| NO | Paper Title & Code   | Co -<br>Number       | Course Out Comes  |
|----|--|----------------------|---|
| 01 | Semester – l<br><u>యూనిట్ 1</u><br>శకుంతలోపాఖ్యానం<br>గొడగూచి<br>త్యాగనిరతి<br>గజేంద్రమోక్షం<br><u>యూనిట్ 2</u><br>ఆధునిక కవిత్వం<br>కాసులు<br>రాజు కవి<br>గంగిరెద్దు<br>జయభేరి<br><u>యూనిట్ 3</u><br>వచన విభాగం<br>యుగాంతం కథానిక వెంకన్న<br>కథానిక<br><u>యూనిట్ 4</u><br>భాషా విభాగం సంధులు<br>సమాసాలు | Co-1<br>Co-2<br>Co-3 | <ul> <li>విద్యాద్ధులు ప్రాచీన కవిత్వం ద్వారా అనాటి సాహిత్యం మరియు<br/>ఆదార వ్యవహారాలు సంప్రదాయాలు ఏ విధంగా ఉన్నావు<br/>గ్రహిందారు.</li> <li>విద్యాద్ధులు అదికవి నన్నయ కవిరా లకడాలు కవితా లకడాలు<br/>త్యాగం భక్తి తత్వం గూర్చి తెలుసుకున్నారు.</li> <li>ఆనాటి కాలంలో వాడిన భాష విభాగాలు తెలుసుకున్నారు.</li> <li>ఆనాటి కాలంలో వాడిన భాష విభాగాలు తెలుసుకున్నారు.</li> <li>విద్యాద్ధులు ప్రాచీన కాలంలో ఉన్న వివిధ సాహిత్యం పద్యం గద్యం<br/>విభాగాల్లో ఉన్న మెలకువలను గ్రహించారు.</li> <li>విద్యాద్ధులు ప్రాచీన కాలంలో ఉన్న వివిధ సాహిత్యం పద్యం గద్యం<br/>విభాగాల్లో ఉన్న మెలకువలను గ్రహించారు.</li> <li>విద్యాద్ధులు ఆధునిక సాహిత్య విశిషాలు గ్రహించారు<br/>మారుతున్న సమాజంలో నటి సామాజిక పరిస్థితులు<br/>విద్యాద్ధులు లగ్రహించడమే అభ్యుదయ బావాల వైపు వెళ్ళుటకు<br/>మార్గం ఏర్పడింది.</li> <li>అభ్యుదయభావాలు ప్రగతి పైపు చైతన్యం పైపు వెళ్ళుటకు ఈ<br/>ఆధునిక సాహిత్యం ఎంతో ఉపయోగపడింది.</li> <li>తెలంగాణ సంస్కృతి గ్రహించారు.</li> <li>విద్యాద్ధులు ఆధునిక సాహిత్యం వల్ల ప్రాచీన మరియు ఆధునిక<br/>భావాలు సాహిత్యం ఎంతో ఉపయోగపడింది.</li> <li>తెలంగాణ సంస్కృతి గ్రహించారు.</li> <li>విద్యాద్ధులు ఆధునిక సాహిత్యం వల్ల ప్రాచీన మరియు ఆధునిక<br/>భావాలు సాహిత్యంలో జీవిత సత్యాలను గ్రహిందారు విద్యాద్ధులు<br/>ఎలా అలవర్పుకోవాలి అని తెలుసుకున్నారు</li> <li>విద్యాద్ధులు పల్లె ప్రజల యొక్క మనోభావాలు ఆదార<br/>వ్యవహారాలు గ్రహించారు వాతావరణంలో తెలుసుకున్నారు</li> <li>జిరితానికి ఆ లోగ్యకరమైన వాతావరణం ఎంత<br/>ఉపయోగపడుతుందో తెలుసుకున్నారు విద్యాద్ధులు పల్లె<br/>ప్రాంతాల్లో ఉన్న పశుసంపదను గూర్పి తెలుసుకున్నారు</li> <li>జంతువులు పల్ల పల్ల ప్రజులకు ఎంత ప్రేమ<br/>ఆప్యాయత ఉంటుందో తెలుసుకున్నారు మన చుట్టూ ఉన్న<br/>మన చుట్టూ ఉన్న పశుపుక్యాడులను రకిస్తూ ప్రమిస్తూ<br/>ఉందాలని తెలుసుకున్నారు విద్యాద్రులు తెలుసుకున్నారు</li> </ul> |
|    |  | Co-4                 | <ul> <li>&gt; విద్యార్థులు సంధులు వాటి యొక్క ప్రత్యేకతలు</li> <li>తెలుసుకున్నారు గ్రహించారు.</li> <li>&gt; విద్యార్థులు సమాసాల యొక్క ఉపయోగాలు తెలుసుకున్నారు</li> <li>వివిధ సందర్భాలలో ఎలా ఉపయోగించాలో గ్రహించారు.</li> </ul>   |



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| S NO | Paper Title & Code  | Co -<br>Number | Course Out Comes   |
|------|---|----------------|--|
| 01   | Semester –II<br>యూనిట్ 1<br>ప్రాచీన కవిత్వం<br>సంవరణుడు తపస్సు<br>శ్రీరంగ జేత్రం మహిమ<br>హనుమత్ సందేశం<br>సుభాపితాలు<br><u>యూనిట్ 2</u><br>ఆధునిక కవిత్వం<br>వస్ అంతర్ నాదం | Co-1<br>Co-2   | <ul> <li>విద్యార్థులు ప్రాచీసకాలం నాటి గూర్చి తెలుసుకున్నారు<br/>విద్యార్థులు అపసవ్య యొక్క ప్రత్యేకతలను</li> <li>తెలుసుకున్నారు విద్యార్థులు వివిధ పుణ్యకేత్రాల గురించి<br/>తెలుసుకున్నారు విద్యార్థులు భక్తి క్రమశిక్షణ గూర్చి<br/>తెలుసుకున్నారు</li> <li>సామాజిక సేపథ్యం లో విద్యార్థులు నీతి వాక్యాలు జీవిత<br/>సత్యాలను ధర్మాలను తెలుసుకున్నారు</li> <li>పిద్యార్థులు తెలంగాణ సాయుధ పోరాట యోధులు గురించి<br/>తెలుసుకున్నారు దాశరధి డాక్టర్ సి నారాయణ రెడ్డి సి 1 ఆధునిక<br/>భావాలు కలిగిన అభ్యుదయ కవుల గురించి తెలుసుకున్నారు</li> <li>విద్యార్థులు అభ్యుదయ భావాలు ఉపయోగాలు గ్రహించారు<br/>విద్యార్థులు అలవర్చుకున్నారు</li> <li>విద్యార్థులు జీవిత విలువలను గ్రహించారు ఆధునిక సమాజంలో</li> </ul> |
|      | ప్రపంచ పదులు<br>అల్విదా<br>రోడ్డు రోలర్   | Co-3           | విద్యార్థులు ఏ విధంగా జీవించాలో తెలుసుకున్నారు<br>≻ విద్యార్థులు తెలంగాణ ప్రసిద్ధిగాంచిన కవుల జీవిత<br>తెలుసుకున్నారు విద్యార్థులు మామిడి పండ్ల యొక్క విలువను<br>గ్రహించారు  |
|      | <u>యూనిట్ 3</u><br>మామిడి పండు<br>మా ఊరు పోయింది<br>ఇది ఒక కల పర్తు ఊరు దారులు<br>గుర్తుంచుకోవడం  |                | <ul> <li>ఏద్యాద్ధులు భావ కవుల అధ్యుదయ కవుల గురించి<br/>తెలుసుకున్నాడు విద్యార్థులు పల్లెకు పట్టణానికి వ్యత్యాసాలను<br/>గ్రహించారు సటి సమాజంలో పట్టణానికి పల్లెకు ఉన్న వ్యత్యాసం<br/>గ్రహించారు పల్లె ప్రాంతం అంటే గ్రామీణ ప్రాంతం ఎంత విలుపైనది<br/>గ్రహించారు</li> <li>ఏద్యార్థులు యొక్క స్వరూప గ్రహించారు విద్యార్థులు కలల పర్త<br/>ఉర్ధు దారులు యొక్క విశిషాలు గ్రహించారు విద్యార్థులు<br/>ప్రత్యేకతలు తెలుపుకున్నారు</li> </ul>  |
|      | <mark>యూనిట్ 4</mark><br>ఉపమా వాచకం రాణి రుద్రమదేవి   | Co-4           | ఏద్యార్థులు కాకతీయుల గురించి వివరంగా తెలుసుకున్నారు<br>రాణి రుద్రమదేవి ధైర్య సహస్ర గ్రహించారు విద్యార్థులు<br>కాకతీయుల సామాజిక ఆర్థిక విశిషాలను తెలుసుకున్నారు   |



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| 02 |                          | Co-1 | ఏద్యార్థులు సంస్కృత భారతం మరియు ఆంద్రభారతం  |
|----|--------------------------|------|---|
|    | Semester –III            |      | గురించి తెలుసుకున్నారు విద్యార్థులు నన్నయ్య ఎర్రన్న   |
|    | Semester in              |      | తిక్కన్న లాంటి కవుల గురించి తెలుసుకున్నారు ఆంధ్ర  |
|    | <u>యూనిట్ 1</u>          |      | మహాభారతం లోని విశేషాలు తెలుసుకున్నారు   |
|    | 25 4 49.30               |      | > విద్యార్థులు సంపూర్ణ రామాయణం మరియు రంగనాథ   |
|    | ప్రాచీన కవిత్వం          |      | రామాయణం లోని లోని విశేషాలు గ్రహించారు విద్యార్థులు  |
|    | ధర్మజుని వాక్చాతుర్యం    |      | 14 15 వ శతాబ్దపు సాహిత్యపు విలువలను గ్రహించారు  |
|    | విభీషణ శరణాగతి గుణనిధి   |      | ≻ విద్యార్థులు గుణం విలువ మానవతా విలువలు  |
|    | యూనిట్ 2                 |      | తెలుసుకున్నారు  |
|    | ఆధునిక కవిత్వం           | Co-2 | 🏷 ໃຫ້ແຜນນາສາຍດານຫຼວ ຜ່າດີຕີ ເອີຍນະນະຮາສາ ຜູ້ເ ຜີສຸ່ນ  |
|    | రైతు ప్రశస్తి            | 0-2  | ≻ విద్యార్థులు రామాయణం గురించి తెలుసుకున్నారు రైతు<br>యొక్క స్థితి యొక్క స్థితిగతులను తెలుసుకున్నారు విద్యార్థు<br>రైతులు పండించే వివిధ పంటల గురించి గ్రహించారు |
|    | గుడిసెలు కాలిపోతున్నాయి  |      |   |
|    | గీతం                     |      | <ul> <li>విద్యార్థులు బోయి భీమన్న గూర్చి తెలుసుకున్నారు విద్యార్థుల</li> </ul>  |
|    |                          |      | ఆధునిక భావజాలాలు వాసవి కథలు తెలుసుకున్నారు ఆనాటి  |
|    | యూనిట్ 3                 |      | పుటి రాజకీయాల గురించి తెలుసుకున్నారు  |
|    | వచన విభాగం అర్దరాత్రి    |      | > తిలక్ రచనల ద్వారా వ్యక్తుల మధ్య వ్యత్యాసాలు గ్రహించారు  |
|    | అరుణోదయం                 |      | సమాజం యొక్క బాధ్యత ఏంటో తెలుసుకున్నారు  |
|    | సి పి బ్రౌన్ సాహిత్య సేవ |      | G .j ~  |
|    | కొండమల్లెలు              | Co-3 | విద్యార్థులు సమాజంలో ఎలా జీవనయానం చేయాలో  |
|    |                          |      | తెలుసుకున్నారు విద్యార్థులు   |
|    | యూనిట్ 4                 |      | సామాజిక జీవనంలో మార్పులను ఎలా తీసుకురావాలో  |
|    | చలిచీమలు                 | .7   | గ్రహించారు సంఘటిత పోరాటం గ్రహించారు   |
|    | సామాజిక నాటకం            |      | విద్యార్థులు తెలుగు ఇంగ్జీషు గూర్చి తెలుసుకున్నారు  |
|    |                          |      | సి.పి.బ్రౌన్ సాహిత్యం గురించి గ్రహించారు  |
|    |                          |      | విద్యార్థులు కథలు కథానికలు వాటి ప్రాముఖ్యతను  |
|    |                          |      | గ్రహించారు నేటి సమాజంలో కథల విలువ ఏ విధంగా  |
|    |                          |      | ్రంది రెలు సుకున్నారు కథల ద్వారా సామాజిక సేపథ్యం  |
|    |                          |      | జరద రెలునువున్న దు కథర ద్వర్ ని టి దర సరిధ్యం<br>గ్రహించారు   |
|    |                          |      | 02000   |
|    |                          | Co-4 | > విద్యార్థులు నాటకం నాటిక నాట్యశాస్త్ర లపై అవగాహనన   |
|    |                          |      | ్యం<br>పించుకున్నారు నాటకం ప్రాముఖ్యతను గ్రహించారు  |
|    |                          |      | బడుగు బలహీన మనోభావాలను మరియు మనోధైర్యం  |
|    |                          |      | •   |
|    |                          |      | గూర్చి తెలుసుకున్నారు పట్టుదల కృషి శ్రమ విలువ<br>విజానాయా కోజు జాను   |
|    |                          |      | విద్యార్థులు గ్రహించారు   |



Bhadradri Kothagudem Dist Telangana State

| S NO | Paper Title & Code  | Co - Number  | Course Out Comes  |
|------|---|--|---|
| 01   | Semester –IV  | Co-1   | ఏద్యార్థులు గానమాత్సర్యం ద్వారా ఇద్దరి మధ్య పోటీ తత్వం<br>తెలుసుకున్నారు ఇచ్చిన మాట తప్పకూడదు అని గ్రహించారు<br>శతక పద్యాల యొక్క ప్రావీణ్యం గూర్చి గ్రహించారు ఏ సమస్య<br>వచ్చినా సామరస్యంగా పరిష్కరించుకోవాలని తెలుసుకున్నారు   |
|      |   |  | ఆనాటి సంగీతానికి ఈనాటి సంగీతానికి వ్యత్యాసం గ్రహించారు  |
|      | <u>యూనిట్ 1</u>   |  | విద్యార్థులు ప్రాచీన కాలపు సంగీతం గురించి తెలుసుకున్నారు<br>ఆనాటి గురుశిష్యుల మధ్య ఏ రకమైన సంబంధాలు   |
|      | నారద గానమాత్సర్యం   |  | ఉన్నాయో తెలుసుకున్నారు  |
|      | వాగ్దాన భంగం<br>నరసింహ శతకం   |  | <ul> <li>గురు విలువను తెలుసుకొని ప్రవర్తించాలని గ్రహించారు నేటి</li> <li>సమాజంలో మంచి విజయాలు సాధించి ఇవ్వడమే గురుద జీణగా</li> </ul>  |
|      | <u>యూనిట్ 2</u><br>ఆధునిక కవిత్వం   |  | సమాజంలో మంచి వజయాలు ని ధంది ఇచ్చింది గెందిందిగా<br>భావిందారు కాళోజీ నారాయణరావు గారు సమాజంలో పేద<br>దళితుల మధ్య మరియు యు.కె ద ధనికుల మధ్య వ్యత్యాసం<br>ఎందుకు అని ప్రశ్నించారు   |
|      | గురుదకిణ<br>నరుడా సేను నరుడా  | Co-2   | విద్యార్థుల మధ్య సమానత్వం ఉండాలని తెలుసుకున్నారు<br>తెలంగాణ ప్రాంతపు దుర్గమ్మ గూర్చి మరియు దుర్గమ్మ   |
|      | దేవరకొండ దుర్గం<br><u>యూనిట్ 3</u><br>నివురు తొలగిన నిష్పు<br>కథ<br>మన గ్రామ నామాలు | గురించి అవగాహన తెలుసుకున్నారు<br>> విద్యార్థులు తెలంగాణలోని దేవాలయాల ప్రత్యేకతలను<br>గ్రహించారు విద్యార్థులు నేటి సమాజంలో కష్టాలు కన్నీళ్లు<br>మధ్య సమస్యను ఏవిధంగా జయించాలో విజయం ఎలా |   |
|      |   | సాధించాలి తెలుసుకున్నారు<br>> సాధించాలసే తపన ఉండాలని అనిగిమనిగి ఉండాలని<br>గ్రహించారు ఎన్ని ఆటుపోట్లు వచ్చినా చదువు విద్యార్థులు<br>గ్రహించారు   |   |
|      | వ్యాకరణం<br>అలంకారాలు<br>ఛందస్సు  | Co-3   | <ul> <li>ఆదినుండి గ్రామ నామాలు గుంపు గూడెం మరియు పల్లె<br/>మరియు పేట లోయ మొదలగు రకాలుగా పూర్పికులు వారి<br/>నివాస యోగ్యంగా ఉండేవిధంగా గ్రామ నామాలు పెట్టారు అని<br/>విద్యార్థులు గ్రహించారు</li> <li>విద్యార్థులు భారతీయ అలంకార శాస్త్రాలు యొక్క మేలు<br/>తెలుసుకొని అలంకారాల ముఖ్య ఉపయోగం తెలుసుకున్నారు</li> <li>విద్యార్థులు యతి ప్రాసలు గణ విభజన లక్యాలు ఏ విధంగా<br/>పద్యాలలో గ్రహించారి గుర్తించాలి తెలుసుకున్నారు</li> </ul> |
|      |   | Co-4   | <ul> <li>ఏద్యార్థులు నాటకం నాటిక నాట్యశాస్త్ర లపై అవగాహనను<br/>పంచుకున్నారు నాటకం ప్రాముఖ్యతను గ్రహించారు</li> <li>బడుగు బలహీన మనోభావాలను మరియు మనోదైర్యం గూర్చి<br/>తెలుసుకున్నారు పట్టుదల కృషి శ్రమ విలువ విద్యార్థులు<br/>గ్రహించారు.</li> </ul>   |



12000 Bhadradri Kothagudem Dist

## **COURSE OUT-COMES**

## **DEPARTMENT OF COMMERCE**

| S.No. | Paper Title & Paper Code                | со  | Course Outcomes  |
|-------|---|-----|--|
|       |   | CO1 | The student gains the knowledge about<br>principles of accounting, accounting<br>standards, and basic knowledge on journal,<br>ledger and trial balance. |
|       |   | CO2 | Student acquires knowledge on types of cash book and subsidiary books.   |
| 1     | FINANCIAL ACCOUNTING – I<br>DSC101      | CO3 | Student will be able to know the reasons for differences between cash book and pass book.  |
|       |   | C04 | Students learn how to rectify the errors and types of depreciation.  |
|       |   | C05 | Student gains the knowledge in preparing the final accounts of a sole trader.  |
|       |   | CO1 | Acquires basic knowledge on business and forms of business.  |
|       |   | CO2 | Student gains the knowledge on preparation<br>of important documents of joint stock<br>company.  |
| 2     | BUSINESS ORGANIZATION AND<br>MANAGEMENT | CO3 | Student learns about functions and principles of management.   |
|       | DSC102                                  | CO4 | Learns about planning and organizing.  |
|       |   | CO5 | Knows the meaning of authority and responsibility, techniques of effective coordination.   |
|       |   | CO1 | Student gains the knowledge on negotiable instruments.   |
|       |   | CO2 | Learns the accounting treatment of consignment.  |
| 3     | FINANCIAL<br>ACCOUNTING-II<br>DSC201    | CO3 | Gains knowledge on methods of keeping records for joint venture accounts.  |
|       | DSC201                                  | C04 | Determines the ascertainment of profit in Single entry system.   |
|       |   | C05 | Learns the accounting treatment of non-<br>profit organizations.   |
|       |   |     | Understands the basic contract act, essentials   |



|   |                                |     | of a valid contract, types of contract.  |
|---|--------------------------------|-----|--|
|   |                                | CO1 |  |
|   | BUSINESS LAWS                  | CO2 | Gains knowledge on consumer protection act and sale of goods act.  |
| 4 | DSC202                         | CO3 | Learns about the types of intellectual property rights.  |
|   |                                | CO4 | Gains knowledge on duties and<br>responsibilities of company director,<br>meetings, minutes etc.   |
|   |                                | C05 | Learns about the modes of winding up of a company.   |
|   |                                | CO1 | Learns the accounting treatment of partnership.  |
|   | ADVANCED                       | CO2 | Student gains knowledge on dissolution and insolvency of a partner.  |
| 5 | ACCOUNTING<br>BC304            | CO3 | Student knows about the types of shares, issue of share capital etc.   |
|   |                                | CO4 | Student learns about the different types of companies acts.  |
|   |                                | CO5 | Student acquires knowledge about goodwill and valuation of goodwill.   |
|   | BUSINESS STATISTICS-I<br>BC305 | CO1 | Acquires knowledge about origin and<br>development of statistics, statistical<br>investigation, primary and secondary data,<br>tabulation of data. |
|   |                                | CO2 | Students will be able to do diagrammatic<br>and graphical presentations of frequency<br>distributions.   |
| 6 |                                | CO3 | Gains knowledge to solve 5 types of averages.  |
|   |                                | CO4 | Acquires knowledge on dispersion and skewness.   |
|   |                                | CO5 | Gains knowledge on karl pearson's correlation and rank correlation.  |
|   |                                | CO1 | Gains knowledge on cannons of taxation, basic concepts of income tax.  |
|   |                                | CO2 | Will be able to compute agricultural and non-agricultural income.  |
| 7 | INCOME TAX-I<br>BC306          | CO3 | Gains knowledge on computation of income from salary.  |
|   | BC306                          | CO4 | Gains knowledge on computation of income<br>from house property, deductions under<br>section 24.   |
|   |                                | CO5 | Will be able to compute the income from business and profession.   |



| 8  | ENTREPRENEURIAL<br>DEVELOPMENT & BUSINESS<br>ETHICS<br>BC307 | CO1<br>CO2<br>CO3<br>CO4<br>CO5 | Learns about entrepreneur, women<br>entrepreneur in India, challenges &<br>opportunities of entrepreneurship.<br>Learns the ways of entrepreneurial<br>development, selection of right opportunity.<br>Learns about budget and planning financial<br>analysis, project financing and MSMEs.<br>Learns about policies and programmes of<br>entrepreneurial development.<br>Learns about business ethics and moral<br>values. |
|----|--|---------------------------------|---|
|    |  | CO1                             | The student will be able to compute the liquidator's final statement of account.  |
|    | CORPORATE ACCOUNTING<br>BC404                                | CO2                             | Gains basic knowledge and accounting treatment on amalgamation.   |
| 9  |  | CO3                             | Gains knowledge in preparation of final statement after reconstruction.   |
|    |  | CO4                             | Learns about the accounts of banking companies.   |
|    |  | CO5                             | Gains knowledge on accounts of insurance companies and insurance claims.  |
|    |  | CO1                             | The student will be able to compute regression lines.   |
|    |  | CO2                             | Learns about different types of index<br>numbers and tests of consistency.  |
|    |  | CO3                             | Learns about the components of time series, their uses and limitations.   |
| 10 | BUSINESS STATISTICS-II<br>BC405                              | CO4                             | The students will be able to compute probability and theorems of probability.   |
|    |  | CO5                             | The students gains knowledge on theoretical distributions.  |
|    |  | CO1                             | Student gains knowledge in short term and long term capital gains   |
|    |  | CO2                             | The student knows about general incomes, specific incomes, casual income and deductions.  |
| 11 | INCOME TAX-II<br>BC406                                       | CO3                             | Gains knowledge on carry forward of losses,<br>computation of gross total income,<br>deductions from GTI u/s 80C to 80U.  |
|    |  | CO4                             | The students will be able to compute tax liability of individuals.  |
|    |  | CO5                             | Gains knowledge on assessment procedure and filing of e-returns.  |



|    |                          | CO1 | Will be able to understand Auditing as per AASB.   |
|----|--------------------------|-----|--|
|    |                          | CO2 | Learns about Auditors qualifications,<br>qualities, remuneration, rights and duties.   |
| 12 | AUDITING                 | CO3 | Learn about internal control, internal check and internal audit.   |
|    | BC407                    | CO4 | Will be able to do vouching of trading<br>transactions and vouching of cash<br>transactions.   |
|    |                          | CO5 | Learns about verification and valuation of assets.   |
|    |                          | CO1 | Gains knowledge in cost concepts and cost classification.  |
|    |                          | CO2 | Acquires knowledge on inventory control techniques.  |
| 13 | COST ACCOUNTING<br>BC503 | CO3 | The students will be able to compute wages<br>payment methods, methods of allocation and<br>apportionment of overheads.                              |
|    |                          | CO4 | Will be able to compute tenders and estimated costs, job cost sheet.   |
|    |                          | CO5 | Will be able to solve contract and process accounts, compute normal and abnormal losses.   |
|    |                          | CO1 | Acquires knowledge of working of Indian<br>Banking system, origin and growth of<br>banking, nationalization of commercial                            |
|    |                          | CO2 | banks, emerging trends.<br>Acquires knowledge on the role of RBI.  |
| 14 | BANKING THEORY AND       | CO3 | Learns about the types of banks.   |
|    | PRACTICE<br>BC505        | CO4 | Students acquire knowledge on KYC norms, opening of accounts, types of customers.  |
|    |                          | CO5 | Learns about duties and responsibilities of<br>paying and collecting banker, precautions to<br>be taken while advancing loans against<br>securities. |
|    |                          | CO1 | Student acquires knowledge on techniques<br>of financial management, maximization of<br>wealth management.   |
|    | FINANCIAL MANAGEMENT     | CO2 | Gains knowledge on financial planning.   |
| 15 | BC507                    | CO3 | Understands the concepts of over capitalization and undercapitalization.   |
|    |                          | CO4 | The student will be able to analyze the differences in cost of capital, cost of debt, and cost of equity capital.                                    |



|    |                                   |     | Coing knowledge on not income enproach  |
|----|-----------------------------------|-----|---|
|    |                                   | CO5 | Gains knowledge on net income approach,<br>net operating income approach, traditional<br>approach.                                    |
|    |                                   | CO1 | The student acquires knowledge about<br>marketing definition, scope, concept and<br>online marketing opportunities and<br>challenges. |
| 16 | PRINCIPLES OF MARKETING           | CO2 | Learns about marketing environment, micro and macro environment.  |
| 10 | BC508                             | CO3 | Learns about marketing segmentation.  |
|    |                                   | CO4 | Acquires knowledge on consumer behavior,<br>post purchase behavior, organizational<br>buyer.  |
|    |                                   | CO5 | Learns about market research process, ethics in marketing.  |
|    | MANAGERIAL<br>ACCOUNTING<br>BC603 | CO1 | Learns about the techniques of managerial accounting.   |
|    |                                   | CO2 | The students will be able to compute BEP<br>and learn its assumptions, importance and<br>limitations.                                 |
| 17 |                                   | CO3 | Acquires the knowledge of marginal costing and decision making.   |
|    |                                   | CO4 | Will be able to prepare the budgets.  |
|    |                                   | CO5 | Will be able to prepare the estimations of working capital requirements.  |
|    | COMPANY LAW                       | CO1 | Learns about company promotion,<br>memorandum of association, articles of<br>association, prospectus, commencement of<br>business.    |
| 18 |                                   | CO2 | Learns about company director duties, responsibilities, remuneration etc.   |
| 10 | BC604                             | CO3 | Gains knowledge on company secretary appointment, duties, liabilities etc.  |
|    |                                   | CO4 | Gains knowledge in types of company meetings.   |
|    |                                   | CO5 | Learns about modes of winding up of a company.  |
|    |                                   | CO1 | The student gets an overview of Indian<br>Financial System.   |
| 19 | FINANCIAL INSTITUTIONS AND        | CO2 | Gains the knowledge on role of financial institutions in economic development.  |
|    | MARKETS                           | CO3 | Learns about state level development banks.   |
|    | BC605                             | CO4 | Acquires knowledge on money market.   |
|    |                                   | CO5 | Acquires knowledge on capital market.   |



|    |   | CO1 | Learns about introduction of human resource<br>management, Elton mayo's human relations<br>theory.            |
|----|---|-----|---|
|    |   | CO2 | Learns about human resource planning.   |
| 20 | HUMAN RESOURCE<br>MANAGEMENT<br>BC607   | CO3 | Acquires knowledge on recruitment methods and selection process.  |
|    |   | CO4 | Learns about human resource training and development.   |
|    |   | CO5 | Learns about performance appraisal methods.   |
|    | TAX PLANNING AND<br>MANAGEMENT<br>BC608 | CO1 | The student knows about tax planning, tax avoidance, tax evasion.   |
| 21 |   | CO2 | Students gain knowledge on basic salary, DA, gratuity, medical allowances etc.                                |
|    |   | CO3 | Understands the concept of tac planning for<br>profit and gain of business or profession and<br>capital gain. |
|    |   | CO4 | Learns about short term loans, term loans, public deposits, bonus issues.                                     |
|    |   | CO5 | Learns about various types of mergers and amalgamations.  |



## DEPARTMENT OF BOTANY

| S.No. | Paper Title & Paper Code                | со  | Course Outcomes  |
|-------|---|-----|--|
|       |   | CO1 | The student gains the knowledge about<br>principles of accounting, accounting<br>standards, and basic knowledge on journal,<br>ledger and trial balance. |
|       |   | CO2 | Student acquires knowledge on types of cash book and subsidiary books.   |
| 1     | FINANCIAL ACCOUNTING – I<br>DSC101      | CO3 | Student will be able to know the reasons for differences between cash book and pass book.  |
|       |   | C04 | Students learn how to rectify the errors and types of depreciation.  |
|       |   | C05 | Student gains the knowledge in preparing the final accounts of a sole trader.  |
|       |   | CO1 | Acquires basic knowledge on business and forms of business.  |
|       |   | CO2 | Student gains the knowledge on preparation<br>of important documents of joint stock<br>company.  |
| 2     | BUSINESS ORGANIZATION AND<br>MANAGEMENT | CO3 | Student learns about functions and principles of management.   |
|       | DSC102                                  | CO4 | Learns about planning and organizing.  |
|       |   | CO5 | Knows the meaning of authority and responsibility, techniques of effective coordination.   |
|       |   | CO1 | Student gains the knowledge on negotiable instruments.   |
|       |   | CO2 | Learns the accounting treatment of consignment.  |
| 3     | FINANCIAL<br>ACCOUNTING-II              | CO3 | Gains knowledge on methods of keeping records for joint venture accounts.  |



|   | DSC201                | C04 | Determines the ascertainment of profit in Single entry system.   |
|---|-----------------------|-----|--|
|   |                       | C05 | Learns the accounting treatment of non-<br>profit organizations.   |
|   |                       | CO1 | Understands the basic contract act, essentials<br>of a valid contract, types of contract.  |
|   |                       | CO2 | Gains knowledge on consumer protection act and sale of goods act.  |
| 4 | BUSINESS LAWS         | CO3 | Learns about the types of intellectual property rights.  |
|   | DSC202                | CO4 | Gains knowledge on duties and<br>responsibilities of company director,<br>meetings, minutes etc.   |
|   |                       | C05 | Learns about the modes of winding up of a company.   |
|   |                       | CO1 | Learns the accounting treatment of partnership.  |
| _ | ADVANCED              | CO2 | Student gains knowledge on dissolution and insolvency of a partner.  |
| 5 | ACCOUNTING<br>BC304   | CO3 | Student knows about the types of shares, issue of share capital etc.   |
|   |                       | CO4 | Student learns about the different types of companies acts.  |
|   |                       | CO5 | Student acquires knowledge about goodwill and valuation of goodwill.   |
|   |                       | CO1 | Acquires knowledge about origin and<br>development of statistics, statistical<br>investigation, primary and secondary data,<br>tabulation of data. |
|   | BUSINESS STATISTICS-I | CO2 | Students will be able to do diagrammatic<br>and graphical presentations of frequency<br>distributions.   |
| 6 | BC305                 | CO3 | Gains knowledge to solve 5 types of averages.  |
|   |                       | CO4 | Acquires knowledge on dispersion and skewness.   |
|   |                       | CO5 | Gains knowledge on karl pearson's correlation and rank correlation.  |
|   |                       | CO1 | Gains knowledge on cannons of taxation,<br>basic concepts of income tax.   |
|   | INCOME TAX-I<br>BC306 | CO2 | Will be able to compute agricultural and non-agricultural income.  |
| 7 |                       | CO3 | Gains knowledge on computation of income from salary.  |
|   | <b>D</b> (500         | CO4 | Gains knowledge on computation of income from house property, deductions under section 24.   |



|    |   | CO5 | Will be able to compute the income from business and profession.   |
|----|---|-----|--|
|    |   | CO1 | Learns about entrepreneur, women<br>entrepreneur in India, challenges &<br>opportunities of entrepreneurship.            |
|    | ENTREPRENEURIAL                           | CO2 | Learns the ways of entrepreneurial development, selection of right opportunity.  |
| 8  | DEVELOPMENT & BUSINESS<br>ETHICS<br>BC307 | CO3 | Learns about budget and planning financial analysis, project financing and MSMEs.  |
|    | BC307                                     | CO4 | Learns about policies and programmes of entrepreneurial development.   |
|    |   | CO5 | Learns about business ethics and moral values.   |
|    |   |     |  |
|    |   |     | The student will be able to compute the  |
|    |   | CO1 | The student will be able to compute the liquidator's final statement of account.   |
|    |   | CO2 | Gains basic knowledge and accounting treatment on amalgamation.  |
| 9  | CORPORATE ACCOUNTING<br>BC404             | CO3 | Gains knowledge in preparation of final statement after reconstruction.  |
|    |   | CO4 | Learns about the accounts of banking companies.  |
|    |   | CO5 | Gains knowledge on accounts of insurance companies and insurance claims.   |
|    |   | CO1 | The student will be able to compute regression lines.  |
|    |   | CO2 | Learns about different types of index<br>numbers and tests of consistency.   |
|    |   | CO3 | Learns about the components of time series, their uses and limitations.  |
| 10 | BUSINESS STATISTICS-II<br>BC405           | CO4 | The students will be able to compute probability and theorems of probability.  |
|    |   | CO5 | The students gains knowledge on theoretical distributions.   |
|    |   | CO1 | Student gains knowledge in short term and long term capital gains  |
|    |   | CO2 | The student knows about general incomes, specific incomes, casual income and deductions.                                 |
| 11 | INCOME TAX-II<br>BC406                    | CO3 | Gains knowledge on carry forward of losses,<br>computation of gross total income,<br>deductions from GTI u/s 80C to 80U. |
|    |   | CO4 | The students will be able to compute tax liability of individuals.   |



| I  |                                | -1  |  |
|----|--------------------------------|-----|--|
|    |                                | CO5 | Gains knowledge on assessment procedure and filing of e-returns.   |
|    |                                | CO1 | Will be able to understand Auditing as per AASB.   |
|    |                                | CO2 | Learns about Auditors qualifications,<br>qualities, remuneration, rights and duties.   |
| 12 | AUDITING                       | CO3 | Learn about internal control, internal check and internal audit.   |
| 12 | BC407                          | CO4 | Will be able to do vouching of trading<br>transactions and vouching of cash<br>transactions.   |
|    |                                | CO5 | Learns about verification and valuation of assets.   |
|    |                                | CO1 | Gains knowledge in cost concepts and cost classification.  |
|    |                                | CO2 | Acquires knowledge on inventory control techniques.  |
| 13 | COST ACCOUNTING<br>BC503       | CO3 | The students will be able to compute wages<br>payment methods, methods of allocation and   |
|    |                                | CO4 | apportionment of overheads.<br>Will be able to compute tenders and<br>estimated costs, job cost sheet.   |
|    |                                | CO5 | Will be able to solve contract and process<br>accounts, compute normal and abnormal<br>losses.   |
|    |                                | CO1 | Acquires knowledge of working of Indian<br>Banking system, origin and growth of<br>banking, nationalization of commercial<br>banks, emerging trends. |
|    |                                | CO2 | Acquires knowledge on the role of RBI.   |
| 14 | BANKING THEORY AND<br>PRACTICE | CO3 |  |
|    | BC505                          | CO4 | Students acquire knowledge on KYC norms, opening of accounts, types of customers.  |
|    |                                | CO5 | Learns about duties and responsibilities of<br>paying and collecting banker, precautions to<br>be taken while advancing loans against<br>securities. |
|    |                                | C01 | Student acquires knowledge on techniques<br>of financial management, maximization of<br>wealth management.   |
| 15 | FINANCIAL MANAGEMENT           | CO2 | Gains knowledge on financial planning.   |
| 15 | BC507                          | CO3 | Understands the concepts of over capitalization and undercapitalization.   |



|    |                                       | CO4        | The student will be able to analyze the differences in cost of capital, cost of debt, and cost of equity capital.                     |
|----|---------------------------------------|------------|---|
|    |                                       | CO5        | Gains knowledge on net income approach,<br>net operating income approach, traditional<br>approach.                                    |
|    |                                       | CO1        | The student acquires knowledge about<br>marketing definition, scope, concept and<br>online marketing opportunities and<br>challenges. |
| 16 | PRINCIPLES OF MARKETING               | CO2        | Learns about marketing environment, micro and macro environment.  |
|    | BC508                                 | CO3        | Learns about marketing segmentation.  |
|    |                                       | CO4        | Acquires knowledge on consumer behavior,<br>post purchase behavior, organizational<br>buyer.  |
|    |                                       | CO5        | Learns about market research process, ethics in marketing.  |
|    |                                       | CO1        | Learns about the techniques of managerial accounting.   |
|    | MANAGERIAL<br>ACCOUNTING<br>BC603     | CO2        | The students will be able to compute BEP<br>and learn its assumptions, importance and<br>limitations.                                 |
| 17 |                                       | CO3        | Acquires the knowledge of marginal costing and decision making.   |
|    |                                       | CO4        | Will be able to prepare the budgets.  |
|    |                                       | CO5        | Will be able to prepare the estimations of working capital requirements.  |
|    |                                       | CO1        | Learns about company promotion,<br>memorandum of association, articles of<br>association, prospectus, commencement of<br>business.    |
| 18 | COMPANY LAW                           | CO2        | Learns about company director duties, responsibilities, remuneration etc.   |
| 10 | BC604                                 | CO3        | Gains knowledge on company secretary appointment, duties, liabilities etc.  |
|    |                                       | CO4        | Gains knowledge in types of company meetings.   |
|    |                                       | CO5        | Learns about modes of winding up of a company.  |
|    |                                       | CO1        | The student gets an overview of Indian<br>Financial System.   |
|    |                                       | CO2        | Gains the knowledge on role of financial  |
| 19 | FINANCIAL INSTITUTIONS AND<br>MARKETS |            | institutions in economic development.   |
|    | BC605                                 | CO3<br>CO4 | Learns about state level development banks.<br>Acquires knowledge on money market.  |



|    |                                       | CO5 Acquires knowledge on capital market.   | CO5 |     |
|----|---------------------------------------|---|-----|-----|
|    |                                       | CO1 Learns about introduction of human res<br>management, Elton mayo's human rela<br>theory.        |     |     |
|    |                                       | CO2 Learns about human resource planning.   | CO2 |     |
| 20 | HUMAN RESOURCE<br>MANAGEMENT<br>BC607 | CO3 Acquires knowledge on recruitment me and selection process.                                     | CO3 | ods |
|    | BC007                                 | CO4 Learns about human resource training a development.   | CO4 | b   |
|    |                                       | CO5 Learns about performance appraisal methods.   | CO5 |     |
|    | TAX PLANNING AND                      | CO1 The student knows about tax planning, avoidance, tax evasion.                                   | CO1 | х   |
| 21 |                                       | CO2 Students gain knowledge on basic salar DA, gratuity, medical allowances etc.                    | CO2 |     |
|    | MANAGEMENT<br>BC608                   | CO3 Understands the concept of tac planning profit and gain of business or profession capital gain. | CO3 |     |
|    |                                       | CO4 Learns about short term loans, term loa public deposits, bonus issues.                          | CO4 | ',  |
|    |                                       | CO5 Learns about various types of mergers a amalgamations.  | CO5 | d   |



|      | DEPARTN   | AENT OF BO     | DTANY-COURSE OUTCOMES  |
|------|---|----------------|--|
| S.NO | Paper Title &Code   | CO<br>NUMBER   | Course Outcomes  |
| 1    | Microbial Diversity<br>& Lower Plants<br>PAPER-I                      | CO-01          | Student gains knowledge on basic structure,<br>metabolic and reproductive methods of bacteria and<br>Viruses. Special attention given for the plant<br>diseases caused by the Bacteria and Viruses. The<br>unique characteristics of Archaebacteria,<br>Actinomycetes and Mycoplasma also covered in<br>course.  |
|      |   | CO-02          | Student's familirised with the concept of<br>Biofertilizers and its producing organisms. They<br>also know about the basic biology, life cycles and<br>economic importance of Algae. Practical<br>knowledge on identification of the algae and<br>cultivation of Bio fertilizers.  |
|      |   | CO-03          | Students acquire knowledge on General characters<br>and economic importance of Fungi and Lichens.<br>Dissection capabilities of the student to observe<br>pathological stage of the pathogen in infected plant<br>material.  |
|      |   | CO-04          | Student's gains knowledge on evolutionary trends<br>in Bryophytes and Pteridophytes by comparing the<br>features of case study plants. The aspects of origin<br>of stele and Heterospory are given special attention<br>to taught since these events are important for<br>understanding the Evolution process.   |
| 2    | Gymnosperms,<br>Taxonomy of<br>Angiosperms and<br>Ecology<br>PAPER-II | CO-01<br>CO-02 | The student knows about origin of Gymnosperms<br>and general characters with reference to the case<br>study plants. The concept of Geological Time Scale<br>introduced to the students and they are also<br>familiarize with the formation of the fossils.<br>The student understands and applies the basic<br>principles and rules of Botanical nomenclature for<br>identification and paping the plant |
|      |   |                | identification and naming the plant.<br>A basic understanding of the classification<br>systems, origin & history of ICBN and<br>interpretation of phylogenetic trees for<br>reconstructing the evolutionary relationships<br>between the plants. Practical knowledge of<br>identification of the plants and preserving the plant<br>specimens using Herbarium techniques.                                |
|      |   | CO-03          | A basic understanding of systemic study of plant<br>families (Dicotyledons and Monocotyledons) and<br>description of the plants based on the classification<br>learns by the students.   |
|      |   | CO-04          | The learner understands the concept of Ecosystem (structural and functional aspects), ecological   |



|   |   |       | adaptations of plants and concept of plant   |
|---|---|-------|--|
|   |   |       | succession (Hydrosere, Xerosere).  |
|   |   |       | succession (Hydrosere, Xerosere).  |
| 2 | Towonomy of   | CO 01 | The student going knowledge on plant systematics   |
| 3 | Taxonomy of<br>Angiosperms &<br>Medicinal Botany<br>Paper-III | CO-01 | The student gains knowledge on plant systematics<br>and comparative study of the different classification<br>systems. Awareness of the recent trends in<br>advanced taxonomy, herbarium techniques and<br>salient features of Schenzen code.   |
|   |   | CO-02 | A basic understanding of the systematic study of<br>the plant characters (morphological & sexual) of<br>families and technical description of the plants.  |
|   |   | CO-03 | The student gains knowledge on introduction and<br>scope of Ethnomedicine and outlines of traditional<br>medicinal systems like Ayurveda, Unani, Sidda and<br>Homeopathy. Students are advised to go through<br>the Ministry of Health and AYUSH web sites to get<br>aware of the importance of these traditional<br>therapeutic systems. They also got exposed to<br>common medicinal plants in primary health care<br>(through field visits), evaluation of crude drugs and<br>enlightened with the functional roles of agencies<br>like NMPB, CIMAP and CDRI. |
|   |   | CO-04 | <ul> <li>With the comparative study of the Traditional medicine and Modern medicine student understands the Traditional medicine as a resource for modern medicine by studying the active principles of medicinal plants. They also exposed to basic concepts of Pharmacognocy collection, processing and storage of the plant crude drugs.</li> </ul>   |
| 4 | DI  | CO 01 | The student estima detail langende de seu  |
| 4 | Plant Anatomy,<br>Embryology and<br>Palynology                | CO-01 | The student gains detail knowledge on<br>Meristematic tissues, Permanent tissues and Leaf<br>Ontogeny. Practical knowledge on stomata types.   |
|   | (Paper-IV)  | CO-02 | The secondary growth concept introduced to the<br>students with comparative study of Anomalous<br>secondary growth plants (Achyranthes, Bignonia,<br>Boerhaaavia, Dracaena and Beetroot). Practical<br>knowledge on Wood structure and its basic<br>properties of the commercially important plants<br>through field visits.   |
|   |   | CO-03 | The student gains knowledge of introduction of<br>Embryology and basics of Microsporogenesis and<br>Megasporogenesis.  |
|   |   | CO-04 | The student enlightened with chronological Pre-<br>Fertilization and Post-Fertilization events of sexual<br>life cycle of the plants. Introduction to NPC<br>classification and its applications.  |



| 5 | Cell Biology and                         | CO-01 | The basic knowledge of structure and functions of   |
|---|--|-------|---|
|   | Genetics<br>(Paper-V)                    |       | <ul> <li>Plant cell envelopes (Cell wall &amp; Cell Membrane).</li> <li>The detail understanding of the ultra structure of the Nucleus, Nucleic acids (DNA &amp;RNA),</li> <li>Chromosomes morphology and organization of DNA in a chromosome through animations.</li> </ul>                                  |
|   |  | CO-02 | The student gains knowledge on properties of Extra<br>Nuclear Genomes and their inheritance pattern.<br>They are also enlightened with Cell cycle and<br>Mutations (Chromosomal Aberrations and Gene<br>Mutations).   |
|   |  | CO-03 | Students acquire knowledge on Mendelian laws of<br>inheritance, concept of Linkage and Construction<br>of Genetic maps.   |
|   |  | CO-04 | Understand the concepts of Gene organization and<br>Genetic code. Special focus on concepts of Central<br>Dogma of Molecular Biology (CDMB). Regulation<br>of Transcription (with reference to Lac & Trp<br>Operons) and Translation. Practical knowledge on<br>Cytochemical studies acquire by the students. |
| 6 | Ecology &                                | CO-1  | The student gains knowledge on Elements of  |
| 0 | Biodiversity Paper-<br>VI (Elective-A)   | 0-1   | Environment, structural and functional aspects of<br>Ecosystem and Ecological adaptations of Plants.  |
|   |  | CO-02 | Basic concepts of Population Ecology and<br>Community Ecology learnt by the student. Have<br>awareness on process of pedogenesis, soil erosion,<br>conservation methods and analysis of Soil<br>properties.   |
|   |  | CO-03 | Explain the Community dynamics with reference to<br>Hydrosere and Xerosere. Gains knowledge on<br>concepts of Productivity and Biodiversity. Students<br>are enlightened to Convention of Biodiversity<br>through AV tools to know the value and<br>significance of Biological resources.                     |
|   |  | CO-04 | Gains the knowledge on level of Biodiversity.<br>Concept of Hotspots and Endemism. Detailed study<br>of the opportunities and scope in the areas of<br>Conservations methods of Biodiversity. Practical<br>knowledge on studying the plant communities can<br>be demonstrated by the learner.                 |
|   |  |       |   |
| 7 | Horticulture<br>Paper-VI<br>(Elective-B) | CO-01 | The students aware on Scope and opportunities in<br>Horticulture. Gains knowledge on types of<br>Horticulture crops and manures.  |
|   |  | CO-02 | Student can demonstrate Artificial propagation<br>methods, transplanting, field preparation, use of<br>herbicides, top dressing of fertilizers and use of   |



|   |   |       | Growth regulators in Horticulture.  |
|---|---|-------|---|
|   |   | CO-03 | Applications of Green house technology,<br>Landscaping and Plant Growth regulators in<br>Horticulture.  |
|   |   | CO-04 | The student's familarised with the concept of<br>Organic farming and Bonsai techniques. Practical<br>knowledge on garden implements and making of<br>organic compost.   |
| 8 | Microbiology and<br>Plant Pathology<br>(Paper-VI)<br>Elective-C | CO-01 | Student's gains knowledge on chronology of<br>discovering Microorganisms, cellular properties of<br>prokaryotic organisms and in-vitro growth methods<br>of Microorganisms.   |
|   |   | CO-02 | Explains the Genetic recombination methods in<br>prokaryotes, Biological Nitrogen Fixation (BNF)<br>and industrial applications of Microorganisms.  |
|   |   | CO-03 | The students are acquainted with the historical developments in plant pathology, epidemiology and plant disease management  |
|   |   | CO-04 | Gains knowledge on disease resistance genes and<br>its application in Inducted resistance. Explain the<br>basic concepts of Molecular Plant Pathology and<br>application of Information technology in Plant<br>Pathology. The learner can demonstrate of<br>Biopesticides against some pathogens and<br>Preparation of Winogradsky column using pond<br>bottom mud, observations on temporal sequence of<br>appearance of microbes (visual appearance). |
| 9 | Plant Physiology<br>(Paper-VII)                                 | CO-01 | Understanding the physical properties of Water and<br>mechanisms behind the movement of water and<br>minerals from Soil to Plant. The Transpiration and<br>Translocation concepts explained. Practical<br>knowledge on the role of mineral nutrition and<br>symptoms of mineral deficiency.   |
|   |   | CO-02 | Gains knowledge on Enzyme Nomenclature,<br>Classification, Enzyme Kinetics and regulation<br>mechanisms. Detail knowledge on Structural,<br>Biochemical and Molecular aspects of the Light<br>Phase Reaction and Carbon fixation methods of<br>Photosynthesis. Explained the basics of<br>Photochemistry. The Blackmann's Law of limiting<br>factor and its application in studying the factors<br>affecting the Photosynthesis.                        |
|   |   | CO-03 | The basic concepts of Aerobic and Anaerobic<br>Respiration. Understanding the sequence of<br>biochemical pathways of Respiration, their<br>correlation and feedback control mechanisms.   |



|    |   |       | Explanation of the concepts of Nitrogen<br>Metabolism and Lipid Metabolism.   |
|----|---|-------|---|
|    |   | CO-04 | Gains knowledge on synthesis, transport and<br>physiological effects of Phytohormones on Plant<br>Growth and Development. Understands the<br>Physiology of flowering and photoperiodism.<br>Student can demonstrate the determination of<br>Stomatal frequency, rate of transpiration, separation<br>of plant pigments and estimation of protein. |
| 10 | Tissue culture &<br>Biotechnology<br>(Paper-VIII)<br>Elective-A | CO-01 | Introduction of the History, Scope and basic<br>terminology used in Tissue culture. Student can<br>demonstrate the sterilization methods, Callus<br>culture and Organ culture.  |
|    |   | CO-02 | Gains knowledge on Somatic Hybrids, Cybrids and<br>Application of Tissue Culture. Practical knowledge<br>on estimation of DNA, PCR technique<br>demonstrates to the learner through AV tools and<br>Animations.   |
|    |   | CO-03 | The student acquires knowledge on History, scope<br>and applications of Biotechnology. The concept of<br>Vectors and application of r-DNA technology in<br>Gene cloning.  |
|    |   | CO-04 | Gains knowledge on construction of Gene<br>Libraries, Gene transfer methods and Production of<br>Transgenic plants. Periodical debates conduct to<br>discuss the pros and cons of Transgenic plants<br>through Student forums to attain the knowledge on<br>contemporary developments on the usage of<br>Genetically Modified Organisms (GMO's).  |
| 11 | Seed Technology<br>(Paper-VIII)<br>Elective-B                   | CO-01 | Basic concepts of Seed structure, Seed dormancy,<br>Seed Storage. Structure of Pollen grains and ovules.<br>Student can demonstrate pollen viability test using<br>Evans Blue.  |
|    |   | CO-02 | Gains knowledge on the factors affecting Seed<br>viability, Seed treatment to control seed borne<br>diseases. Understands the Cultural Practices and<br>harvesting of Seed.   |
|    |   | CO-03 | Explains the Principles of Hybrid seed production<br>and Seed development in Cultivated plants. Gains<br>knowledge on the Heterosis and Genetic purity of<br>the seed.  |
|    |   | CO-04 | The students are acquaints with the aspects of Seed<br>production technology, Seed Certification and Seed<br>Banks through field visits to the concerned<br>institutions. Student can demonstrate the seed<br>viability test, estimation of amylase activity.   |



| 12 | Bio control of Plant<br>Diseases and Pests.<br>Paper-VIII<br>(Elective-C) | CO-01 | Gains knowledge on Biological control of diseases<br>caused by Pathogens. Practical knowledge on<br>identification of disease based on the Histo-<br>pathogenesis.                |
|----|---|-------|---|
|    |   | CO-02 | The student acquires knowledge on the concepts of<br>Pheramones, Semi-chemicals, Botanical<br>insecticides and Plant parasitic Nematodes.   |
|    |   | CO-03 | To impart knowledge on commercialization of<br>Baculovirus insecticides, natural and genetic<br>engineering methods to control the weeds.   |
|    |   | CO-04 | Comprehensive knowledge of IPM (Integrated Pest<br>Management strategies. Students can demonstrate<br>the extraction of Biopesticide from <i>Neem</i> ,<br><i>Chrysanthemum</i> . |



|      |   | AENT OF BO | DTANY-COURSE OUTCOMES  |
|------|---|------------|--|
| S.NO | Paper Title &Code   | СО         | Course Outcomes  |
| 1    |   | NUMBER     |  |
| 1    | Microbial Diversity<br>& Lower Plants<br>PAPER-I                      | CO-01      | Student gains knowledge on basic structure,<br>metabolic and reproductive methods of bacteria and<br>Viruses. Special attention given for the plant<br>diseases caused by the Bacteria and Viruses. The<br>unique characteristics of Archaebacteria,<br>Actinomycetes and Mycoplasma also covered in<br>course.  |
|      |   | CO-02      | Student's familirised with the concept of<br>Biofertilizers and its producing organisms. They<br>also know about the basic biology, life cycles and<br>economic importance of Algae. Practical<br>knowledge on identification of the algae and<br>cultivation of Bio fertilizers.  |
|      |   | CO-03      | Students acquire knowledge on General characters<br>and economic importance of Fungi and Lichens.<br>Dissection capabilities of the student to observe<br>pathological stage of the pathogen in infected plant<br>material.  |
|      |   | CO-04      | Student's gains knowledge on evolutionary trends<br>in Bryophytes and Pteridophytes by comparing the<br>features of case study plants. The aspects of origin<br>of stele and Heterospory are given special attention<br>to taught since these events are important for<br>understanding the Evolution process.   |
| 2    | Gymnosperms,<br>Taxonomy of<br>Angiosperms and<br>Ecology<br>PAPER-II | CO-01      | The student knows about origin of Gymnosperms<br>and general characters with reference to the case<br>study plants. The concept of Geological Time Scale<br>introduced to the students and they are also<br>familiarize with the formation of the fossils.   |
|      |   | CO-02      | The student understands and applies the basic<br>principles and rules of Botanical nomenclature for<br>identification and naming the plant.<br>A basic understanding of the classification<br>systems, origin & history of ICBN and<br>interpretation of phylogenetic trees for<br>reconstructing the evolutionary relationships<br>between the plants. Practical knowledge of<br>identification of the plants and preserving the plant<br>specimens using Herbarium techniques. |
|      |   | CO-03      | A basic understanding of systemic study of plant<br>families (Dicotyledons and Monocotyledons) and<br>description of the plants based on the classification<br>learns by the students.   |
|      |   | CO-04      | The learner understands the concept of Ecosystem<br>(structural and functional aspects), ecological<br>adaptations of plants and concept of plant<br>succession (Hydrosere, Xerosere).   |



| 2 | T. A             | 00.01 |   |
|---|------------------|-------|---|
| 3 | Taxonomy of      | CO-01 | The student gains knowledge on plant systematics      |
|   | Angiosperms &    |       | and comparative study of the different classification |
|   | Medicinal Botany |       | systems. Awareness of the recent trends in            |
|   | Paper-III        |       | advanced taxonomy, herbarium techniques and           |
|   | _                |       | salient features of Schenzen code.                    |
|   |                  | CO-02 | A basic understanding of the systematic study of      |
|   |                  |       | the plant characters (morphological & sexual) of      |
|   |                  |       | families and technical description of the plants.     |
|   |                  | CO-03 | <b>* *</b>  |
|   |                  | 0-05  | The student gains knowledge on introduction and       |
|   |                  |       | scope of Ethnomedicine and outlines of traditional    |
|   |                  |       | medicinal systems like Ayurveda, Unani, Sidda and     |
|   |                  |       | Homeopathy. Students are advised to go through        |
|   |                  |       | the Ministry of Health and AYUSH web sites to get     |
|   |                  |       | aware of the importance of these traditional          |
|   |                  |       | therapeutic systems. They also got exposed to         |
|   |                  |       | common medicinal plants in primary health care        |
|   |                  |       | (through field visits), evaluation of crude drugs and |
|   |                  |       | enlightened with the functional roles of agencies     |
|   |                  |       | like NMPB, CIMAP and CDRI.                            |
|   |                  | CO-04 | With the comparative study of the Traditional         |
|   |                  | 0-04  | medicine and Modern medicine student                  |
|   |                  |       |   |
|   |                  |       | understands the Traditional medicine as a resource    |
|   |                  |       | for modern medicine by studying the active            |
|   |                  |       | principles of medicinal plants. They also exposed to  |
|   |                  |       | basic concepts of Pharmacognocy collection,           |
|   |                  |       | processing and storage of the plant crude drugs.      |
|   |                  | T.    | 1   |
| 4 | Plant Anatomy,   | CO-01 | The student gains detail knowledge on                 |
|   | Embryology and   |       | Meristematic tissues, Permanent tissues and Leaf      |
|   | Palynology       |       | Ontogeny. Practical knowledge on stomata types.       |
|   | (Paper-IV)       | CO-02 | The secondary growth concept introduced to the        |
|   |                  |       | students with comparative study of Anomalous          |
|   |                  |       | secondary growth plants (Achyranthes, Bignonia,       |
|   |                  |       | Boerhaaavia, Dracaena and Beetroot). Practical        |
|   |                  |       | knowledge on Wood structure and its basic             |
|   |                  |       | •   |
|   |                  |       | properties of the commercially important plants       |
|   |                  |       | through field visits.                                 |
|   |                  | CO-03 | The student gains knowledge of introduction of        |
|   |                  |       | Embryology and basics of Microsporogenesis and        |
|   |                  |       | Megasporogenesis.                                     |
|   |                  | CO-04 | The student enlightened with chronological Pre-       |
|   |                  |       | Fertilization and Post-Fertilization events of sexual |
|   |                  |       | life cycle of the plants. Introduction to NPC         |
|   |                  |       | classification and its applications.                  |
|   | I                | L     | classification and no approvidions.                   |
| 5 | Cell Biology and | CO-01 | The basic knowledge of structure and functions of     |
| 5 | Genetics         |       | -   |
|   | Genetics         |       | Plant cell envelopes (Cell wall & Cell Membrane).     |



|   | (Paper-V)           |                | The detail understanding of the ultra structure of   |
|---|---------------------|----------------|--|
|   |                     |                | the Nucleus, Nucleic acids (DNA &RNA),   |
|   |                     |                | Chromosomes morphology and organization of   |
|   |                     |                | DNA in a chromosome through animations.  |
|   |                     | CO-02          | The student gains knowledge on properties of Extra   |
|   |                     |                | Nuclear Genomes and their inheritance pattern.   |
|   |                     |                | They are also enlightened with Cell cycle and  |
|   |                     |                | Mutations (Chromosomal Aberrations and Gene  |
|   |                     |                | Mutations).  |
|   |                     | CO-03          | Students acquire knowledge on Mendelian laws of  |
|   |                     | 00.00          | inheritance, concept of Linkage and Construction   |
|   |                     |                | of Genetic maps.   |
|   |                     | CO-04          | Understand the concepts of Gene organization and   |
|   |                     | 0-04           | Genetic code. Special focus on concepts of Central   |
|   |                     |                | Dogma of Molecular Biology (CDMB). Regulation  |
|   |                     |                |  |
|   |                     |                | of Transcription (with reference to Lac & Trp  |
|   |                     |                | Operons) and Translation. Practical knowledge on   |
|   |                     |                | Cytochemical studies acquire by the students.  |
| 6 | Ecology &           | CO-1           | The student going knowledge on Elements of   |
| 0 | Biodiversity Paper- | 0-1            | The student gains knowledge on Elements of<br>Environment, structural and functional aspects of  |
|   | VI (Elective-A)     |                | =  |
|   |                     | <u> </u>       | Ecosystem and Ecological adaptations of Plants.  |
|   |                     | CO-02          | Basic concepts of Population Ecology and   |
|   |                     |                | Community Ecology learnt by the student. Have  |
|   |                     |                | awareness on process of pedogenesis, soil erosion,   |
|   |                     |                | conservation methods and analysis of Soil  |
|   |                     |                | properties.  |
|   |                     | CO-03          | Explain the Community dynamics with reference to   |
|   |                     |                | Hydrosere and Xerosere. Gains knowledge on   |
|   |                     |                | concepts of Productivity and Biodiversity. Students  |
|   |                     |                |  |
|   |                     |                | are enlightened to Convention of Biodiversity  |
|   |                     |                | are enlightened to Convention of Biodiversity<br>through AV tools to know the value and  |
|   |                     |                |  |
|   |                     | CO-04          | through AV tools to know the value and   |
|   |                     | CO-04          | <ul><li>through AV tools to know the value and significance of Biological resources.</li><li>Gains the knowledge on level of Biodiversity.</li></ul>   |
|   |                     | CO-04          | <ul><li>through AV tools to know the value and significance of Biological resources.</li><li>Gains the knowledge on level of Biodiversity.</li><li>Concept of Hotspots and Endemism. Detailed study</li></ul>  |
|   |                     | CO-04          | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of</li> </ul>   |
|   |                     | CO-04          | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical</li> </ul>  |
|   |                     | CO-04          | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical knowledge on studying the plant communities can</li> </ul>  |
|   |                     | CO-04          | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical</li> </ul>  |
| 7 | Horticulture        |                | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical knowledge on studying the plant communities can be demonstrated by the learner.</li> </ul>  |
| 7 | Horticulture        | CO-04<br>CO-01 | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical knowledge on studying the plant communities can be demonstrated by the learner.</li> <li>The students aware on Scope and opportunities in</li> </ul>  |
| 7 | Paper-VI            |                | through AV tools to know the value and<br>significance of Biological resources.Gains the knowledge on level of Biodiversity.<br>Concept of Hotspots and Endemism. Detailed study<br>of the opportunities and scope in the areas of<br>Conservations methods of Biodiversity. Practical<br>knowledge on studying the plant communities can<br>be demonstrated by the learner.The students aware on Scope and opportunities in<br>Horticulture. Gains knowledge on types of  |
| 7 |                     | CO-01          | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical knowledge on studying the plant communities can be demonstrated by the learner.</li> <li>The students aware on Scope and opportunities in Horticulture. Gains knowledge on types of Horticulture crops and manures.</li> </ul>  |
| 7 | Paper-VI            |                | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical knowledge on studying the plant communities can be demonstrated by the learner.</li> <li>The students aware on Scope and opportunities in Horticulture. Gains knowledge on types of Horticulture crops and manures.</li> <li>Student can demonstrate Artificial propagation</li> </ul>  |
| 7 | Paper-VI            | CO-01          | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical knowledge on studying the plant communities can be demonstrated by the learner.</li> <li>The students aware on Scope and opportunities in Horticulture. Gains knowledge on types of Horticulture crops and manures.</li> <li>Student can demonstrate Artificial propagation methods, transplanting, field preparation, use of</li> </ul>  |
| 7 | Paper-VI            | CO-01          | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical knowledge on studying the plant communities can be demonstrated by the learner.</li> <li>The students aware on Scope and opportunities in Horticulture. Gains knowledge on types of Horticulture crops and manures.</li> <li>Student can demonstrate Artificial propagation methods, transplanting, field preparation, use of herbicides, top dressing of fertilizers and use of</li> </ul> |
| 7 | Paper-VI            | CO-01          | <ul> <li>through AV tools to know the value and significance of Biological resources.</li> <li>Gains the knowledge on level of Biodiversity.</li> <li>Concept of Hotspots and Endemism. Detailed study of the opportunities and scope in the areas of Conservations methods of Biodiversity. Practical knowledge on studying the plant communities can be demonstrated by the learner.</li> <li>The students aware on Scope and opportunities in Horticulture. Gains knowledge on types of Horticulture crops and manures.</li> <li>Student can demonstrate Artificial propagation methods, transplanting, field preparation, use of</li> </ul>  |



|   |   |       | Landscaping and Plant Growth regulators in<br>Horticulture.   |
|---|---|-------|---|
|   |   | CO-04 | The student's familarised with the concept of<br>Organic farming and Bonsai techniques. Practical<br>knowledge on garden implements and making of<br>organic compost.   |
| 8 | Microbiology and<br>Plant Pathology<br>(Paper-VI)<br>Elective-C | CO-01 | Student's gains knowledge on chronology of<br>discovering Microorganisms, cellular properties of<br>prokaryotic organisms and in-vitro growth methods<br>of Microorganisms.   |
|   |   | CO-02 | Explains the Genetic recombination methods in<br>prokaryotes, Biological Nitrogen Fixation (BNF)<br>and industrial applications of Microorganisms.  |
|   |   | CO-03 | The students are acquainted with the historical developments in plant pathology, epidemiology and plant disease management  |
|   |   | CO-04 | Gains knowledge on disease resistance genes and<br>its application in Inducted resistance. Explain the<br>basic concepts of Molecular Plant Pathology and<br>application of Information technology in Plant<br>Pathology. The learner can demonstrate of<br>Biopesticides against some pathogens and<br>Preparation of Winogradsky column using pond<br>bottom mud, observations on temporal sequence of<br>appearance of microbes (visual appearance).         |
| 9 | Plant Physiology<br>(Paper-VII)                                 | CO-01 | Understanding the physical properties of Water and<br>mechanisms behind the movement of water and<br>minerals from Soil to Plant. The Transpiration and<br>Translocation concepts explained. Practical<br>knowledge on the role of mineral nutrition and<br>symptoms of mineral deficiency.   |
|   |   | CO-02 | Symptoms of mineral deficiency.Gains knowledge on Enzyme Nomenclature,<br>Classification, Enzyme Kinetics and regulation<br>mechanisms. Detail knowledge on Structural,<br>Biochemical and Molecular aspects of the Light<br>Phase Reaction and Carbon fixation methods of<br>Photosynthesis. Explained the basics of<br>Photochemistry. The Blackmann's Law of limiting<br>factor and its application in studying the factors<br>affecting the Photosynthesis. |
|   |   | CO-03 | The basic concepts of Aerobic and Anaerobic<br>Respiration. Understanding the sequence of<br>biochemical pathways of Respiration, their<br>correlation and feedback control mechanisms.<br>Explanation of the concepts of Nitrogen<br>Metabolism and Lipid Metabolism.  |



|    |   | CO-04   | <ul> <li>Gains knowledge on synthesis, transport and physiological effects of Phytohormones on Plant</li> <li>Growth and Development. Understands the Physiology of flowering and photoperiodism.</li> <li>Student can demonstrate the determination of Stomatal frequency, rate of transpiration, separation of plant pigments and estimation of protein.</li> </ul> |
|----|---|---------|---|
| 10 | Tissue culture &<br>Biotechnology<br>(Paper-VIII)<br>Elective-A | CO-01   | Introduction of the History, Scope and basic<br>terminology used in Tissue culture. Student can<br>demonstrate the sterilization methods, Callus<br>culture and Organ culture.  |
|    |   | CO-02   | Gains knowledge on Somatic Hybrids, Cybrids and<br>Application of Tissue Culture. Practical knowledge<br>on estimation of DNA, PCR technique<br>demonstrates to the learner through AV tools and<br>Animations.   |
|    |   | CO-03   | The student acquires knowledge on History, scope<br>and applications of Biotechnology. The concept of<br>Vectors and application of r-DNA technology in<br>Gene cloning.  |
|    |   | CO-04   | Gains knowledge on construction of Gene<br>Libraries, Gene transfer methods and Production of<br>Transgenic plants. Periodical debates conduct to<br>discuss the pros and cons of Transgenic plants<br>through Student forums to attain the knowledge on<br>contemporary developments on the usage of<br>Genetically Modified Organisms (GMO's).                      |
| 11 | Seed Technology<br>(Paper-VIII)<br>Elective-B                   | CO-01   | Basic concepts of Seed structure, Seed dormancy,<br>Seed Storage. Structure of Pollen grains and ovules.<br>Student can demonstrate pollen viability test using<br>Evans Blue.  |
|    |   | CO-02   | Gains knowledge on the factors affecting Seed<br>viability, Seed treatment to control seed borne<br>diseases. Understands the Cultural Practices and<br>harvesting of Seed.   |
|    |   | CO-03   | Explains the Principles of Hybrid seed production<br>and Seed development in Cultivated plants. Gains<br>knowledge on the Heterosis and Genetic purity of<br>the seed.  |
|    |   | CO-04   | The students are acquaints with the aspects of Seed<br>production technology, Seed Certification and Seed<br>Banks through field visits to the concerned<br>institutions. Student can demonstrate the seed<br>viability test, estimation of amylase activity.   |
| 12 | Bio control of Plant  | t CO-01 | Gains knowledge on Biological control of diseases   |



| Diseases and Pests. |       | caused by Pathogens. Practical knowledge on       |
|---------------------|-------|---|
| Paper-VIII          |       | identification of disease based on the Histo-     |
| (Elective-C)        |       | pathogenesis.                                     |
|                     | CO-02 | The student acquires knowledge on the concepts of |
|                     |       | Pheramones, Semi-chemicals, Botanical             |
|                     |       | insecticides and Plant parasitic Nematodes.       |
|                     | CO-03 | To impart knowledge on commercialization of       |
|                     |       | Baculovirus insecticides, natural and genetic     |
|                     |       | engineering methods to control the weeds.         |
|                     | CO-04 | Comprehensive knowledge of IPM (Integrated Pest   |
|                     |       | Management strategies. Students can demonstrate   |
|                     |       | the extraction of Biopesticide from Neem,         |
|                     |       | Chrysanthemum.                                    |



**Department of Physics- Course outcomes** 



| S.no | Paper title         | Semester    | Course Outcomes  |
|------|---------------------|-------------|--|
| 1.   | Paper -I            | Semester -I | <u>Unit-I</u>  |
|      | Mechanics           |             | 1.To understand the basic concepts of<br>Vector fields, application of vectors by using<br>various theorems.   |
|      |                     |             | <u>Unit-II</u>   |
|      |                     |             | <ul><li>2.To understand various laws of motion,</li><li>2,3- dimensional collisions.</li><li>3.To able to understand Angular momentum<br/>Rotational motion &amp; Gyroscope.</li></ul> |
|      |                     |             | <u>Unit-III</u>  |
|      |                     |             | 4.Able to differentiate central forces,<br>Inverse square law and Kepler's laws  |
|      |                     |             | <u>Unit-iV</u>   |
|      |                     |             | 5.Theorems of Relativity able to understand<br>Michelson – Morley experiment, Lorentz<br>transformations, Four vector formalism.   |
|      |                     |             |  |
| 2.   | Paper-II<br>Waves & | Semester-II | <u>Unit-I</u>  |
|      | Oscillations        |             | Concept of SHM, Compound Pendulum,<br>Measurement of 'g' in different combination<br>Lissajous figures.  |
|      |                     |             | <u>Unit-II</u>   |
|      |                     |             | Able to understand about damped and<br>Oscillations, amplitude resonance, Coupled<br>Oscillations  |
|      |                     |             | <u>Unit-III</u>  |



|    |                                  |              | Understanding different types of waves<br>In vibrating strings<br><u>Unit-IV</u><br>Able differentiating vibration of bars in<br>different types of combinations, Tuning fork.   |
|----|----------------------------------|--------------|--|
| 3. | Paper -III<br>Thermal<br>Physics | Semester-III | <ul> <li><u>Unit-I</u></li> <li>Able to know about transport phenomena of gases, Thermodynamic scale of Temperature, Concept of entropy in all Aspects. T-S diagram.</li> <li><u>Unit-II</u></li> <li>Can understand thermodynamic potentials Cp-Cv &amp; Cp/Cv=s expression for joule coefficient foe perfect and Vander walls gas. Joule-kelvin effect, Joule-Thomson cooling, Kapitsa method- liquifying helium, Principle Of refrigeration</li> <li><u>Unit-III</u></li> <li>To know about black body energy spectrum Planks law, Rayleigh jeans law, Stefan's law to measure the radiation using pyrometers To calculate effective temperature of sun.</li> </ul> |
| 4. | Paper -IV<br>OPTICS              | Semester -IV | <u>Unit-IV</u><br>Able to understand about phase space,<br>Ensembles , Maxwell Boltzmann distribution<br>Laws, differences applications, Neutron   |



|    |                                 |             | 1  |
|----|---------------------------------|-------------|--|
|    |                                 |             | stars.   |
|    |                                 |             | <u>Unit-I</u><br>To enlighten about light interference<br>different types and conditions. Lloyd's<br>mirror experiment. Wedge method,<br>Newton's rings, wave length determination<br>Using Michelson interferon meter sodium<br>D1, D2 lines. |
|    |                                 |             | <u>Unit-II</u><br>To aware the student about different<br>types of diffraction and methods double slit,<br>Calculate the resolve power of grating in<br>different methods, Zone plate uses.  |
|    |                                 |             | <u>Unit-III</u><br>To understand the concept of Polarization,<br>Methods to get polarized light, Babine<br>Compensator, Lorentz half shade<br>polarimeter.   |
| 5. |                                 |             | <u>Unit-IV</u><br>To know about types of aberrations and ways<br>to minimize it. Optical fibres types,<br>Principles and advantages of optical fibre<br>communications.  |
| 5. | Paper-V<br>Electro<br>Magnetism | Semester -V | <u>Unit-I</u><br>Able to understand the concept of electric<br>Field, Flux, Gauss law applications,<br>Conservative nature of electric field 'E',<br>Concept of electric potential calculation.  |
|    |                                 |             | <u>Unit-II</u><br>To understand about magnetic field,<br>Magnetic flux, Properties and Ampere's<br>Law applications, Ballistic galvanometer<br>working principle.  |



|    |  |              | <u>Unit-III</u><br>To enlighten the concept of Electromagnetic<br>Induction forms, Lenz's law, self and mutual<br>Induction, Maxwell equations.   |
|----|--|--------------|---|
|    |  | Semester -V  | <u>Unit-IV</u><br>To Understand about Electromagnetic waves<br>types, Polarization of EM waves,   |
| 6. | Paper-VI(A)                            |              | Brewster's angle, deception of linear,<br>Circular and elliptical polarization.   |
|    | Solid state<br>Physics<br>(Elective-I) |              | <u>Unit-I</u><br>To understand about different types of<br>Crystal structure, Unit cell, Miller indices.<br>Types of Lattices. SC, BCC, FCC, HCP,<br>Brillouin zones, X-ray diffraction by<br>Crystals, Braggs law, Dulong and Petits law,<br>T3 law. |
|    |  |              | <u>Unit-II</u><br>Magnetic properties of matter dia, para,<br>ferro magnetic materials Curiel's law, B-H<br>curve and to understand dielectric<br>properties of materials.  |
|    |  |              | <u>Unit-III</u><br>To understand about Band theory,<br>Classification based on it. Conductivity of<br>semiconductor, mobility, hall effect,<br>Measurement of conductivity and hall<br>coefficient.   |
| 7. | Paper-VII                              | Semester -VI | <u>Unit-IV</u><br>To aware about LASER types and Ruby<br>laser,<br>He-Ni laser concepts, Superconductivity<br>Concept& types. Isotope effect and BCS<br>theory.   |



|    | Modern   |              |   |
|----|--|--------------|---|
|    | Physics  |              |   |
|    |  |              | <u>Unit-I</u><br>To aware about atomic spectra and models.<br>Alpha particle scattering, Rutherford<br>Scattering formula, model and limitations<br>Bohr's model of hydrogen atom, limitations. |
|    |  |              | <u>Unit-II</u><br>To elaborate understanding about wave<br>particle duality, de-Broglie hypothesis,<br>Wave packet types, distribution Heisenberg<br>uncertainty principle.                     |
|    |  |              | <u>Unit-III</u><br>To get knowledge about Nuclear size and<br>structure and atomic weight relation.<br>Nuclear force nature, Liquid -drop model<br>and binding energy, magnetic numbers.        |
| 8. | Paper -VIII(A)<br>Basic<br>electronics<br>(Elective-I) | Semester -VI | <u>Unit-IV</u><br>To understand concept of radioactivity,<br>Alpha decay, Beta decay, Fission& Fusion,<br>Mass defect, Nuclear reactor.   |
|    |  |              | <u>Unit-I</u><br>To have basic knowledge about network<br>Elements and network theorems, Models,<br>Transport networks, Y, H and ABCD<br>parameters.  |
|    |  |              | <u>Unit-II</u><br>Broad knowledge about band theory in<br>Solids. Semiconductors, N-type, P-type<br>Conductors. P-N junction diode, Zener diode<br>as a voltage regulator.                      |
|    |  |              | <u>Unit-III</u><br>To elaborate knowledge about bipolar   |



|  | junction transistor.<br>p-n-p, n-p-n transistors, CE, CB, CC<br>configurations, RC- coupled<br>amplifier which are used in all electronic<br>devices.  |
|--|--|
|  | <u>Unit-IV</u><br>The modern development trend binary<br>number system, conversions. Decimal<br>to hexagonal vice-versa. Logic gates OR,<br>AND, NOT gates truth tables EX-OR,<br>De-Morgan's laws proof |
|  |  |
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|      | DEPARTME   | NT OF CHE | EMISTRY-COURSE OUTCOMES  |  |  |
|------|--|-----------|--|--|--|
| S.NO | -  |           | Course Outcomes  |  |  |
|      |  | NUMBER    |  |  |  |
|      |  | CO-01     | The Student acquires knowledge on nature of<br>Chemical bonding and Hybridizations, Bond order<br>and Magnetic properties of elements. The physical<br>and Chemical properties of Group-13, Group-14<br>and Group-15 elements.   |  |  |
|      |  | CO-02     | The students understand the basics of organic<br>chemistry and factors influencing reactivity.<br>Preparations, properties (physical &Chemical) and<br>uses of Acyclic hydrocarbons(Alkanes, Alkenes<br>and Alkynes)   |  |  |
|      | Inorganic Chemistry,   | CO-03     | Basics of the Atomic structure and elementary quantum mechanics.   |  |  |
| 1    | Organic Chemistry,<br>Physical Chemistry,<br>General Chemistry-<br>Paper-I |           | Student acquires the knowledge on Deviation of<br>real gases from ideal gas properties.<br>The Student learns the factors affecting the liquid<br>state parameters.<br>Basic laws which governs the properties of the<br>Solutions   |  |  |
|      |  | CO-04     | Solutions<br>Student acquires the practical knowledge of semi<br>qualitative analysis of Cations and Anions. The<br>Student understands the concept of isomerism and<br>applies the various representation projections to<br>determine the 3D structures of the Molecules.<br>Understand the intermolecular forces in liquid and<br>solid basic principles of crystallography. Uses of<br>the X-ray diffraction and crystal structure in<br>Chemistry and Life Sciences. Practical knowledge<br>on Semi micro analysis of salt mixure. |  |  |
| 2    |  | CO-01     | The student acquires the Preparations, properties<br>(physical &Chemical) of P-block elements. The<br>student can distinguish inter halogens, Poly halides<br>and Pseudo halogens based on their properties<br>which is explained in an illustrative manner. The<br>students understand the concept of Noble gases and<br>their compounds.   |  |  |
|      | Inorganic Chemistry,   | CO-02     | The Students understands the structure<br>Preparations, properties (physical &Chemical) of<br>organic halogen compounds. The student acquires<br>the knowledge on Preparations, properties (physical<br>&Chemical) of Alcohols, Phenols, Ethers and<br>Carbonyl compounds. Special attention given to<br>understanding the SN1, SN2, Pinacole-Pinacalone<br>rearrangement, Reimer-Teimer Reaction etc  |  |  |
|      | Organic Chemistry,<br>Physical Chemistry,<br>General Chemistry-            | CO-03     | Basic understanding of the electrochemical properties and its industrial applications in making electrical batteries.  |  |  |
|      | Paper-II   | CO-04     | The students acquire the practical knowledge on  |  |  |



|   |  |                | volumetric and Gravimetric analysis titration<br>methods. By studying the Stereoisomerism student<br>can identify and naming (D, L & R, S<br>nomenclature) the optically active compounds. The<br>students gain the knowledge on various colligative<br>properties and their experimental determination.<br>Practical knowledge on Semi micro analysis of salt<br>mixture. (Cations, Anions)   |
|---|--|----------------|--|
| 2 |  | CO-01          | The students introduced to peculiar properties and<br>configurations of Lanthanides and Actinides.<br>Basics of Axis of Symmetry, Plane of Symmetry,<br>Centre of symmetry and improper rotational axis of<br>symmetry. Classification, Physical and chemical<br>properties of non aqueous solvents and its  |
| 3 | Inorganic Chemistry,<br>Organic Chemistry,<br>Physical Chemistry,<br>General Chemistry-<br>Paper-III | CO-02<br>CO-03 | <ul> <li>applications in medicine and industry.</li> <li>The student acquires the knowledge on<br/>classification, preparations, properties and<br/>applications of Alcohols, Ethers, Epoxides and<br/>carbonyl compounds.</li> <li>The students acquire the basic knowledge on<br/>properties and applications of phase rule (Phase<br/>rule of water system, Lead-silver system and salt<br/>water system), colloids and surface chemistry.</li> <li>Applications missiles in domestic and industrial<br/>purposes explained to the students.</li> </ul> |
|   |  | CO-04          | The synthesis and applications of nano materials in<br>various areas. The stereo properties of carbon<br>compounds and basic principles of conformational<br>analysis. The student gains practical knowledge on<br>estimation of carbonates and bicarbonates.  |
| 4 | Inorganic Chemistry,<br>Organic Chemistry,<br>Physical Chemistry,<br>General Chemistry-<br>Paper-IV  | CO-01          | Introducing the concept and theories (Werner,<br>Sidgwick, EAN, VBT) of Coordination compounds<br>and their isomeric properties. Applications of<br>organo metallic compounds in synthesis of organic<br>compounds and structural properties of metal<br>carbonyls.  |
|   |  | CO-02          | Student gains knowledge on Classification and<br>preparation, properties (physical &chemical) and<br>applications of Carboxylic acids, Nitro hydro<br>carbons. Special importance given to the named<br>reactions like Arndt-Eistert synthesis, Hell-<br>Volhard-Zelensky(HVZ), Nef reaction, Mannich<br>reaction, Michael addition & reduction reaction for<br>preparing the students in exam and practical point<br>of view.   |



|   |  | CO-03          | <ul> <li>The basic understanding of the Electro chemistry princioles like Kholrausch's law, Debye-Huckel-Onsagar's theory, Hittorf's method and their applications in Industry.</li> <li>Student gains the knowledge of HOMO and LUMO</li> </ul>   |
|---|--|----------------|--|
|   |  |                | energy levels and their importance. Introduces the<br>basic terminology of Synthetic strategies. The<br>student gains practical knowledge on<br>potentiometric titrations.   |
| 5 | Inorganic Chemistry,<br>Organic Chemistry,<br>Physical Chemistry,<br>General Chemistry-<br>Paper-V | CO-01          | The detail knowledge of Coordination compounds<br>with reference to Crystal Field Theory (CFT),<br>magnetic properties and Electronic metal spectra.<br>Applications of coordination compounds in<br>chemical analysis, Cancer therapy, Synthesis of<br>polymers and Water softening.  |
|   |  | CO-02          | The student acquires the knowledge on<br>classification, preparations, properties (physical and<br>chemical) and applications of Amines, Cyanides,<br>Isocyanides, Heterocyclic compounds (Pyrrole,<br>Furan and Thiophene).   |
|   |  | CO-03          | The student acquires derivation knowledge on Zero<br>order, First order, Second order and Third order<br>reactions of Chemical Kinetics.   |
|   |  | CO-04          | <ul> <li>Student gains knowledge on Principles of Electro</li> <li>Spectroscopy (electronic transitions), Infrared</li> <li>Spectroscopy (Energy levels and vibrations of Atom).</li> <li>Mechanism of photochemical reactions like</li> <li>Phosphorescence and Fluorescence.</li> <li>At the end of this semester student acquainted with chromatography techniques and identification of functional groups in organic compounds.</li> </ul> |
| 6 | INSTRUMENTAL<br>METHODS OF   | CO-01          | Students acquire knowledge on basic principles of Chromatography.  |
|   | ANALYSIS<br>PAPER-VI-<br>(ELECTIVE-A)  | CO-02          | Student gains knowledge on preparation and usages<br>of Column chromatography, Ion Exchange<br>chromatography, GC-MS.  |
|   |  | CO-03<br>CO-04 | Basics of Colorimetry and its applicationsStudent gains practical knowledge on knowledgeon Volumetric titration techniques, Chemicalkinetics, Potentiometry and PH-Metry.  |
| 7 | INDUSTRIAL<br>CHEMISTRY AND<br>CATALYSIS   | CO-01          | The student gains knowledge on general principles<br>of metallurgy and its applications in mining<br>industry.   |



|   | PAPER-VI<br>(ELECTIVE-B)   | CO-02 | Student acquires knowledge on types of dyes and its applications in Textile industry.   |
|---|--|-------|---|
|   |  | CO-03 | Student gains knowledge on Types of Catalytic reactions, Enzyme catalysis and its kinetics.   |
|   |  | CO-04 | Student gains practical knowledge on, Spectral<br>analysis of organic compounds and separation of<br>two component mixture.   |
| 8 | Analysis of Drugs,<br>Foods & Dairy  | CO-01 | Students will know about the analysis of frequently used pharmaceutical drugs.  |
|   | Products.<br>PAPER-<br>VI(ELECTIVE-C)  | CO-02 | Student's gains knowledge on Pharmaceutical<br>preparations of Allegra, Zyrtec(Citirizine),<br>Alprazolam.  |
|   |  | CO-03 | Student's gains knowledge on Pharmaceutical<br>preparations of Phenobarbital, Phenacemide,<br>Atenolol. Furosemide, Triamterene.  |
|   |  | CO-04 |   |
|   |  |       | Student's gains practical knowledge on detection f<br>adulteration in Milk, Milk products and food<br>materials. Analysis of Water quality parameters<br>like DO, COD and BOD.  |
| 9 | Inorganic Chemistry,   | CO-01 | Students acquire knowledge on inorganic reaction  |
| , | Organic Chemistry,<br>Physical Chemistry,<br>General Chemistry-<br>Paper-VII |       | mechanisms and their thermodynamic and physical<br>properties based on VBT and CFT. Biological<br>significance of essential elements (Sodium,<br>Potassium, Iron, Cobalt etc.), and transport<br>mechanism of Oxygen in mammals. HSAB<br>Classification.  |
|   |  | CO-02 | Students acquainted with Nomenclature,<br>Classification, preparations, properties (Physical<br>&Chemical) and the biological significance of<br>Carbohydrates and Amino acids.   |
|   |  | CO-03 | Student gain the knowledge on Basic<br>Thermodynamic terminology, Laws of<br>Thermodynamics, Carnot's cycle and Kirchhoff's<br>equation.  |
|   |  | CO-04 | Student understands the Proton Magnetic<br>Resonance spectroscopy and Principles of Nuclear<br>Magnetic Resonance (NMR), equivalent and non-<br>equivalent protons, position of signals and<br>Applications of NMR with suitable examples. The<br>laboratory skills like determination of Cell<br>constant, determination of distribution coefficient<br>and verification of Beer-Lamberts law are also |



|    |   |       | acquired.   |
|----|---|-------|---|
|    |   |       |   |
| 10 | MEDICINAL<br>CHEMISTRY<br>(PAPER-VIII)              | CO-01 | Students know about the basic Nomenclature and<br>terminology of drugs and diseases. Drug delivery<br>and administration routes in the body.  |
|    | ELECTIVE-A  | CO-02 | Student knows about Enzyme- Substrate kinetics,<br>types of Inhibition and interactions of Drug-<br>Receptor.   |
|    |   | CO-03 | Student knows about synthesis and therapeutic<br>activity of the drugs. They also got familiarize with<br>metabolic disorders drugs (Ibuprofen,Paracetamol,<br>Tolbutamide ) and drugs acting on nervous<br>system(Benzocaine, Nitrous Oxide).                        |
|    |   | CO-04 | Students are acquainted with importance of<br>Vitamins, Hormones and Neurotransmitters in<br>human body. Practical knowledge of Quantitative<br>analysis of organic compounds acquires by the<br>students.  |
| 11 | AGRICULTURAL  | CO-01 | Student enlightened with adverse effects of   |
| 11 | AUD FUEL<br>CHEMISTRY<br>PAPER-VIII<br>(ELECTIVE-B) | 0-01  | chemical pesticides on human health and<br>Environment. They also know about the potential<br>benefits of Bio pesticides. Case studies of<br>Azadirachtin, Pyrethrins, Pyrethroids, nicotinoids<br>(Imidacloprid) showed to students.                                 |
|    |   | CO-02 | Students understand the potential harmfulness of         NPK Chemical fertilizers and importance of         Biofertilizers in Organic farming.  |
|    |   | CO-03 | Students know about that Renewable and Non-<br>renewable energy resources. They also enlightened<br>with practical knowledge at Singareni mines about<br>types of coal and its formation.   |
|    |   | CO-04 | Students acquainted with the formation of fossilfuels. Basic principles of Refining. ReformingPetroleum and non Petroleum products.Types of Lubricants and its industrial applications.Students know about practical knowledge onpreparation of Aspirin, Paracetamol. |
| 12 | GREEN   | CO-01 | Students know about the Concept and scope of the  |
| 12 | GREEN<br>CHEMISTRY<br>PAPER-VIII<br>(ELECTIVE-C)    |       | Students know about the Concept and scope of the<br>Green Chemistry. The basic principles and<br>synthesis of Green Chemistry also illustrates with<br>the students.  |
|    |   | CO-02 | Student's gains knowledge on selection of solvent<br>in aqueous phase reactions.  |
|    |   | CO-03 | Students acquired knowledge on basics of  |



|     |                                    | Microwave synthesis. | and Ultrasound assisted green  |   |         |     |        |
|-----|------------------------------------|----------------------|--|---|---------|-----|--------|
|     |                                    | ~                    | aine knowledge on green synthesis /  | 1 |         |     |        |
| S1. | Paper Title & Code                 | reactions or         | ains knowledge on green synthesis /  |   |         |     |        |
| No. |                                    |                      | d its practical applications in industry.  |   |         |     |        |
|     |                                    |                      | s gains practical knowledge on   |   |         |     |        |
|     | Semester - I                       |                      | of arganicknow paup drancest volidee &   |   |         |     |        |
|     | History of India (From Earliest    |                      | aphthple-histipis of ith) hy Defrantons -  |   |         |     |        |
|     | Times to c.700 CE)                 | methods.             | Nature and Scope of History - History and  |   |         |     |        |
|     | Discipline Specific Course - Paper | -                    | Its Relationship with other Social   |   |         |     |        |
|     | 1                                  |                      | Sciences - Geographical Features of India  |   |         |     |        |
|     |                                    |                      | Sources of Indian History: Pre-History   |   |         |     |        |
|     |                                    |                      | Paleolithic, Mesolithic, Neolithic,  |   |         |     |        |
|     |                                    | CO-02                | Chalcolithic and Megalithic Cultures.<br>Students importance of Indus Valley         |   |         |     |        |
|     |                                    | 0-02                 | Civilization - Its Features & Decline;   |   |         |     |        |
|     |                                    |                      | Early Vedic and Later Vedic Civilizations  |   |         |     |        |
|     |                                    |                      | Vedic Literature Society Economy -   |   |         |     |        |
|     |                                    |                      | Polity Religion.   |   |         |     |        |
|     |                                    | CO-03                | Students Understand background of our  |   |         |     |        |
|     |                                    | 00 05                | religion, customs institutions,  |   |         |     |        |
|     |                                    |                      | administration and so on Rise of New   |   |         |     |        |
|     |                                    |                      | Religious Movements Charvakas,   | Г | ΓΡΔ     | RΤΛ | ИEN    |
|     |                                    |                      | Lokayathas, Jainism and Buddhism;  |   |         | OF  | VILLIN |
|     |                                    |                      | Mahajanapadas - Rise of Magadha;   |   |         | TOR | v      |
|     |                                    |                      | Alexander's Invasion and its impact.   |   | 1115    | 100 | . 1    |
|     |                                    | CO-04                | Understand the social, political, religious  |   | CO      | URS | E      |
|     |                                    |                      | and economic conditions of the   |   | OUT     |     |        |
|     |                                    |                      | Foundation of the Mauryan Dynasty;   |   |         |     |        |
|     |                                    |                      | Ashoka and His Dharma Polity   |   |         |     |        |
|     |                                    |                      | Administration - Society Economy   |   |         |     |        |
|     |                                    |                      | Religion Literature - Art and Architecture;  |   |         |     |        |
|     |                                    |                      | Disintegration of the Mauryan Empire;  | S | Pa      | C   | Co     |
|     |                                    |                      | Post-Mauryan Kingdoms - Indo-Greeks -  | 1 | pe      | 0   | urs    |
|     |                                    |                      | Kushanas and Kanishka - Society  | . | r       | Ν   | e      |
|     |                                    |                      | Economy Literature Art and Architecture;   | Ν |         | u   | Out    |
|     |                                    |                      | The Satavahanas; Sangam Age , Litarary   | 0 | tle     | m   | co     |
|     |                                    | <u> </u>             | Development.   | • | &       | b   | me     |
|     |                                    | CO-05                | Understand the social, political, religious  |   | С       | er  |        |
|     |                                    |                      | and economic conditions of the Gupta   |   | od      |     |        |
|     |                                    |                      | Empire: A Brief Political Survey - Polity  |   | e       | ~   | ~      |
|     |                                    |                      | and Administration, Social and Economic<br>Conditions, Agriculture and Land Grants - |   |         | C   | Stu    |
|     |                                    |                      | Feudalism, Caste System, Position of   |   |         | 0   | den    |
|     |                                    |                      | Women, Education, Literature, Science  |   | Hi      | -   | ts     |
|     |                                    |                      | and Technology, Art and Architecture -   |   | st      | 0   | und    |
|     |                                    |                      | Harshavardana and His Achievements.  |   | or      | 1   | erst   |
|     |                                    | I                    | Tharshavardana and Ths Achievements.   | I | y<br>of |     | and    |
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.700-152 Disciplin – II Ist Y Semester

| S1.                                | Paper Title & Code              | Со     | Course Outcome                         |
|------------------------------------|---------------------------------|--------|--|
| No.                                |                                 | Number |  |
|                                    |                                 |        |  |
|                                    |                                 |        |  |
|                                    | History of India (1526-1857 CE) | CO-01  | Students understand importance         |
| Discipline Specific Course - Paper |                                 |        | Establishment of Mughal Dynasty -      |
|                                    | – III IInd Year                 |        | Sources Shershah Sur and His Reforms - |



| Semester - III |       | Brief Survey of Political History of<br>Mughals Akbar, Shah Jahan and<br>Aurangzeb - Polity - Administration<br>Society Economy Technological<br>Developments - Religion Hindu-Muslim<br>Relations Emergence of Composite<br>Culture<br>Education Language and Literature Art<br>and Architecture - Disintegration of<br>Mughal Empire. |
|----------------|-------|---|
|                | CO-02 | Students Gained an awareness of Rise of<br>Regional Powers - Marathas Shivaji and<br>His Administration Peshwas - Sikhs.  |
|                | CO-03 | Students known importance of Advent of<br>European Powers - Portuguese, Dutch,<br>English and French, Anglo- French<br>Rivalry - Expansion and Consolidation of<br>British Power We Subsidiary Alliance   |
|                | CO-04 | Students gained knowledge Three Stages<br>of Colonialism Mercantilism - Free Trade<br>Policies Finance Capital - Land Revenue<br>Settlements Cornwallis and Permanent<br>Revenue Settlement;<br>Thomas Munroe and Ryotwari;<br>Mahalwari System Changes in the<br>Agrarian<br>Economy and Condition of Peasantry<br>Famines.            |
|                | CO-05 | Students knowledge of Decline of Rural<br>Cottage Industries and Urban Handicrafts<br>- Growth of Railways,<br>Roads, Communication Modern Industries<br>Coal Mines, Textiles, Iron and Steel,<br>etc Anti-Colonial Upsurge - 1857<br>Revolt Nature, Causes and Results.  |

| Sl. | Paper Title & Code | Со     | Course Outcome |
|-----|--------------------|--------|----------------|
| No. |                    | Number |                |



| History of India (1858-1964 CE)<br>Discipline Specific Course -Paper –<br>IV<br>IInd Year Semester - IV | CO-01 | Students understand importance Queen's<br>Proclamation – Beginning of Colonial<br>Rule – Introduction of Western Education<br>– Role of Christian Missionaries – Press,<br>Communication and Emergence of<br>Middle Classes - Lytton and Rippon:<br>Impact of their Policies.  |
|---|-------|--|
|   | CO-02 | Students gained Knowledge of Socio-Religions Reform Movements – BrahmaSamaj - Arya Samaj - TheosophicalSociety - Ramakrishna Mission - AligarhMovement; Anti-Caste Movements -Jyotibha Phule - Narayana Guru - PeriyarRamaswamy Naicker and Dr. B.R.Ambedkar.  |
|   | CO-03 | Students Known the Factors for the Rise<br>of Nationalism – Formation of Indian<br>National Congress – Three Phases of<br>Freedom Struggle: Moderate Phase,<br>Extremist Phase and Gandhian Era - Non-<br>Cooperation, Civil Disobedience and Quit<br>Indian Movement; Indian National Army<br>and Subhash Chandra Bose. |
|   | CO-04 | Students knowledge about Revolutionary<br>Movement: Gadhar Party – Bhagath Singh<br>– Chandra Sekhar Azad and Others; Left-<br>Wing Movement – Rise of Socialist and<br>Communist Parties - Peasant and Workers<br>Movements.  |
|   | CO-05 | Students gained an awareness of<br>Emergence of Communal Politics and<br>Mohd. Ali Jinnah – Prelude to Partition of<br>India - Sardar Vallabhai Patel and<br>Integration of Princely States into Indian<br>Union – Republic of India – Jawaharlal<br>Nehru and His Policies  |



| Sl.<br>No. | Paper Title & Code   | Co<br>Number | Course Outcome   |
|------------|--|--------------|--|
|            | World History (1453-1815 CE)<br>Discipline Specific Course – Paper<br>- V<br>B.A. Final Year<br>Semester - V | CO-01        | Students gained knowledge of Fall of<br>Constantinople (1453 C.E.) – Beginning<br>of Modern Age in Europe – Geographical<br>Discoveries and Scientific Inventions and<br>their impact on Society – Rise of New<br>Ideas – Spirit of Humanism – Renaissance<br>– Meaning-Causes and Results – Impact<br>of Renaissance on Europe. |
|            |  | CO-02        | Students understand importance<br>Reformation Movement – Causes –<br>Martin Luther, John Calvin and Zwingli;<br>Counter Reformation Movement and<br>Ignatius Loyola – Results of Reformation<br>and<br>Counter Reformation.  |
|            |  | CO-03        | Students gained knowledge about<br>Emergence of Nation States – Causes –<br>Spain – Charles V; England – Henry VIII<br>- Glorious Revolution (1688); France<br>under Bourbons – Louis XIV; Era of<br>Enlightened Despotism – Peter the Great<br>and his Policies – Frederick the Great and<br>his Achievements.                  |
|            |  | CO-04        | Students gained an awareness of End of<br>Feudalism – Industrial Revolution –<br>Causes for Industrialization in England<br>and Europe – Textile Industry – Working<br>Class Movement.   |
|            |  | CO-05        | Students known the information about<br>American War of Independence (1776) –<br>French Revolution (1789) – Causes,<br>Course, Results and its Impact. Factors for<br>the Rise of Napoleon – Domestic and<br>Foreign Policies – Fall of Napoleon.  |

| Sl.<br>No. | Paper Title & Code                                       | Co<br>Number | Course Outcome  |
|------------|--|--------------|---|
|            | History of Telangana (From Earliest<br>Times to 1724 CE) | CO-01        | Students understand importance Sources<br>– Archaeological and Literary Sources -<br>Geographical Features of Telangana - Pre<br>History – The Age of Satavahanas – |



| r |       |  |
|---|-------|--|
|   |       | Origin – Administration - Society and  |
|   |       | Economy – Religion - Language &  |
|   |       | Literature - Art & Architecture  |
|   |       |  |
|   | CO-02 | Students gained information of Post-<br>Satavahana Period - Ikshvakus –<br>Vishnukundins – A Brief Political History<br>– Society – Economy – Religion -<br>Language & Literature - Art &<br>Architecture.   |
|   | CO-03 | Students gained knowledge of Origin and<br>Early History of Chalukyas of Badami<br>and their Contribution to Culture -<br>Chalukyas of Vemulavada & Mudigonda -<br>Political History – Society – Economy –<br>Religion - Language & Literature - Art &<br>Architecture.  |
|   | CO-04 | Students understand importance<br>Kakatiyas – Origin and Early History –<br>Ganapatideva, Rudramadevi and<br>Prataparudra - Administration - Society –<br>Economy – Language & Literature - Art<br>& Architecture – Sammakka-Sarakka<br>Revolt - Post-Kakatiya Political<br>Developments – Musunuri Nayakas,<br>Recherla Rulers – Their Contribution to<br>Culture.  |
|   | CO-05 | Students gained knowledge Qutb Shahis<br>of Golconda – Origin and Political<br>History – Society – Economy -<br>Agriculture – Irrigation – Trade &<br>Commerce – Religion – Language &<br>Literature – Art & Architecture – Political<br>Conditions in Telangana from 1687 to<br>1724 – Life and Times of Sarvai Papanna.<br>Recommended Books: G. Yazdani, Early<br>History of Deccan, 2 Vols. D. Raja<br>Reddy, The Study of Satavahana History:<br>The Source Material. |
|   |       |  |



| Sl.<br>No. | Paper Title & Code  | Co<br>Number | Course Outcome   |
|------------|---|--------------|--|
|            | Islamic History and Culture (From<br>Earliest Times to the fall of<br>Ummayads) Discipline Specific<br>Elective - Paper - I (B) Semester –<br>V |              | Students gained knowledge The Scope of<br>Islamic History – Geographical<br>Conditions of Arabic – Pagan Civilization<br>and Islam – Political and Social<br>Conditions before the Prophet.  |
|            |   |              | Students understand importance Early<br>Life of Prophet Muhammad – Mecca<br>period – Migration to Madina – the Holy<br>Quran – the Battle of Badr-Conquest of<br>Mecca – Conditions of Arabic at the death<br>of Prophet-Prophet Muhammad as<br>Politician, Social Reformer and Leader.<br>Students gained an awareness of The Era<br>of Pious Khalifas – Abu-Bakr, Umar –<br>Further expansion – Osman Ali their<br>achievements – The Struggle for power<br>between Syria and Al-Iraq and Hijaz<br>Administrative System under Khalifas.<br>Students understand importance The<br>Ummayad Khalifas – Mua' Wiyah-Yazid-<br>I-Battle of Karbala-Marwan-I, Abdul<br>Malik and his achievements – Causes for<br>the fall of Khalifas.<br>Students understand importance Al-<br>Walid-I – Suleman-Ibn-ul-Azi-Hisham<br>and his relations with Byzantine-<br>Conquests in East and West-Development<br>of Society and growth of Fine Arts –<br>Marwan-II and the fall of Ummayads –<br>Administrative System under Ummayads<br>– Society under Ummayads. |



| Sl.<br>No. | Paper Title & Code   | Co<br>Number | Course Outcome   |
|------------|--|--------------|--|
|            | History of USA (1776-1991 CE)<br>Discipline Specific Elective - Paper<br>- I (C) | CO-01        | Students gained knowledge of American<br>Revolution – Causes – Consequences –<br>Formation of U.S.A. – Confederation of<br>States – George Washington, Alexander<br>Hamilton – Thomas Jefferson -<br>Administration – War of 1812 and Its<br>Revolts.  |
|            |  | CO-02        | Students understand importance Nation<br>Building Process 1815-1865 - The<br>Monroe Doctrine – Jacksonian<br>Democracy - West Ward Movement –<br>South and North Divergence – The<br>Missouri Compromise – Civil War 1861-<br>65.  |
|            |  | CO-03        | Students understand importance Abraham<br>Lincoln - Reconstruction of the South<br>America – The Economic Revolution –<br>Industrialization- American Labour<br>Movement - Agrarian Revolution   |
|            |  | CO-04        | Students gained an awareness of<br>Emergence of Modern America 1890-<br>1919 - The Populist Party and Its<br>Programmes – Progressive Movement –<br>Imperialism in Cuba – Panama Canal<br>Issue – Woodrow Wilson – USA in World<br>War-I - USA and League of Nations.  |
|            |  | CO-5         | Students understand importance Inter<br>War Period 1919-1939 –Washington<br>Disarmament Conference – Kellogg<br>Briand Pact – The Great Depression –<br>Franklin Roosevelt and the New Deal -<br>U.S.A. in the World War-II – Emergence<br>of USA as World Power – Cold War –<br>Collapse of USSR, 1991 – Emergence of<br>Uni-Polar World. |



| S1. | Paper Title & Code           | CO     | Course Outcomes                            |   |     |   |      |
|-----|------------------------------|--------|--|---|-----|---|------|
| No. |                              | Number |  |   |     |   |      |
|     |                              | CO-01  | Students understand importance of          |   |     |   |      |
|     |                              |        | Congress of Vienna (1815) – Principles     |   |     |   |      |
|     |                              |        | and Impact; Metternich and his System –    |   |     |   |      |
|     |                              |        | 1830 and 1848 French Revolutions:          |   |     |   |      |
|     |                              |        | Unification of Italy – Role of Joseph      |   |     |   |      |
|     |                              |        | Mazzini, Count Cavour and Garibaldi;       |   |     | С |      |
|     |                              |        | Unification of Germany – Role of           |   |     | 0 | Stu  |
|     |                              |        | Bismarck; Significance of the Unification  |   |     | - | den  |
|     |                              |        | Movements.                                 |   |     | 0 | ts   |
|     |                              | CO-02  | Students understand importance Factors     |   | Fi  | 1 | und  |
|     |                              |        | responsible for the outbreak of First      | 1 | na  |   | erst |
|     |                              |        | World War (1914-18) – Results – Treaty     |   | l   |   | and  |
|     |                              |        | of Versailles – Its Provisions and         |   | Y   |   | im   |
|     | World History (1815-1950 CE) |        | Consequences; Russian Revolution (1917)    |   | ea  |   | por  |
|     | Paper – VI                   |        | - Causes - The role of Lenin - Results;    | 1 | r   |   | tan  |
|     |                              |        | League of Nations (1920) – Its             |   | Se  |   | ce   |
|     |                              |        | Achievements and Failures                  |   | m   |   | Th   |
|     |                              | CO-03  | Students gain the knowledge Europe         |   | es  |   | e    |
|     |                              |        | between World Wars: Turkey under           | 1 | te  |   | Ad   |
|     |                              |        | Mustafa Kamal Pasha - The Great            | 1 | r - |   | ven  |
|     |                              |        | Economic Depression and its Impact -       |   | V   |   | t of |
|     |                              |        | Mussolini and the Rise of Fascism in Italy |   | [   |   | Ab   |
|     |                              |        | - Hitler and Nazism in Germany -           |   | [s] |   | bas  |
|     |                              |        | Militarism in Japan.                       |   | a   |   | ids  |
|     |                              | CO-04  | Students understand knowledge of Second    |   | m   |   | _    |
|     |                              |        | World War – Causes and Results;            |   | ic  |   | Al-  |
|     |                              |        | Establishment of United Nations            |   | Hi  |   | Saf  |
|     |                              |        | Organization (1945) – Its Aims and         |   | st  |   | fah  |
|     |                              |        | Achievements; Cold War and Its Impact.     |   | or  |   | and  |
|     |                              | CO-05  | Students known about Colonization of       |   | У   |   | Al-  |
|     |                              |        | Asia - India and China under Colonial      |   | an  |   | Ma   |
|     |                              |        | Rule, Role of Gandhi in Indian National    |   | b   |   | nsu  |
|     |                              |        | Movement (1920-1947); Sun-Yat-Sen and      |   | С   |   | r    |
|     |                              |        | His Ideas; Role of MaoTse-Tung in          |   | ul  |   | Al-  |
|     |                              |        | Chinese Revolution – 1949.                 |   | u   |   | Ma   |
|     |                              |        |  |   | re  |   | hdi  |
|     |                              |        |  |   | (R  |   | -    |
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| Sl.<br>No. | Paper Title & Code   | Co<br>Number | Course Outcome   |
|------------|--|--------------|--|
|            | Semester - VI Introduction to<br>Indian Art and Architecture<br>Discipline Specific Elective - Paper<br>- II (C) | CO-01        | Students understand importance<br>Introduction to Art and Architecture - Pre-<br>Historic and Proto-Historic Art –<br>Harappan Arts and Crafts - Indian Art and<br>Architecture (c.600 BCE-1200 CE) –<br>Major Developments in Stupa and Cave<br>architecture - Temple Art & Architecture<br>– Early Indian Sculpture – Style and<br>Iconography – Early Illustrated<br>Manuscripts and Mural Painting<br>Traditions - Numismatic Art. |
|            |  | CO-02        | Students known information Indian Art &<br>Architecture (c.1200 CE-1800 CE) -<br>Sultanate and Mughal Architecture –<br>Miniature Painting Traditions – Mughal –<br>Rajasthani – Pahari - Introduction to Fort<br>– Palace - Haveli Architecture.  |
|            |  | CO-03        | Students gain information of South Indian<br>Art & Architecture – Unique Features –<br>Satavahana, Pallava, Chalukyan,<br>Hoyasala.  |
|            |  | CO-04        | Students understand importance Art &<br>Architecture under Kakatiya,<br>Vijayanagara, Bahmani and Qutb Shahis –<br>Amaravathi, Mahabalipuram, Badami,<br>Warangal, Hampi, Gulbarga and<br>Hyderabad – Influence of Islam on Indian<br>Art & Architecture.  |
|            |  | CO-05        | Students know importance of Modern and<br>Contemporary Indian Art & Architecture -<br>Colonial Period – Art Movements –<br>Bengal School of Art – Progressive<br>Artists Group, etc. – Major Artists and<br>Their Art Works – Popular Art Forms<br>(Folk Art Traditions) - IndoEuropean<br>architecture  |



| Sl.<br>No. | Paper Title & Code   | Co<br>Number | Course Outcome  |
|------------|--|--------------|---|
|            | History of India (1526-1857 CE)<br>Discipline Specific Course - Paper<br>– III IInd Year<br>Semester - III | CO-01        | Students understand importance of<br>Establishment of Mughal Dynasty -<br>Sources Shershah Sur and His Reforms -<br>Brief Survey of Political History of<br>Mughals Akbar, Shah Jahan and<br>Aurangzeb - Polity - Administration<br>Society Economy Technological<br>Developments - Religion Hindu-Muslim<br>Relations Emergence of Composite<br>Culture<br>Education Language and Literature Art<br>and Architecture - Disintegration of<br>Mughal Empire. |
|            |  | CO-02        | Student gained information of Rise of<br>Regional Powers - Marathas Shivaji and<br>His Administration Peshwas - Sikhs.  |
|            |  | CO-03        | Students Advent of European Powers -<br>Portuguese, Dutch, English and French,<br>Anglo- French Rivalry - Expansion and<br>Consolidation of British Power We<br>Subsidiary Alliance   |
|            |  | CO-04        | Students understand importance Three<br>Stages of Colonialism Mercantilism - Free<br>Trade Policies Finance Capital - Land<br>Revenue Settlements Cornwallis and<br>Permanent Revenue Settlement;<br>Thomas Munroe and Ryotwari;<br>Mahalwari System Changes in the<br>Agrarian<br>Economy and Condition of Peasantry   |



|       | Famines.                               |
|-------|--|
|       |  |
| CO-05 | Students known information Decline of  |
|       | Rural Cottage Industries and Urban     |
|       | Handicrafts - Growth of Railways,      |
|       | Roads, Communication Modern Industries |
|       | Coal Mines, Textiles, Iron and Steel,  |
|       | etc Anti-Colonial Upsurge - 1857       |
|       | Revolt Nature, Causes and Results.     |
|       |  |

| Sl.<br>No. | Paper Title & Code   | Co<br>Number | Course Outcome  |
|------------|--|--------------|---|
|            | World History (1815-1950 CE)<br>B.A. Final Year<br>Semester - VI<br>Discipline Specific Course - Paper<br>– VI | CO-01        | Known information of Congress of<br>Vienna (1815) – Principles and Impact;<br>Metternich and his System –<br>1830 and 1848 French Revolutions:<br>Unification of Italy – Role of Joseph<br>Mazzini,<br>Count Cavour and Garibaldi; Unification<br>of Germany – Role of Bismarck;<br>Significance of the Unification<br>Movements. |
|            |  | CO-02        | Students understand importance Factors<br>responsible for the outbreak of First<br>World War (1914-18) – Results –<br>Treaty of Versailles – Its Provisions and<br>Consequences; Russian Revolution (1917)<br>– Causes – The role of Lenin – Results;<br>League of Nations (1920) – Its<br>Achievements and Failures.             |
|            |  | CO-03        | Students understand importance Europe<br>between World Wars: Turkey under<br>Mustafa Kamal Pasha - The Great<br>Economic Depression and its Impact -<br>Mussolini and the Rise of Fascism in Italy<br>-   |



|       | Hitler and Nazism in Germany -<br>Militarism in Japan.   |
|-------|--|
| CO-04 | Known the importance of Second World<br>War – Causes and Results; Establishment<br>of United Nations<br>Organization (1945) – Its Aims and<br>Achievements; Cold War and Its Impact.   |
| CO-05 | Students understand importance<br>Colonization of Asia - India and China<br>under Colonial Rule, Role of Gandhi in<br>Indian National Movement (1920-1947);<br>Sun-Yat-Sen and His Ideas; Role of Mao-<br>Tse-Tung in Chinese Revolution – 1949. |

| Sl.<br>No. | Paper Title & Code   | Co<br>Number | Course Outcome   |
|------------|--|--------------|--|
|            | History of Telangana<br>(1724-2014 CE)<br>Discipline Specific<br>Elective - Paper - II (A)<br>B.A. Final Year<br>Semester - VI | CO-01        | Students understand importance Foundation of Asaf Jahi<br>Dynasty – Nizam-ul-Mulk to Mir Mahaboob Ali Khan –<br>Nizam-<br>British Relations – Salarjung Reforms - Modernization of<br>Hyderabad – 1857 Revolt and<br>Adivasi Rebellion – Ramji Gond – Rekapalli Revolt - The<br>Rule of Mir Osman Ali Khan –<br>Agriculture, Irrigation, Modern Industries and Economic<br>Development – Coal Mines,<br>Railways, Roads, Posts and Telegraph – Educational<br>Reforms – Osmania University –<br>Public Health. |
|            |  | CO-02        | Student knowledge about Social, Cultural and Political<br>Awakening in Telangana – Press, Journalism and Library<br>Movements – Arya Samaj and Its Activities – Ittehad-ul-<br>Muslimeen – Bhagya Reddy<br>Verma and Dalit Movements - The Role of Andhra Maha<br>Sabha – Hyderabad State<br>Congress – Political Developments in Hyderabad State –<br>Administrative and Constitutional<br>Reforms – Mulki-Non-Mulki Issue 1930 – Vandemataram  |



|   |       | Movement – Communist Party<br>and Its Activities – Andhra Mahila Sabha and Women's<br>Movement.  |
|---|-------|--|
| C | CO-03 | Student know information about Anti-Nizam and Anti-<br>Feudal Struggles – Telangana Peasants Armed Struggle<br>1946-51 –<br>Revolt by Kumaram Bheem – Razakars and Their Activities<br>– Police Action, 1948 –<br>Formation of Popular Ministry in 1952 – Assertion of Mulki<br>Identity and the City College<br>Incident 1952 – Merger of Telangana and the Formation of<br>Andhra Pradesh 1956.  |
| C | CO-04 | Known information of Discrimination, Dissent and Protest –<br>Violation of Gentlemen's Agreement – Agitation for<br>Separate Telangana State: Formation of Telangana Praja<br>Samithi – Role of Intellectuals,<br>Students and Employees in 1969 Movement.   |
| C | CO-05 | Students understand importance second Phase Movement for<br>Separate Telangana – Formation of Various Associations –<br>Telangana Aikhya Vedika – Telangana Jana Sabha -<br>Telangana Rashtra Samithi 2001 -<br>Role of Osmania and Kakatiya University Students and<br>Others - Formation of Telangana<br>Political Joint Action Committee and Its Role in the<br>Movement - Mass Mobilization –<br>Sakala Janula Samme – Million March – Sagara Haram,<br>Chalo Assembly – Sri Krishna<br>Committee and Its Recommendations – December 2009<br>Declaration and Later<br>Developments - The Formation of Telangana State, June<br>2014. |

| S1. | Paper Title & Code                   | Со     | Course Outcome                         |
|-----|--------------------------------------|--------|--|
| No. |                                      | Number |  |
|     |                                      |        |  |
|     |                                      |        |  |
|     | Islamic History and Culture (Rise    | CO-01  | Students understand importance The     |
|     | of Abbasids to Crusades)             |        | Advent of Abbasids – Al-Saffah and Al- |
|     | Discipline Specific Elective - Paper |        | Mansur Al-Mahdi-Revolt-in Khurasan     |
|     | - II (B)                             |        | – Byzantine Raid-Al-Hasi – his         |
|     | Final Year                           |        | Achievements – Haroon-Al-Rasheed-His   |



| Semester - VI |       | Political<br>and Neo-Political Achievements – Rise<br>and fall of Baramkids – Estimate of<br>Haroon<br>– Al-Rasheed's Character.  |
|---------------|-------|---|
|               | CO-02 | Students understand Al-Amin – Civil War<br>between Al-Amin and Al-Mamun-<br>Achievements of Al-<br>Mamun-later Khalifa of Abbasid Dynasty-<br>Al-Mustas – War with the Byzantine<br>Empire-Revolt of Tabaristan – the<br>Buwaids – Azad-ud-Daula – the Seljuqs –<br>Malekshah.  |
|               | C0-03 | Students gain knowledge The Crusades –<br>Causes – Course of Crusades – Imaduddin<br>– Zengi-Nuruddin –<br>Mahmud – The Results of Crusades – Fall<br>of Abbasid Dynasty.   |
|               | CO-04 | Students know about The Abbasid State –<br>Political and Military system – Judicial<br>Reforms – Education –<br>Socio-Economic Conditions – Growth of<br>Arts and Architecture under Abbasids –<br>Significance of Scientific Spirit.   |
|               | CO-05 | Students understand importance The<br>Ummayads in Spain – Abdur – Rahman –<br>Hisham I-War with the franks –<br>Cultural progress in Muslim Spain –<br>Fatimids of Egypt-Al-Mahsi-Al-Qaim-Al-<br>Fal<br>of Fatimids (1171 C.E.) – Administration<br>and Society under Fatimids. |

| Sl.<br>No. | Paper Title & Code  | Co<br>Number | Course Outcome   |
|------------|---|--------------|--|
|            |   |              |  |
|            | Introduction to Indian Art and<br>Architecture<br>Discipline Specific Elective - Paper<br>- II (C)<br>Final Year<br>Semester - VI | CO-01        | Acquire knowledge about Art and<br>Architecture - Pre-Historic and Proto-<br>Historic Art –<br>Harappan Arts and Crafts - Indian Art and<br>Architecture (c.600 BCE-1200 CE) –<br>Major Developments in Stupa and Cave<br>architecture - Temple Art & Architecture |



| CO-02 | Early Indian Sculpture – Style and<br>Iconography – Early Illustrated<br>Manuscripts and Mural Painting<br>Traditions - Numismatic Art.<br>Students understand greatness of Indian<br>Art & Architecture (c.1200 CE-1800 CE)<br>- Sultanate and Mughal<br>Architecture – Miniature Painting<br>Traditions – Mughal – Rajasthani – Pahari<br>-<br>Introduction to Fort – Palace - Haveli<br>Architecture. |
|-------|--|
| CO-03 | Acquire knowledge about South Indian<br>Art & Architecture – Unique Features –<br>Satavahana, Pallava,<br>Chalukyan, Hoyasala.   |
| CO-04 | Students known about Art & Architecture<br>under Kakatiya, Vijayanagara, Bahmani<br>and Qutb Shahis –<br>Amaravathi, Mahabalipuram, Badami,<br>CO-Warangal, Hampi, Gulbarga and<br>Hyderabad<br>– Influence of Islam on Indian Art &<br>Architecture.  |
| CO-05 | Acquire knowledge about Modern and<br>Contemporary Indian Art & Architecture -<br>Colonial Period – Art<br>Movements – Bengal School of Art –<br>Progressive Artists Group, etc. – Major<br>Artists and Their Art Works – Popular Art<br>Forms (Folk Art Traditions) - Indo-<br>European architecture.   |

| Sl.<br>No. | Paper Title & Code   | Co<br>Number | Course Outcome   |
|------------|--|--------------|--|
|            | World History (1453-1815 CE)<br>Discipline Specific Course – Paper<br>– V B.A. Final Year Semester - V | CO-01        | Students understand importance Fall of<br>Constantinople (1453 C.E.) – Beginning<br>of Modern Age in Europe – Geographical<br>Discoveries and Scientific Inventions and<br>their impact on Society – Rise of New<br>Ideas – Spirit of Humanism – Renaissance<br>– Meaning-Causes and Results – Impact<br>of Renaissance on Europe. |



| CO-02 | Acquire knowledge about Reformation<br>Movement – Causes – Martin Luther,<br>John Calvin and Zwingli; Counter<br>Reformation Movement and Ignatius<br>Loyola – Results of Reformation and<br>Counter Reformation.  |
|-------|--|
| CO-03 | Students known information Emergence<br>of Nation States – Causes – Spain –<br>Charles V; England – Henry VIII -<br>Glorious Revolution (1688); France under<br>Bourbons – Louis XIV; Era of<br>Enlightened Despotism – Peter the Great<br>and his Policies – Frederick the Great and<br>his Achievements. |
| CO-04 | Acquire knowledge about End of<br>Feudalism – Industrial Revolution –<br>Causes for Industrialization in England<br>and Europe – Textile Industry – Working<br>Class Movement.   |
| CO-05 | Students understand importance American<br>War of Independence (1776) – French<br>Revolution (1789) – Causes, Course,<br>Results and its Impact. Factors for the<br>Rise of Napoleon – Domestic and Foreign<br>Policies – Fall of Napoleon.  |

| S1. | Paper Title & Code | CO     | Course Outcomes                       |
|-----|--------------------|--------|---------------------------------------|
| No. |                    | Number |                                       |
|     |                    | CO-01  | Acquire knowledge about Foundation of |
|     |                    |        | Asaf Jahi Dynasty – Nizam-ul-Mulk to  |
|     |                    |        | Mir Mahaboob Ali Khan – NizamBritish  |
|     |                    |        | Relations – Salarjung Reforms -       |
|     |                    |        | Modernization of Hyderabad – 1857     |
|     |                    |        | Revolt and Adivasi Rebellion – Ramji  |
|     |                    |        | Gond – Rekapalli Revolt - The Rule of |
|     |                    |        | Mir Osman Ali Khan – Agriculture,     |
|     |                    |        | Irrigation, Modern Industries and     |



|     | I                                  |       |  |
|-----|------------------------------------|-------|--|
|     |                                    |       | Economic Development – Coal Mines,           |
|     |                                    |       | Railways, Roads, Posts and Telegraph –       |
|     |                                    |       | Educational Reforms –                        |
|     |                                    |       | OsmaniaUniversity - Public Health            |
|     | B.A. Final Year Semester - VI      | CO-02 | Social, Cultural and Political Awakening     |
|     | History of Telangana (1724-2014    |       | in Telangana – Press, Journalism and         |
|     | CE) Discipline Specific Elective - |       | Library Movements – Arya Samaj and Its       |
|     | Paper - II (A)                     |       | Activities – Ittehad-ul-Muslimeen –          |
|     | 1                                  |       | Bhagya Reddy Verma and Dalit                 |
|     |                                    |       | Movements - The Role of Andhra Maha          |
|     |                                    |       | Sabha – Hyderabad State Congress –           |
|     |                                    |       | Political Developments in Hyderabad          |
|     |                                    |       | State – Administrative and Constitutional    |
|     |                                    |       | Reforms – Mulki-Non-Mulki Issue 1930 –       |
|     |                                    |       | Vandemataram Movement – Communist            |
|     |                                    |       |  |
|     |                                    |       | Party and Its Activities – Andhra Mahila     |
|     |                                    |       | Sabha and Women's Movement.                  |
|     |                                    | CO-03 | Students to achieve knowledge Anti-          |
|     |                                    |       | Nizam and Anti-Feudal Struggles –            |
|     |                                    |       | Telangana Peasants Armed Struggle            |
|     |                                    |       | 1946-51 – Revolt by Kumaram Bheem –          |
|     |                                    |       | Razakars and Their Activities – Police       |
|     |                                    |       | Action, 1948 – Formation of Popular          |
|     |                                    |       | Ministry in 1952 – Assertion of Mulki        |
|     |                                    |       | Identity and the City College Incident       |
|     |                                    |       | 1952 – Merger of Telangana and the           |
|     |                                    |       | Formation of Andhra Pradesh 1956.            |
|     |                                    | CO-04 | Students known importance of                 |
|     |                                    |       | Discrimination, Dissent and Protest –        |
|     |                                    |       | Violation of Gentlemen's Agreement –         |
|     |                                    |       | Agitation for Separate Telangana State:      |
|     |                                    |       | Formation of Telangana Praja Samithi –       |
|     |                                    |       | Role of Intellectuals, Students and          |
|     |                                    |       | Employees in 1969 Movement                   |
|     |                                    | CO 05 |  |
|     |                                    | CO-05 | Students to achieve knowledge second         |
|     |                                    |       | Phase Movement for Separate Telangana        |
|     |                                    |       | - <b>Formation</b> of Various Associations - |
|     |                                    |       | Telangana Aikhya Vedika – Telangana          |
|     |                                    |       | Jana Sabha - Telangana Rashtra Samithi       |
|     |                                    |       | 2001 - Role of Osmania and Kakatiya          |
|     |                                    |       | University Students and Others -             |
|     |                                    |       | Formation of Telangana Political Joint       |
|     |                                    |       | Action Committee and Its Role in the         |
|     |                                    |       | Movement - Mass Mobilization – Sakala        |
|     |                                    |       | Janula Samme – Million March – Sagara        |
|     |                                    |       | Haram, Chalo Assembly – Sri Krishna          |
|     |                                    |       | Committee and Its Recommendations –          |
|     |                                    |       | December 2009 Declaration and Later          |
|     |                                    |       | Developments - The Formation of              |
|     |                                    |       | Telangana State, June 2014                   |
|     | 1                                  | 1     |  |
|     |                                    |       |  |
| Sl. | Paper Title & Code                 | СО    | Course Outcomes                              |



| No. |   | Number          |   |
|-----|---|-----------------|---|
| No. | B.A. Final Year Semester - VI   | Number<br>CO-01 | Students to achieve knowledge<br>Foundation of Asaf Jahi Dynasty –<br>Nizam-ul-Mulk to Mir Mahaboob Ali<br>Khan – NizamBritish Relations –<br>Salarjung Reforms - Modernization of<br>Hyderabad – 1857 Revolt and Adivasi<br>Rebellion – Ramji Gond – Rekapalli<br>Revolt - The Rule of Mir Osman Ali Khan<br>– Agriculture, Irrigation, Modern<br>Industries and Economic Development –<br>Coal Mines, Railways, Roads, Posts and<br>Telegraph – Educational Reforms –<br>OsmaniaUniversity - Public Health<br>Students to achieve knowledge Social, |
|     | History of Telangana (1724-2014<br>CE) Discipline Specific Elective -<br>Paper - II (A) |                 | Cultural and Political Awakening in<br>Telangana – Press, Journalism and<br>Library Movements – Arya Samaj and Its<br>Activities – Ittehad-ul-Muslimeen –<br>Bhagya Reddy Verma and Dalit<br>Movements - The Role of Andhra Maha<br>Sabha – Hyderabad State Congress –<br>Political Developments in Hyderabad<br>State – Administrative and Constitutional<br>Reforms – Mulki-Non-Mulki Issue 1930 –<br>Vandemataram Movement – Communist<br>Party and Its Activities – Andhra Mahila<br>Sabha and Women's Movement.                                  |
|     |   | CO-03           | Students to achieve knowledge Anti-<br>Nizam and Anti-Feudal Struggles –<br>Telangana Peasants Armed Struggle<br>1946-51 – Revolt by Kumaram Bheem –<br>Razakars and Their Activities – Police<br>Action, 1948 – Formation of Popular<br>Ministry in 1952 – Assertion of Mulki<br>Identity and the City College Incident<br>1952 – Merger of Telangana and the<br>Formation of Andhra Pradesh 1956.   |
|     |   | CO-04<br>CO-05  | Students known importance of<br>Discrimination, Dissent and Protest –<br>Violation of Gentlemen's Agreement –<br>Agitation for Separate Telangana State:<br>Formation of Telangana Praja Samithi –<br>Role of Intellectuals, Students and<br>Employees in 1969 Movement<br>Students knowledge about Second Phase<br>Movement for Separate Telangana –<br>Students to achieve knowledge Formation  |
|     |   |                 | Students to achieve knowledge Formation<br>of Various Associations – Telangana<br>Aikhya Vedika – Telangana Jana Sabha -<br>Telangana Rashtra Samithi 2001 - Role of<br>Osmania and Kakatiya University   |



| Students and Others - Formation of<br>Telangana Political Joint Action<br>Committee and Its Role in the Movement<br>- Mass Mobilization – Sakala Janula<br>Samme – Million March – Sagara Haram,<br>Chalo Assembly – Sri Krishna Committee<br>and Its Recommendations – December<br>2009 Declaration and Later Developments<br>The Formation of Talangana State June |
|--|
| - The Formation of Telangana State, June 2014  |

| Sl. | Paper Title & Code                   | СО       | Course Outcomes   |
|-----|--------------------------------------|----------|---|
| No. |                                      | Number   |   |
|     |                                      | CO-01    | Student Understanding The Advent of<br>Abbasids – Al-Saffah and Al-Mansur Al-<br>Mahdi-Revolt-in Khurasan – Byzantine |
|     |                                      |          | Raid-Al-Hasi – his Achievements –   |
|     | Final Year Semester - VI             |          | Haroon-Al-Rasheed-His Political and   |
|     | Islamic History and Culture (Rise of |          | Neo-Political Achievements – Rise and   |
|     | Abbasids to Crusades)                |          | fall of Baramkids – Estimate of Haroon –  |
|     | Discipline Specific Elective - Paper |          | Al-Rasheed's Character.   |
|     | - II (B)                             | CO-02    | Students known importance of Al-Amin  |
|     |                                      |          | - Civil War between Al-Amin and Al-   |
|     |                                      |          | Mamun-Achievements of AlMamun-later   |
|     |                                      |          | Khalifa of Abbasid Dynasty-Al-Mustas –  |
|     |                                      |          | War with the Byzantine Empire-Revolt of   |
|     |                                      |          | Tabaristan – the Buwaids – Azad-ud-   |
|     |                                      |          | Daula – the Seljuqs – Malekshah.  |
|     |                                      | CO-03    | Students to achieve knowledge The   |
|     |                                      |          | Crusades – Causes – Course of Crusades –  |
|     |                                      |          | Imaduddin – Zengi-Nuruddin – Mahmud   |
|     |                                      |          | – The Results of Crusades – Fall of   |
|     |                                      | ~~ ~ ~ / | Abbasid Dynasty.  |
|     |                                      | CO-04    | Students Acquire knowledge about The  |
|     |                                      |          | Abbasid State – Political and Military  |
|     |                                      |          | system – Judicial Reforms – Education –<br>Socio-Economic Conditions – Growth of                                      |
|     |                                      |          | Arts and Architecture under Abbasids –  |
|     |                                      |          | Significance of Scientific Spirit.  |
|     |                                      | CO-05    | Students known importance of The  |
|     |                                      |          | Ummayads in Spain – Abdur – Rahman –  |
|     |                                      |          | Hisham I-War with the franks – Cultural   |
|     |                                      |          | progress in Muslim Spain – Fatimids of  |
|     |                                      |          | Egypt-Al-Mahsi-Al-Qaim-Al-Fal of  |



|  | Fatimids (1171 C.E.) – Administration<br>and Society under Fatimids |
|--|---|
|--|---|

| Sl.<br>No. | Paper Title & Code   | Co<br>Number | Course Outcome   |
|------------|--|--------------|--|
|            | Semester - VI Introduction to<br>Indian Art and Architecture<br>Discipline Specific Elective - Paper<br>- II (C) | CO-01        | Understanding of Salient Features of Art<br>and Architecture - Pre-Historic and Proto-<br>Historic Art – Harappan Arts and Crafts -<br>Indian Art and Architecture (c.600 BCE-<br>1200 CE) – Major Developments in Stupa<br>and Cave architecture - Temple Art &<br>Architecture – Early Indian Sculpture –<br>Style and Iconography – Early Illustrated<br>Manuscripts and Mural Painting<br>Traditions - Numismatic Art. |
|            |  | CO-02        | Students to achieve knowledge Indian Art<br>& Architecture (c.1200 CE-1800 CE) -<br>Sultanate and Mughal Architecture –<br>Miniature Painting Traditions – Mughal –<br>Rajasthani – Pahari - Introduction to Fort<br>– Palace - Haveli Architecture.   |
|            |  | CO-03        | Students gain knowledge of South Indian<br>Art & Architecture – Unique Features –<br>Satavahana, Pallava, Chalukyan,<br>Hoyasala.  |
|            |  | CO-04        | Students known importance of Art &<br>Architecture under Kakatiya,<br>Vijayanagara, Bahmani and Qutb Shahis –<br>Amaravathi, Mahabalipuram, Badami,<br>Warangal, Hampi, Gulbarga and<br>Hyderabad – Influence of Islam on Indian<br>Art & Architecture.  |
|            |  | CO-05        | Students understand importance of<br>Modern and Contemporary Indian Art &<br>Architecture - Colonial Period – Art<br>Movements – Bengal School of Art –<br>Progressive Artists Group, etc. – Major<br>Artists and Their Art Works – Popular Art  |



| Forms (Folk Art Traditions) - |
|-------------------------------|
| IndoEuropean architecture     |

|      | Department of Economics - Course out comes |           |  |  |
|------|--|-----------|--|--|
| S.No | paper Title & Code                         | Co-Number | Course out comes   |  |
|      | 1 Semester-I Micro<br>Economics paper -I   | Co-01     | Student learns nature of the micro<br>economics subject like<br>wealth,welfare,security of<br>Economics definations and also<br>choice on economic problem.            |  |
|      |  | Co-02     | Student known as consumal<br>behaviour for example consumer<br>is rationalist consumer can buy<br>more utility of commodity and<br>aslo he can with consumer surplus   |  |
| 1    |  | Co-03     | He knows what is the defination of<br>demand and importance of<br>demand in the economic system.   |  |
|      |  | Co-04     | student learns concept of<br>supply,seller can sell more price of<br>commodity in the market.  |  |
|      |  | Co-05     | producer can produce least cost of<br>commodity and higher price can<br>he sell.ultimatly ultimately<br>students learn how to production<br>of producer of commodities |  |



|      | paper Title &                          |           |   |
|------|--|-----------|---|
| S.No | Code                                   | Co-Number | Course out comes  |
|      | semester II<br>Micro Economics -<br>II | C0-1      | Students learns cost and<br>revenue analysis. Producer<br>can prdocue commodities<br>with how much cost and he<br>can returns how much<br>revenue can sell the<br>quantitity. |
|      |  | CO-2      | Market structure, what is the<br>meaning of market<br>clarification of market overall<br>student learn about market in<br>the economy system.                                 |
| 2    |  | C0-3      | Students knows classification<br>of market, perfect<br>competition of maket,<br>imperfect competition of<br>market  |
|      |  | C0-4      | Concept of marginal<br>productivity what are the<br>factors of production student<br>improve the knowledge about<br>the production.   |
|      |  | C0-5      | what are the returns of<br>factors of production like<br>wage,rent,interest and profit<br>student knows about there in<br>the economy system.                                 |



| S.No | paper Title & Code                           | Co-Number | Course out comes  |
|------|--|-----------|---|
|      |  | C0-1      | Student knows mearning, nature and<br>scope of macro Economics.National<br>income,concept of national income in<br>the macro economics. |
|      |  | CO-2      | Student learns empoyment theories in<br>the economics how to get employment<br>in the economic system and also he<br>learns investment. |
| 3    | semester III<br>Macro Economics<br>paper-III | C0-3      | Money and theories of money, student<br>learns functions of money supply and<br>demand.purchasing power of money.                       |
|      |  | C0-4      | student knows what are the trade<br>cycles in the economy and inflation,<br>deflation,concept also.                                     |
|      |  | C0-5      | what is the rule of banking in the economy system.functions of banks and also stock markets.  |

|      | paper Title   |             |                             |
|------|---------------|-------------|-----------------------------|
| S.No | & Code        | Co-Number   | Course out comes            |
|      |               |             |                             |
|      | semester -IV  |             |                             |
|      | Public        |             | Student learns what is the  |
|      | Finance and   |             | defination of pulic finance |
| 4    | International | Co-Number 1 | in the economy.             |



| Trade |             | Student knows source of<br>public revenve.meaning<br>of the revenve and also |
|-------|-------------|--|
|       | Co-Number 2 | about taxes.   |
|       |             | Student knows public   |
|       |             | expendutere how to   |
|       |             | expenditure for the  |
|       |             | people welfare and how   |
|       | Co-Number 3 | to get public de   |
|       |             | International Trade  |
|       |             | importance in the  |
|       |             | economy system.what<br>are the exports and                                   |
|       |             | imports student  |
|       | Co-Number 4 | understood.  |
|       |             |  |
|       |             | Student learnswhat are   |
|       |             | the balance of payments  |
|       |             | in the international   |
|       |             | trade.and also   |
|       | Co-Number 5 | trade, exchange rates.   |
|       |             |  |
|       |             |  |
|       | Co-Number   | Course out comes   |
|       |             | student knows structer   |
|       |             | and planning of the indian   |
|       |             | economy and also   |
|       |             | students knows ecomic  |
|       |             | growth,development   |
|       | C0-1        | planning etc.  |
|       |             | Student learns national  |
|       |             | income, poverty and  |
|       |             | unemployment in the  |
|       |             | economy system.what  |
|       |             | are the eradication of   |
|       |             | poverty and  |
|       |             | unempolyment in nthe   |
|       | CO-2        | society.   |
|       |             | what is agriculture which  |
|       |             | factors are concern with   |
|       |             | agriculture, importance of   |
|       |             | agriculture ,food security   |
|       |             | in the country and also<br>student learn importance                          |
|       | C0-3        | of industry in the country.  |
|       | 0-5         | or mouse y in the country.   |



|      | meaning of service sector<br>and industrial<br>polices,problems of<br>industry,banking<br>insurance information<br>technology and |
|------|---|
|      | •.  |
|      | communication student   |
| C0-4 | learns above those.   |

| S.No | paper Title &<br>Code                         | Co-<br>Number | Course out comes   |
|------|---|---------------|--|
|      |   | C0-1          | Economic Growth and development<br>in dex of Economic development and<br>also student knows components of<br>humman development.   |
| 6    | semester-V<br>Economics of<br>development and | CO-2          | Students learns characters of<br>undevelopment<br>Economies,demography.  |
|      | Infrastructure<br>paper-II                    | C0-3          | Theories of Economic develoment<br>,NURKES,Hershman,Lewis,Shumpetes<br>Economists.Student learns Economic<br>development therioes. |
|      |   | C0-4          | student learns infra structure and<br>economic development health<br>education energy and transporation.                           |



| Co-Number | Course out comes  |
|-----------|---|
| CO-1      | Stuent learns Telangana<br>Economy,what is the Telangana<br>Economy,Components of Telangana<br>Economy,human Resources.                                 |
| CO-2      | Telangana GSDP,Unempolyment<br>povertyand employment generations<br>programmes in Telangana student<br>learns above those.                              |
| C0-3      | Stuent learns Telangana agriculture<br>system water souce,mission<br>Kakatiya,Mission Bagiradha,Irrigation<br>Projects ,Cropping pattern                |
| C0-4      | Student knows Telangana Industrial<br>and service sector industrial policy of<br>Telangana.Telangana infrastructure<br>transparts, Energy,communication |

| S.No | paper Title &<br>Code                     | Co-<br>Number | Course out comes   |
|------|---|---------------|--|
| 8    | Semester -VI<br>Agricultural<br>Economics | C0-1          | meaning Agricultural<br>Development,Nature and Scope of<br>Agricultural Economics what is the<br>relation between agricultural and<br>industry student learns those above. |
|      | Paper-II                                  | CO-2          | student learns meaning of land<br>reforms law less labour,gander<br>discrimination in the wages.   |



| 1              |  |
|----------------|--|
| C0-3           | student knows agriculture<br>production and productivity and<br>also green revulation                                  |
| C0-4           | Student try to understood<br>diversitication of agricultural<br>Economic activities and also<br>agricultural marketing |
| Co-Number      | Course out comes   |
| C0-1           | Student learns defination concept of<br>Ecology and Environment.   |
| CO-2           | Student knows problems of resource allocation.   |
| C0-3           | Impact of environment an GNP and<br>development Vs sustainable<br>development student learns above<br>those.           |
| C0-4           | Industrial and agricultural<br>technology,global environment<br>issues.student knows above those.                      |
| Co-Number      | Course out comes   |
| Co-Number<br>1 | Student learns fundamentals of<br>computers like Input -Output<br>devices ,CPU,RAM,Etc.                                |



|  |  | Co-Number<br>2 | word Processing with MS-word,MS-<br>Excel Main menu,copy cut and<br>paste,printing adocument above<br>those student learning. |
|--|--|----------------|---|
|--|--|----------------|---|

## **DEPARTMENT OF COMPUTER SCIENCE AND APPLICATIONS**

## **COURSE OUTCOMES**

|       |               | СО |                 |
|-------|---------------|----|-----------------|
| S.NO. | PAPER TITLE & |    | COURSE OUTCOMES |



|   | PAPER CODE                               | NUMBER |  |
|---|--|--------|--|
|   |  | CO1    | Students are able to understand<br>Basic concepts and terminology of<br>fundamental information technology.<br>Personal computers and their<br>operations. The history of computers.<br>Computer and basic concepts of<br>computer and they identify the I/O<br>devices and its functions. Finally<br>students gain knowledge of computer<br>equipment, including both hardware<br>and software. |
|   | FUNDAMENTAL OF<br>INFORMATION TECHNOLOGY | CO2    |  |
| 1 | &<br>DSC 103                             | CO3    | Students aware about types of<br>software's. Study and enhance<br>software skills. They gain knowledge<br>about programming languages.   |
|   |  | C04    | Students able to know about functions and services of operating system   |
|   |  | C05    | Students can understand the networks<br>and network deceives. They will be<br>able to know communications process<br>and the understand the security issues  |
|   |  | CO1    | The student knows about history of c<br>language. Understand the preparation<br>of algorithm and flowchart with<br>programming environment with c<br>program structure, declaration of<br>variables and constants, predefined data<br>types, understand operators,<br>expressions and preprocessors.   |
|   | COMPUTER PROGRAMMING IN<br>C & C++       | CO2    | Students gains knowledge of Control<br>structures (conditional sentences and<br>loops)   |
|   | &<br>DSC 203                             | CO3    | Students can design programs using<br>functions, arrays and strings. Will be<br>work with arrays of complex objects.   |
| 2 |  | CO4    | Students can design programs using pointers, structures and unions in C language.  |
|   |  | CO5    | Students understand the OOPs<br>concepts and differentiate between<br>structure oriented programming and<br>object oriented programming. An<br>ability to use template classes and the<br>STL library in C++   |



|   |                                       | CO1 | The student knows about history of C<br>language. Understand the preparation<br>of algorithm and flowchart of program.<br>Be familiar with programming<br>environment with C program Structure,<br>Declaration of Variables and Constants,<br>Predefined Data types. |
|---|---------------------------------------|-----|--|
|   |                                       | CO2 | Understand Operators, Expressions and<br>Preprocessors. Students can design<br>programs using Functions.   |
| 3 | PROGRAMMING WITH C<br>&<br>BC206      | CO3 | Students can design programs using<br>Arrays and Strings. Understand arrays,<br>its declaration and uses will be work<br>with arrays of complex objects.   |
|   |                                       | C04 | Students can design programs using<br>Pointers, Structures and Unions in C<br>language.  |
|   |                                       | C05 | Students can design programs using p<br>I/O Operations ( Put(), Get(), Putchar(),<br>Getchar()).   |
|   |                                       | CO1 | Students learn to enthusiasm to learn<br>creating their companies for practice.<br>Describe the basic concepts of<br>accounting about revenue, expense,<br>assets.   |
|   |                                       | CO2 | They understand the beauty of the computerized accounting they create their account related manual like stock information and liability and equity.  |
| 4 | COMPUTERIZED ACCOUNTING<br>&<br>BC506 | CO3 | Students can easily create balance<br>sheets, acquire competency to enter<br>accounting transactions in the<br>accounting software and have the<br>capability of generating different<br>accounting reports/documents.   |
|   |                                       | CO4 | Make cost analysis reports, profit & loss accounts, and cash flow statements, preparation of stores legers etc.  |
|   |                                       | C05 | Students can gains the knowledge tax,<br>and enter all the business transactions<br>in computerized accounting system<br>efficiently.  |
|   | E-COMMERCE<br>&                       | CO1 | Student should able to understand the<br>basic concepts and technologies used in<br>the field of management Electronic<br>commerce. Be aware of the ethical, E-  |
| 5 |                                       |     | marketing - E- advertising social, and security issues e-com.  |



| I | <b>—</b> <i>a</i> :=                         |     |  |
|---|--|-----|--|
|   | BC507  | CO2 | Describe E-banking, mobile commerce,<br>E-trading, E-learning, E-shopping. The<br>process of selling and marketing on<br>web. Understand the processes of<br>developing and implementing<br>information systems; |
|   |  | CO3 | Students can ability to understand the<br>connections and configurations TCP/IP,<br>HTTP, SECURED HTTP, SMTP – SSL.<br>At same time they practice to create<br>website.  |
|   |  | CO4 | Enlightenment of the topic Private key -<br>digital signatures - digital certificates.   |
|   |  | CO5 | Easily understand the methodologies of<br>E-marketing techniques, e- business.   |
|   |  | CO1 | Students can understand the procedural<br>and Object Oriented paradigm with<br>concepts of Streams, Classes,<br>Functions, Data and objects.<br>Understand dynamic memory<br>management techniques.              |
| 6 | OBJECT ORIENTED<br>PROGRAMMING WITH C++<br>& | CO2 | Understanding of the concepts of<br>Function ,Inheritance, using Pointers,<br>Constructors, Destructors, etc and<br>Polymorphism , overload Operators in<br>C++  |
|   | BC508  | CO3 | An understanding of the difference<br>between function Overloading and<br>function Overriding  |
|   |  | CO4 | An ability to incorporate Exception handling in object-oriented programs   |
|   |  | CO5 | An ability to write object-oriented<br>programs of moderate complexity in<br>C++   |
|   | COMMERCE LAB                                 | CO1 | Students will be understanding basic<br>business documents; they can design<br>and fill the documents easily.  |
|   |  | CO2 | Students grip about banking, insurance and finance related all the forms.  |
|   | & BC606                                      | CO3 | Students can able to understand the various business documents and their responsibilities.   |
| 7 |  | CO4 | Students acquire the knowledge about documents of taxation, they can easily find the act., and services.   |
|   |  | CO5 | Student gains the knowledge charts,<br>models, classifications and their<br>organizing.  |



|   | WEB TECHNOLOGIES                 | CO1 | <ul> <li>Explain the history of the internet and related internet concepts that are vital in understanding web development.</li> <li>the insights of internet programming and implement complete application over the web. Utilize the concepts of java script and java and identify the environments currently available on the market to design web sites.</li> <li>Demonstrate the important html tags for designing static pages and separate</li> </ul> |
|---|----------------------------------|-----|--|
|   | &                                | CO2 | design from content using cascading style sheet  |
| 8 | BC607                            | CO3 | Students will be able to write a server<br>side java application called JSP to catch<br>form data sent from client and store it<br>on database. Students are able to<br>develop a dynamic webpage by the use<br>of java script and DHTML.  |
|   |                                  | CO4 | Students will be able to write a server<br>side java application on mouse move -<br>on mouse out -on mouse over - on<br>move - onrest - onresize - onselect - on<br>submit - onunload.   |
|   |                                  | CO5 | Use web application development<br>software tools i.e. XML etc. Students<br>will be able to write a well formed /<br>valid XML document  |
|   |                                  | CO1 | Explain the features of database<br>management systems and relational<br>database. Design conceptual models of<br>a database using ER- modeling define<br>database system concepts   |
|   | RELATIONAL DATABASE              | CO2 | To analyze the existing design of a<br>database schema and apply concepts of<br>normalization to design an optimal<br>database   |
| 9 | MANAGEMENT SYSTEMS<br>&<br>BC608 | CO3 | Students be familiar with the relational<br>Database theory, and be able to write<br>Relational algebra expressions for high<br>level query. Implement basic DDL,<br>DML and DCL commands  |
|   |                                  | CO4 | Build, join, indexing, hash, group by<br>mechanisms for efficient retrieval of<br>information from a database.   |
|   |                                  | CO5 | Discuss advanced database technologies<br>and products used in enterprise.<br>Different types of databases such as<br>object oriented and distributed databases  |



|    | PROGRAMMING WITH C<br>&                         | CO1 | Students are able to understand<br>Personal computers and their<br>operations. The history of computers.<br>Identify the i/o devices and its<br>functions. History of c language.<br>Understand the preparation of<br>algorithm, flowchart of the program<br>and environment with c program<br>structure, declaration of variables and<br>constants, predefined data types,<br>operators. |
|----|---|-----|---|
| 10 | BSCs & BZCA Paper - I                           | CO2 | Students acquire the knowledge about decision of looping, branching, arrays and its types. Design the programs.   |
|    |   | CO3 | Students will analyze functions.<br>Demonstrate practical programs.   |
|    |   | CO4 | The knowledge about of pointers and<br>memory allocation. User defined data<br>types, file management of advantages.  |
|    |   | CO1 | Students aware the knowledge about<br>basic concepts of C++ (tokens, data<br>types etc.,)<br>Students able to be familiar with object<br>oriented programming environment.<br>Differentiate between structure oriented<br>programming and object oriented<br>programming.   |
|    | COMPUTER PROGRAMMING IN<br>C++<br>&             | CO2 | Students will understand the concepts of<br>oops classes, functions, constructors,<br>overloading and objects. Describes the<br>programs by algorithm based on<br>designed.   |
| 11 | BSCs & BZCA Paper- II                           | CO3 | Classify inheritance with the<br>understanding of member class access,<br>constructors and destructors in base and<br>derived classes, function overloading,<br>operator overloading, virtual functions,<br>polymorphism and streams.   |
|    |   | CO4 | Students will be learning to usage of<br>exception handling, generic<br>programming and templates. An ability<br>to use template classes and the STL<br>library in C++  |
|    | COMPUTER BASICS AND<br>AUTOMATION<br>&<br>SEC-I | CO1 | Understand the history of computers.<br>Computer and basic concepts of<br>computer. Aware about various types of<br>computers, types of input and output<br>devices.  |



| 13 |                                     |     |  |
|----|-------------------------------------|-----|--|
| 15 |                                     | CO2 | Students able to do the ms- office tasks internet access and their maintains.  |
|    |                                     | CO1 | Students can understand the concept<br>main concept of DBMS, they gains<br>knowledge about relational models<br>.design and implement a database<br>schema for given problem   |
|    | DATA BASE<br>MANAGEMENT<br>SYSTEM   | CO2 | Design conceptual models of a database<br>using ER modeling for real life<br>applications and also construct queries<br>in relational algebra  |
| 14 | &<br>DSC 1C<br>Bsc & BA Paper – III | CO3 | Students will understand database<br>implementations. Formulate queries<br>using SQL DML/DDL/DCL<br>commands. They gains practical<br>knowledge  |
|    |                                     | CO4 | Students will be demonstrating the intermediate SQL query knowledge at the same thing in practical.  |
|    | MULTIMEDIA AND<br>APPLICATIONS      | CO1 | Developed understanding of technical aspect of multimedia systems.   |
| 15 | &<br>SEC-II                         | CO2 | Understand various file formats for<br>audio, video and text media   |
|    | DESIGN AND ANALYSIS OF              | CO1 | Analyze algorithms and improve the<br>efficiency of Algorithm, understand<br>different algorithmic design strategies<br>different designing methods for<br>development of algorithms realistic<br>problems, such as divide and conquer<br>greedy method and etc. |
|    | ALGORITHMS<br>&<br>DSC 1D           | CO2 | Ability to understand how the choice of<br>data structures and the algorithm design<br>methods impact the performance of<br>programs. And describe the notations of<br>P, NP, NP-complete, and NP- hard<br>Gains the practical knowledge.                        |
| 16 | BSCs Paper - IV                     | CO3 | Construct minimal spanning trees and<br>find shortest path between source and<br>sink. Design the own algorithm to<br>practical  |
|    |                                     | CO4 | Analyze and estimate the performance<br>of algorithm. BFS, DFS etc., Learn the<br>programs for real time problems<br>solving.  |
|    | PROGRAMMING IN JAVA<br>&            | CO1 | Students can understand the features o<br>java, differences of C++ and java<br>Describes the control statements  |



| 17 | BSCs Paper - V                          |     | looping, object, class etc,. Develop<br>solutions for a range of problems using<br>objects and classes.   |
|----|---|-----|---|
|    |   | CO2 | Grip the concepts of Constructor's<br>Inheritance and Packages and<br>demonstrate the implementation of<br>constructors, destructors and operator<br>overloading. Apply fundamental<br>algorithmic problems including type<br>casting, inheritance                    |
|    |   | CO3 | Students will demonstrate and evaluate<br>exception, multithreading, input/output.<br>Demonstrate understanding and use of<br>different exception handling<br>mechanisms and concept of<br>multithreading for robust faster and<br>efficient application development. |
|    |   | CO4 | To understand a typical applets,<br>Event handling, AWT, database<br>handling using JDBC.<br>Identify and describe common abstract<br>User Interface Components to design<br>GUI in java using applet & AWT<br>along with response to events.                         |
|    |   | CO1 | Explicate the functions of each layer in<br>OSI and TCP/IP model. Explain the<br>types of transmission media  |
|    | COMPUTER NETWORKS                       | CO2 | Become competent in data link layer.  |
| 18 | <b>BSCs Elective – 1(A)</b>             | CO3 | Students can command on data link<br>protocols, multi-channel access<br>protocols<br>And IEEE 802 standards for LAN   |
|    | boes Elective – I(A)                    | CO4 | Students can understand the networks<br>layers, describe routing and congestion<br>networking and internetworking devices<br>with routing algorithms.   |
|    | ELEMENTS OF SCRIPTING                   | CO1 | Learn the creation, design and maintains<br>of Websites using the HTML tags. Gain<br>the practical Knowledge.   |
|    | ELEMENTS OF SCRIPTING<br>LANGUAGES<br>& | CO2 | Understanding the Border elements and<br>CSS features for design of websites.<br>Practice the creations of WebPages.  |
| 19 | æ<br>BSCs Paper - VI                    | CO3 | Describes the JavaScript and JavaScript<br>Constructs of the web pages with<br>handling. Students can understand how<br>to design the WebPages using  |



|    |                                 |     | JavaScript. Grips the practical   |
|----|---------------------------------|-----|---|
|    |                                 |     | knowledge.  |
|    |                                 | CO4 | Students can easily develop the Forms,<br>Option Elements, Checkbox, etc,.<br>Students can develop the WEBSITEs in<br>lab practices timings.  |
|    | PHP with My SQL                 | CO1 | Describes the PHP and its applications.<br>Practice the lab exercise  |
|    | &                               | CO2 | Students can understand the uses of strings and functions.  |
| 20 | BSCs Elective – 2(B)            | CO3 | Interstate the learn the Objects and Handling HTML forms with PHP.  |
|    |                                 | CO4 | Describe the important databases and MySQL with PHP.  |
|    |                                 | CO1 | Students are able to understand the<br>history of computers, basic concepts of<br>computer. Aware about various types of<br>computers, computer architecture,<br>hardware and software and computer<br>memories.  |
|    | COMPUTER FUNDAMENTALS           | CO2 | Ability to understand types of input and<br>output devices. Describes the knowledge<br>of number system, binary codes and<br>Boolean algebra to minimize logic<br>expressions and represent numbers and<br>perform arithmetic operations and<br>logical gates. Learns difference of user<br>and computer. The role of software's and<br>its types.  |
| 21 | &<br>BS106<br>BA (CA) Paper – I | CO3 | Describe the important computer<br>system resources and the role of<br>operating system in their management<br>policies and algorithms. Grip the<br>process management policies and<br>scheduling of processes by CPU. They<br>can understand preparation of<br>algorithm, flowchart, Pseudo code of<br>program paradigm. Learn computer<br>networks, its types and basics of<br>internet |
|    |                                 | CO4 | Students will evaluate information<br>systems important; analyze software<br>vulnerabilities and attacks on databases<br>and operating systems, latest emerging<br>techniques in computer technologies.   |
|    | COMPUTER PROGRAMMING IN         |     | Students are able to understand   |



| 22 | C<br>&<br>BS206<br>BA (CA) Paper – II                    |     | Personal computers and their<br>operations. The history of computers.<br>Identify the i/o devices and its<br>functions. History of c language.<br>Understand the preparation of<br>algorithm, flowchart of the program<br>and environment with c program<br>structure, declaration of variables and<br>constants, predefined data types,<br>operators. |
|----|--|-----|--|
|    |  | CO2 | Students acquire the knowledge about decision of looping, branching, arrays and its types. Design the programs.  |
|    |  | CO3 | Students will analyze functions.<br>Demonstrate practical programs.  |
|    |  | CO4 | The knowledge about of pointers and<br>memory allocation. User defined data<br>types, file management of advantages.   |
|    |  | CO1 | Design and develop the types of<br>website, it's structure, site organization<br>model, site planning and testing. Using<br>html language creating the website.<br>Design advanced website using CSS.<br>Make the web pages more dynamic and<br>interactive  |
| 23 | INTERNET TECHNOLOGIES<br>&<br>BS406<br>BA(CA) Paper – IV | CO2 | To understand the Java script through<br>design to create structure of web page,<br>to store the data in web document, and<br>transport information in web.<br>Implemented the creating the Web<br>pages.  |
|    |  | CO3 | Integrate java and server side scripting<br>languages to develop web applications.<br>Simultaneously students gain the<br>practice their own ideas.  |
|    |  | CO4 | Evaluate the XML, DTDS and DOM with practical knowledge  |
|    | MULTIMEDIA SYSTEMS AND<br>APPLICATIONS                   | CO1 | To understanding of technical aspect of<br>multimedia systems like text, images<br>and where we have to uses day-to-day<br>life.   |
| 24 | &<br>BS505   | CO2 | Every enthusiasm to learn and practice<br>the creation of sound, video and<br>animation of the movies.   |
|    | BA (CA) - V  | CO3 | Learn the stages of creating multimedia<br>projects, how to uses internet applying   |



|               |  |     | multimedia on web.  |
|---------------|--|-----|---|
|               | COMPUTER NETWORKS                      | CO1 | To understand THE TCP/IP AND OSI<br>reference models layers and its<br>functions, data communications and<br>multiplexing.  |
| 25            | &<br>BS508<br>BA (CA) Elective – I (A) | CO2 | Evaluate and discovery the error detection and correction, data link control and switching.   |
|               |  | CO3 | Describe the transport layer, upper C layers, and TCP/IP protocol suite.  |
|               | VISUAL PROGRAMMING                     | CO1 | Explain the methodology of VB<br>programming, Environment, Controls<br>and Variables, constants and<br>calculation. Practice the programming<br>applying the technical methodologies. |
| 26            | &<br>BS605                             | CO2 | Understand the basic concepts of<br>modular programming, forms handling.<br>Gains the practical knowledge.  |
| BA (CA) Paper | BA (CA) Paper – VI                     | CO3 | Develop the programs using arrays.<br>Apply the knowledge of database<br>connectivity. And discussing the<br>advanced topics of VB. Interested to<br>learn the new programs.          |
|               | PHP Programming                        | CO1 | Explain the PHP. Students can<br>understand the using variables and<br>operators. Applying the practical<br>knowledge. Build web applications<br>using PHP.                           |
| 27            | &<br>BS608<br>BA (CA) Elective – 2 (C) | CO2 | Analyze working with arrays.<br>Demonstrate the controlling program<br>flow. Develop the programs related<br>concepts.  |
|               |  | CO3 | Students can develop simple web<br>application using server side PHP<br>programming and Database<br>Connectivity using MySQL  |



| S.NO | Paper Title                   | semester     | Course Outcomes   |
|------|-------------------------------|--------------|---|
| 1    | English for<br>advancement    | Semester-I   | <ul> <li>To improve the students' fluency in English, through a well-developed vocabulary and enable them to listen to English spoken at normal conversational speed by educated English speakers and respond appropriately in different socio-cultural and professional contexts.</li> <li>Further, they would be required to communicate their ideas relevantly and coherently in writing.</li> </ul> |
|      |                               | Semester-II  | <ul> <li>To prepare all the students for their placements.</li> <li>Usage of correct English Language, written and spoken</li> </ul>  |
|      | English for<br>Accomplishment | Semester-III | <ul> <li>Enrichment of comprehension and fluency</li> <li>Gaining Confidence in using language in varied situations</li> <li>Better understanding of nuances of English language through audio- visual experience and group activities</li> </ul>   |
| 1    |                               | Semester-IV  | <ul> <li>Basics of phonetics and accent for accurate pronunciation</li> <li>Speaking skills with clarity and confidence which in turn enhances their employability skills</li> </ul>  |





### DEPARTMENT OF ZOOLOGY

#### PAPER 1 - ANIMAL DIVERSITY – INVERTEBRATES

| PAPER TITLE AND CODE  | Co-<br>NUMBER | Outcomes   |
|---|---------------|--|
| SEMESTER -I<br>Invertebrates –Phylum<br>Protozoa & Porifera                   | CO - 1        | <ul> <li>Invertebrates are generally soft bodies<br/>animals that lack a grid internal Skelton<br/>for the attachment of muscles but often<br/>passes a hard outer skeleton that serves<br/>as well for body protection</li> <li>Protozoa are unicellular eukaryotes as in<br/>all eukaryotes the nucleus is enclosed in<br/>a membrane and belonging to the<br/>kingdom Protista many of the most<br/>prevent and deadly human disease are<br/>caused by a protozoan infection,<br/>including African sleeping sickness,<br/>amoebic dysentery and malaria.</li> <li>Porifera phylum has pore being<br/>multicellular animals the body has no<br/>organs the body is Radicully symmetrical<br/>and they can regenerate their lost parts.</li> </ul> |
| Invertebrates –Phylum's<br>Coelenterate, Platyhelminthes,<br>Nemathelminthes, | CO – 2        | <ul> <li>Nematocysts are the most distinguishing future of this phylum. Coelenterate don't have sensory organs respiratory and excretion accurse through simple diffusion. The circulatory system is absent</li> <li>Some of the characteristics that distinguished the Organisms belonging to phylum Platyhelminthes from others are presence of the flame cells ladder like nervous system. Presence of parenchyma in the body Cavity and self fertilization.</li> <li>Most of the species of nematodes like parasitic life, through a member of free living forms are also present. Body is elongated, cylindrical, unsegemented and vermiform</li> </ul>   |
| Invertebrates–Phylum's<br>Annelids ,Arthopoda.                                | co - 3        | <ul> <li>The Coeliac fluid of annelids plays a role<br/>in many important functions e-g:<br/>Locomotion and regulation of fluid<br/>transfer through the body wall<br/>(osmoregulation)</li> <li>They have along and segmented body,<br/>by laterally symmetrical and triploblastic<br/>body covered with a thin cuticle and<br/>they are coelmet.</li> <li>In order for the orthotropic to move in<br/>such a rigid body, it has numerous joints<br/>in it's exco-skeleton and they have open<br/>Circulstary system.</li> <li>Arthropods contributes to human food</li> </ul>  |



| Invertebrates–Phylum's       co – 4         Mollusca,       echinoderms&Hemichordata | live stock and incur crop losses   |
|--|--|
|  | <ul> <li>Mollusca are among most diverse and abundant animals group, inhabitant many aquatic and Terrestrial environments they are important ecosystem engineers helping to structure aquatic bottom environments and providing habitat, protection and food to wide array of the other taxa</li> <li>Mollusca's have evolved distinctive and highly successful body plan that features a mental, shell muscular foot and radula</li> <li>Echinoderms are all possess five part radial cemetery around a central disc second they all possess very unique water vascular system this unique characteristics distinguished echinoderms from other animals in the animal kingdom</li> <li>Hemichordate are deuterostome phylum the sister group of echinoderms and closely related to Chordates they have thus been used to gain insights into the origins of deuterostome and Chordates body plans</li> </ul> |



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|------|----------------------------------|--------------|--|
| 1    |                                  | CO-01        | <ul> <li>Digestion begins in the mouth, when you chew and swallow and is complete in the small intestine</li> <li>Break down large molecules of food into small molecules</li> <li>The body cells need a continuous supply of oxygen for the metabolic processes that are necessary to maintain life</li> <li>Circulatory system carries oxygen , nutrients and hormones to cells and remove waste products like CO2</li> </ul>  |
|      | PHYSIOLOGY<br>& BIO<br>CHEMISTRY | CO-02        | <ul> <li>The Excretory system is responsible for the elimination of waste produced by homeostatic</li> <li>Muscular system is an organ system consisting of skeletal, smooth and cardiac muscles. It permits movement of the body</li> <li>The nervous system is a highly complex part of an animal that coordinates its action and sensory information by transmitting signals to and from different parts of its body</li> </ul>   |
|      |                                  | CO-03        | <ul> <li>The endocrine system is a network of glands that produce and release hormones that help control many important body functions</li> <li>Excess electrolytes and wastes that result from osmoregulation are transported to the kidneys and excreted</li> <li>Enzymes are biological catalysis. they are specialized proteins capable of catalyzing specific reaction in the cells</li> <li>Homeostasis is an organisms process of maintaining a stable internal environment suitable for sustaining life</li> </ul> |



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|   |   | CO-04 | <ul> <li>Carbohydrates should be supplemented with proteins, vitamins and fats to be a part of well balanced diet</li> <li>Glycolysis the aerobic catabolic break down of glucose produce energy in the of ATP,NADH, pyruvate</li> <li>Proteins are bio molecules, consisting of one or more long chains of amino acid residues</li> <li>Its performance avast array of functions within</li> <li>Organisms, including catalysing metabolic reactions, DNA replication, providing structure of cells, transporting molecules from one location to another</li> <li>Lipids are needed to protect and insulate our body .to keep our internal body temperature regular, there is a layer of fats just beneath the skin that made from lipids one of the main function of lipids do is storing energy.</li> </ul> |
| 2 | SEMESTER- V<br>ELECTIVE<br>PAPER<br>Applied zoology | CO-01 | <ul> <li>Basic biology of aquatic living resources Aqua culture and fisheries practices for major species worldwide and locally</li> <li>Elements of water quality important to aquaculture</li> <li>Principles of health management for aquatic species</li> <li>Impact of aqua culture and fisheries in society ; the economy and the natural environment</li> <li>Fishing methods and technology. Principles of fisheries science and ecosystem based fisheries mangement</li> </ul>  |
|   |   | CO-2  | <ul> <li>Sericulture provides gain full employment<br/>economic development and improvement in the<br/>quality of life to the people in rural area and<br/>therefore it plays in important role in antipoverty<br/>programme and prevent migration of rural<br/>people to urban area in search of employment</li> <li>Sericulture plays a significant role in the rural<br/>economy of INDIA, is not bound to just worms,<br/>but includes all activities related to the<br/>silkculture like mulberry cultivation and even<br/>post –cocoon technology.</li> <li>Its offers career opportunity in GOVT research<br/>centres , silk boards, academic</li> <li>Fields, sericulture unite, Agriculture sector banks<br/>etc.</li> </ul>  |



| CO-03 | <ul> <li>Apiculture is a process of keeping bees as well as manufacturing honey and bees wax</li> <li>It has positive ecological consequences</li> <li>Bees plays an important in pollination of many flowering plant. honey produced by apiculture is a delicious and highly nutritious food</li> <li>Vermi culture -using vermi culture is a great way to improve your organic fertilizer also known as worm management , vermin culture is an easy process that breaks down organic materials and produces castings that enhance your plans growth by providing trace elements , enzymes and nutrients to the soil</li> </ul>  |
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| CO-04 | <ul> <li>Poultry requires less investments compared to rearing other live stock. Broilers intake of feed is comparatively very low while it produces maximum possible amount of food for us</li> <li>Poultry farming is a continuous source of income.</li> <li>It provides us milk, eggs and meat</li> <li>Dairy technology graduates can find employment in the fields of milk collection , quality assurance , quality control and RD departments of milk processing sections of dairy industry</li> <li>Animal husbandry is the science of managing animal live stock. It involves feeding, breeding and controlling diseases in farm animals. It involves the rearing of animals like cattle poultry and fish to obtain desired products from them.</li> </ul> |

# SEMESTER – IV PAPER IV - CELL & MOLECULAR BIOLOGY, GENETICS, EVOLUTION.

| Paper Title and code | CO-    | Out Comes   |
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|                      | Number |   |
| CELL BIOLOGY -1      | 1      | <ul> <li>Studying cells helps us understand jow organisms function cellular components work together to carry out life function cellular process enable organisms to meet their basic needs.</li> <li>As stated before animals calls eukaryote cells with a memberane – bound Nucleus further more these all exhibit the presence of dna inside of the nucleus</li> <li>In cell biology an organelle is a specialized sub unit usually with in a cell that has a specific function the name organelle comes from the idea that these structure are parts of crll as organs are to the body hence organelle</li> </ul> |



| Cell division has there main functions<br>ehich are reproduct<br>- Chain of unicellular organisms and the<br>production of gamate and growth in<br>eukaryotes.MOLECULAR BIOLOGY-22- Ona countains the instructions needed<br>for an organism to develop survive and<br>reproduce to carry these function dna<br>sequence must be converted into<br>messages that can be used to produce<br>proteins, which are the complex<br>molecules that do most of the work in<br>our bodies.RNA is one of thr three major<br>biological Macro-molecules thar are<br>essential for all known forms of life the<br>multiple copies of mRna are then used<br>to translate the genetic code into<br>protein through the action of the cells<br>protein manufacturing machinery the<br>ribosomes.GENETICS-33- Mendal discovered the fundamental<br>laws of inheritance, he tracked the<br>separation of parental genes and their<br>appearance in the off spring sd demi-<br>nant or recessive traits he recognised<br>tha mathe-matial patterns of<br>inheritance for on a generation to<br>the next.GENETICS-33- Mendal discovered fire fundamental<br>laws of inheritance, he tracked the<br>separation of parental genes and their<br>appearance in the off spring sd demi-<br>nant or recessive traits he recognised<br>tha mathe-matial patterns of<br>inheritance for on a generation to<br>the next.GENETICS-3- Mutation plays an important role in<br>evolution because it creates a new<br>DNA sequence for s particular gene<br>creating s new allele. Recombination<br>also can create a new dna sequence for<br>a specific gene is nivhich the body<br>cannot property turn food into enegry.<br>Discovered are usually covered by<br>defects in specific proteins they help<br>breakdown parts of food.EVOLUTION-4UNIT -4- The theory of evolution is based on the<br>id  |                     |          | the suffix-elle being a diminutive.   |
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| MOLECULAR BIOLOGY-22Chain of unicellular organisms and the production of gamate and growth in eukaryotes.MOLECULAR BIOLOGY-22Dna countains the instructions needed for an organism to develop survive and reproduce to carry these function dna sequence must be converted into messages that can be used to produce proteins, which are the complex molecules that do most of the work in our bodies.RNA is one of thr three major biological Macro-molecules thar are essential for all known forms of life the multiple copies of mRna are then used to translate the genetic code into protein manufacturing machinery the ribosomes.PCR is a laboratory technique used to molecules.GENETICS-33Mendal discovered fle fundamental laws of inheritance, he tracked the separation of gamate and genes and their appearance in the off spring sd deminant or recessive traits he recomplied tha mathe-matil patterns of inheritance from on e generation to the next.Mutation plays an important role in evolution because it creates a new DNA sequence for s particular gene creating snew allele, Recombination also csn create a new dna sequence for a specific proteins through intragenic recombinationInbos merrors of metabolism srr raze genetic disorders in which the body cannot properly turn food into energy. Discovered are usually covered by defects in specific proteins they help breakdown parts of food.  |                     |          | -   |
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| MOLECULAR BIOLOGY-2       2 <ul> <li>Dna countains the instructions needed for an organism to develop survive and reproduce to carry these function dna sequence must be converted into messages that can be used to produce proteins, which are the complex molecules that do most of the work in our bodies.</li> <li>RNA is one of thr three major biological Macro-molecules thar are essential for all known forms of life the multiple copies of mRna are then used to translate the genetic code into protein through the action of the cells protein manufacturing machinery the ribosomes.</li> <li>PCR is a laboratory technique used to make multiple copies of Alegment of dna. Pcr is very precise and can be used to amplify or copy a specific dna target from a miniature of dna target from a miniature of dna target from a miniature of dna target in the off spring sd deminant or recessive traits he recognised tha mathe-matial patterns of inheritance, he tracked the separation of parental genes and their appearance in the off spring sd deminant or recessive traits he recognised tha mathe-matial patterns of inheritance from on egeneration to the next.</li> <li>Mutation plays an important role in evolution because it creates a new DNA sequence for sparticular gene creating s new allele. Recombination also csn create a new dna sequence for a specific proteins they help breakdown parts of food.</li> <li>EVOLUTION-4</li> <li>UNIT - 4</li> <li>The theory of evolution is based on the</li> <li>Motation je sould cover de by defects in specific proteins they help</li> <li>The theory of evolution is based on the</li> <li>The theory of evolution is based on the</li> <li>South and the specific proteins they help</li> <li>The theory of evolution is based on the</li> <li>The theory of evolution is based on the</li> <li>Thenemathemate the specific proteins they help</li></ul> |                     |          |   |
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|  | EVOLUTION A         | LINIT 4  | · · · · · · · · · · · · · · · · · · ·   |
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|------|----------------------------------|--------------|--|
| 1    | SEMETSER -V                      | CO-01        | <ul> <li>Digestion begins in the mouth, when you chew and swallow and is complete in the small intestine</li> <li>Break down large molecules of food into small molecules</li> <li>The body cells need a continuous supply of oxygen for the metabolic processes that are necessary to maintain life</li> <li>Circulatory system carries oxygen , nutrients and hormones to cells and remove waste products like CO2</li> </ul>  |
|      | PHYSIOLOGY<br>& BIO<br>CHEMISTRY | CO-02        | <ul> <li>The Excretory system is responsible for the elimination of waste produced by homeostatic</li> <li>Muscular system is an organ system consisting of skeletal, smooth and cardiac muscles. It permits movement of the body</li> <li>The nervous system is a highly complex part of an animal that coordinates its action and sensory information by transmitting signals to and from different parts of its body</li> </ul>   |
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| 2 | SEMESTER- V<br>ELECTIVE<br>PAPER<br>Applied zoology | CO-01 | <ul> <li>Basic biology of aquatic living resources Aqua culture and fisheries practices for major species worldwide and locally</li> <li>Elements of water quality important to aquaculture</li> <li>Principles of health management for aquatic species</li> <li>Impact of aqua culture and fisheries in society ; the economy and the natural environment</li> <li>Fishing methods and technology. Principles of fisheries science and ecosystem based fisheries mangement</li> </ul>  |
|   |   | CO-2  | <ul> <li>Sericulture provides gain full employment<br/>economic development and improvement in the<br/>quality of life to the people in rural area and<br/>therefore it plays in important role in antipoverty<br/>programme and prevent migration of rural<br/>people to urban area in search of employment</li> <li>Sericulture plays a significant role in the rural<br/>economy of INDIA, is not bound to just worms,<br/>but includes all activities related to the<br/>silkculture like mulberry cultivation and even<br/>post –cocoon technology.</li> <li>Its offers career opportunity in GOVT research<br/>centres , silk boards, academic</li> <li>Fields, sericulture unite, Agriculture sector banks<br/>etc.</li> </ul>  |



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| 3 |              | CO-1 |                  | It is the study of the immune system and is a very     |
|   | SEMESTER- VI |      |                  | important branch of the medical and biological         |
|   | IMMUNOLOGY   |      |                  | science. The immune system protects us from            |
|   | AND ANIMAL   |      |                  | infection though various lines of defence              |
|   | BIO          |      | $\checkmark$     | Antigens are molecules that trigger the production of  |
|   | TECHNOLOGY   |      |                  | anti bodies by including an immune response            |
|   |              |      | $\checkmark$     | Antibodies help eliminate disease causing microbes     |
|   |              |      |                  | from the body for instance by directly destroying      |
|   |              |      |                  | them or by blocking them from infecting cells          |
|   |              |      | $\triangleright$ | T cells and B cells are recognise specific non-self    |
|   |              |      |                  | antigens, during a process known as anti presentation. |
|   |              |      |                  |  |



|      | <ul> <li>MHC- group of genes that code for protein found on<br/>the surface of cells that helps the immune system<br/>recognize foreign substances MHC proteins are found<br/>in all higher vertebrates</li> <li>Cytokines are produced by virtually all cells involved in<br/>innate and adaptive immunity</li> <li>Interferences are proteins that are made and released<br/>in response to pathogens like viruses , bacteria ,<br/>parasites and cancer cells</li> <li>Humord immunity is mediated by antibody<br/>molecules that are secreted by plasma cells</li> <li>Neutralization by anti bodies is also important in<br/>preventing bacterial toxins from entering cells</li> <li>Cell mediate immune responses involved the<br/>destruction of infected cells by cytotoxic T-cells</li> <li>Hypersensitivity refers to undesirable reaction and<br/>produced by the normal immune system , including<br/>allergies and auto immunity</li> </ul> |
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| CO-3 | <ul> <li>make useful products the most prominent approach used in genetic engineering , which enables scientists to tallo an organisms DNA of will</li> <li>Cloning vectors are plasmids that are used primarily to propagate DNA. They replicate in E. coli to high copy numbers and contain a multiple cloning site with restictim sites used for inserting a DNA fragment</li> <li>Animal cell culture –these cullines help study the biology and origin of the cell. valuable biological date from large scale cell culture. Specific proteins can be synthesized in large quantities from genetically modified cells in large scale culture</li> </ul>   |
| CO-4 | medicine and researches .it is used to identity map<br>and sequences and to determine their function  |



|   |   |      | <ul> <li>from one organisms into the genome of another organisms. The aim is that the resulting transgenic organism will expense the gene and exhibits some new properties or characteristics</li> <li>Stem cells represents an exciting area in medicine because of their potential to generate and repair damaged tissue. some current therapies, such as bone marrow transplantation, already make use of stem cells and their potential for representation of damaged tissues.</li> </ul>   |
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| 4 | SEMESTER-<br>VI<br>ELECTIVE<br>PAPER<br>Aquatic biology<br>(elective) | CO-1 | <ul> <li>The aquatic biomes is the largest of all the biomes covering abet 75% of Earth's surface. This biomes is usually divided into two categories. fresh water and marine</li> <li>Fresh water habitats include ponds ,lakes, rivers and streams. While marine habitats Include the ocean and salty water</li> <li>The first ,major distraction is between the pelagic and beneath zones. The pelagic zone refers to the water column ,where swimming and floating organisms live. The beneath zone refers the bottom and organisms living on and in the bottom are known as benthos.</li> <li>Coral reefs protect coast line from storms' and erosion, provide tube for local communities. They are also a source of food and new medicines.</li> </ul>  |
|   |   | CO-2 | <ul> <li>Lakes lie on land and are not part of the ocean and therefore are distinct from lagoons and are also larger and deeper than ponds.</li> <li>Lakes are the best available fresh water source on the earths surface. Lakes are valued as water sources and for fishing, water transport recreation and founder.</li> <li>The physico-chemical parameters such as water temperature, pH, dissolved oxygen,o2 saturation conductivity, salinity, secchidise depth, nitrate, nitrite, orto-phosphate, sulphate ,chloride ,total hardness, calcium and magnesium were analysed in the water samples.</li> <li>The nutrient cycle is a system where energy and matter are transformed between living organisms and non living parts of the environment .</li> <li>A stream is flow of water, driven by gravity in a natural channel , on land. A small book in a meadow and the Amazon river are both streams. Streams sculpt and shape the earth surface by crowding,</li> </ul> |



|   |   |      | transporting and depositing sediment areas.  |
|---|---|------|--|
|   |   | CO-3 | <ul> <li>Salinity affects density-when salt is dissolved in fresh water, the density of the water increases because the maze of the water increases.</li> <li>Ocean water is ,more denser because of the salt in it increase in saline also increase the density of sea water</li> <li>A Continental shelf is a position of a continent that is submerged under an area of relatively shallow water known as a shelf sea. Much of these has been exposed during logical periods and integral periods. The self surroundings on islands is known as an insular shelf.</li> </ul>  |
|   |   | CO-4 | <ul> <li>These wastes have negative effects on human health. Different chemicals have different affects depending on their locations and kinds. Bacterial, viral and parasite diseases like typhoid, cholera, encephalitis ,poliomylites ,hepatitis , skin infection and galbomtesnna are spreading thought polluted water</li> <li>Eutro-phication can have serious effect , like blooms that block light from getting in to the water and harm the plants and animal that need</li> <li>BOD is an important water quality parameter because it provides on in day to asses the effect the discharge water will have on receiving environment depletion of do causes stress gauche organisms , making the environment unstable for life.</li> <li>CON – is a measure of water and waste water quality . the COD test often used to mentor water treatment plants effective. The COD is the amount of o2 consumed chemically oxygen organic water contaminants to inorganic and products.</li> </ul> |
| 5 | SEMESTER -II<br>Ecology,<br>Zoogeography<br>and animal<br>behaviour | CO-1 | <ul> <li>Ecosystem has structure and function. The structure is related to species diversity according to E.P odium . the ecosystem is the basic functional unit of organisms and their environment interchanging with each other the function of ecosystem is related to the energy flow . decomposition , nutrient cycling and major biomes</li> <li>However the biogeochemical cycles to function to converse and cycling the matter that is past of living organism.</li> <li>It is a loose association in which to animals are organised of different species live together without either being metabolically depend on the other</li> </ul>   |



|      | although. One animal may receive some benefit called  |
|------|---|
|      | commensally but the other neither get benefit not   |
|      | harm from other.  |
| CO-2 | <ul> <li>The biological species concept defines a species toxin as a group of organism that can success fully inter bread and produce fertile offspring</li> <li>Species are important because they represent on important level of interaction in living nature</li> <li>Change in an organism so that it is better able to survive or reproduce these by contributing to its fitness</li> <li>Environmental pollution is the inter production of different harmful pollutions into certain environment that makes they environment unhealthy to live in the most common pollutions are usually chemicals , garbage and waste water .</li> <li>Wild life helps in maintaining the belong of nature . killing of behaviours which in turn after the test verification , there this due to life of food in the forest there come out from the first to agriculture land destroy our crops</li> </ul> |
| CO-3 | <ul> <li>Zoography the study of the geographical distributions of animals that at can be divided into served faunal regions separated by natural basses, such as oceans, deserts, and moment ranges</li> <li>Wallace line delineates Australian and south east Asian fauna the probable extent of land at the time of the last glacial maximum when the sea level was more then 110m (360ft) lower them today is shown in grey</li> <li>When continuity of distribution of a species is broken by uninvited area which are sometimes very large stretches of ocean</li> <li>Contributed drift large scale horizontal moments of continents relative to one another and to the ocean being during or more episodes of geologic time</li> </ul>   |
| CO-4 | <ul> <li>Innate behaviours are the behaviours that are in hereto and come with seconds birth while learned behaviours are the behaviours are acquired by experience leaned from outside environment</li> <li>Taxes are innate behaviour endpins a taxes differs from a tropisms are growth are turning moments in plants are sensible by a past of the body to a stimulus results help animals response quickly to a stimulus, thus protecting them from harm</li> <li>Social behaviours is behaviours among to for more</li> </ul>   |



| 6 | SEMESTER-III<br>Animal<br>diversity-<br>vertebrates<br>and<br>development<br>biology | CO-1 | <ul> <li>organized with in the same species and in composed may behaviour which are member afters to others</li> <li>In humans biological clocks coordinates the timing of behaviour (sleep, walk cycles, eating, activity mind etc)</li> <li>Urochordates précis a note cold a allow nerve cold and a oral tail. Body wholly enclosed in a tunic of secrete protein and callous like natural</li> <li>The lancelets are also called copho chordates because the chord extends from near the tip of the tail to well into the neither of the body</li> <li>Cyclostomes are considered to be the only living vertebrates without true jaws and are thus called Anglia their are parricides are scavenges on fishes in the adult stay</li> <li>In chordates four common features appear to some front during development a note chord a drool hollow never chord phasing slide and a post and tail</li> <li>Fishes water dwelling vertebrates that may have scales fins an thoughts with gill slide scoliodm is a cacti large fish it is called dogfish because it has highly developed since of small like dog</li> </ul> |
|---|--|------|--|
|   |  | CO-2 | <ul> <li>Amphibians are small vertebrates that need water or a most environment to survive. All can breath and observe water through their very thin skin</li> <li>The simplest form of parental care is guarding or protection of eggs in eggs laying , or oviparous , species.</li> <li>The skin of reptiles is covered with scales or scutes. They have cold blooded metabolisms . most reptiles lay egg that eggs are called amanita eggs</li> <li>The reptiles are classified mainly on the structure of their skull in where there are tempered vacuities of fosses</li> <li>Rhynchcaphalia is an order of lizard are reptiles that includes only one living species , the tuatara of New-zeland</li> </ul>  |



| <br> |   |
|------|---|
|      | <ul> <li>animals has feathers other important features for birds are wings and hollow-bones. Birds also lay eggs and they are water blooded life mammals</li> <li>Birds migrate to move from areas of low or decreasing resources to areas of high or increasing resources. The two primary resources being sought are food and nesting local time</li> </ul>   |
|      | <ul> <li>Spermatogenesis and cogenesis are both forms of game to genesis in which a diploid gamete cell produces helloed sperm and egg cells respectively.</li> <li>Gastrula ion leads to the formation of the three germs layers that give rise during further development the different organs in the animal body this processes is called organogenesis</li> <li>The placenta is a vital connecting organ between the material uterus and the foetus. It supports the development foetus , in uterus , by supplying nutrients , eliminating waste products of the foetus and enabling gas exchange via the maternal blood supply</li> <li>Regeneration is the natural process of replacing or restoring damaged or missing cells , tissues , organs and even entire body parts to full function in plants and animals . scientists are studying regeneration for it potential uses in medicine , such as cresting a variety of injuries diseases.</li> </ul> |





## DEPARTMENT OF PUBLIC ADMINISTRATION

## COURSE OUTCOMES 2018-19

## 1<sup>ST</sup> BA SEMESTER-I

| SI.No | Paper Title & Code                          | Co-<br>Number | Course Outcomes   |
|-------|---|---------------|---|
| 1     | Nature of public administration             | 01            | The students understand the scope of public administration  |
| 2     | Relationship with other social science      | 02            | student improve the knowledge in public<br>administration and theories concepts<br>from multiple prospective  |
| 3     | Oriental and classical approaches           | 03            | The students to comprehend the changing paradigms of public administration how to implement the public administration thinkers developed the public policies  |
| 4     | Human relations and behavior approaches     | 04            | To acquaint with the various approaches concepts and principle of public administration   |
| 5     | ecological and social<br>justice approaches | 05            | The students appreciate the methodological class 10 and sanitizing nature of knowledge in public administration give the relevance of the psychological and organizations from students must be aware of blind implementation of approaches |

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# DEPARTMENT OF PUBLIC ADMINISTRATION COURSE OUTCOMES 2018-19 1<sup>ST</sup> BA SEMESTER-II

| SI.No | Paper Title & Code                               |              |  |
|-------|--|--------------|--|
| 1     | Per Hue & Code                                   | Co-<br>Numbe | Course Outcomes  |
| 2     | Comparative and<br>development<br>administration | 01           | The students appreciate nature scope<br>and changing of public administration<br>send understand the synthesizing<br>nature of knowledge   |
|       | Emerging trends-I                                | 02           | Students grasp the administrative theory<br>concepts and principles make sins of<br>administrative prospective   |
|       | Market theories                                  | 03           | Public choice approach concepts and<br>new public management in public<br>administration the student understand<br>the mark theories in  |
|       | merging trends-I                                 |              | Students upset the function emerging<br>issues in new state of Telangana in The<br>context of changing role of state   |
|       | merging trends-II                                | 05           | it and civil society<br>Role of public service in the learning<br>and development of new state of<br>Telangana understand the world of<br>public administration from the public<br>prospective and provide foundation for<br>urther studies in public administration |

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## DEPARTMENT OF POLITICAL SCIENCE SEMISTER-I

| Sl<br>No. | Paper Title<br>Course                                   | Co<br>Number | Course outcomes   |
|-----------|---|--------------|---|
|           | Understanding<br>Political Theory                       | CO-01        | Student a gains knowledge on<br>What is political theory Evolutions<br>Nature Significance given knowledge<br>Political Theory Normative, Contemplative,<br>Explanatory |
| 2         | What is Political                                       | CO-02        | What is Political Science<br>They also given knowledge on Bciklay. Social<br>contract evolution power and authority and<br>sovereignty State challenges.                |
| 3         | Political Values<br>and Theoretical<br>Perspective      | CO-03        | Student acquire knowledge on General<br>Characters<br>Liberty<br>Equality<br>Justice<br>Programme   |
| 4         | Political<br>Ideologies                                 | CO-04        | Student's gains knowledge<br>Evolutionary - Liberalism<br>- Nationalism<br>- Multiculturalism   |
| 5         | Political<br>Institutions and<br>Political<br>Functions | CO-05        | The Students acquires knowledge on the Political function, Political Institution.   |

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| DEPARTMENT OF POLITICAL SCIENCE<br>COURSE OUTCOMES<br>WESTERN POLITICAL THOUGHT<br>SEMISTER-II |   |              |   |
|--|---|--------------|---|
| Sl<br>No.  | Paper Title &<br>Code II                | Co<br>Number | Course outcomes   |
| 1.   | Greek Political<br>Thought              | 01           | The students' gains knowledge on Greek<br>Political thought – Sophist knowledge gives by<br>student and learning Plato concepts. Justice<br>and Education Next Aristotle classifications of<br>Governments. |
| 2  | Medieval and<br>early modern<br>thought | 02           | Student basically gives knowledge Thomas<br>Aquinas Theory and Law Church and State<br>controversy Miccolo Machivelli – Human<br>Nature for understand theprocess   |
| 3  | Social<br>Contractualists               | 03           | The learner understands the concept of<br>Hoobes Individualism and Absolute<br>Sovereignty and John Loc Natural Right<br>Present topics.  |
| 4  | Unilateral<br>Though                    | 04           | J.J. Rousseau General will popular sovereignty<br>The students gains knowledge on Jeremy<br>Bentham Unititarian thought next highly<br>learning J.S. Mill on library  |
| 5  | Philosophy of<br>Dialectics             | 05           | The student gains on detail knowledge. Hegal<br>Theory Karal Max Socialism.   |

### DEPARTMENT OF POLITICAL SCIENCE COURSE OUTCOMES SECOND YEAR SEMISTER-III

| S<br>No | - por mile de   | Co<br>Number | Course outcomes   |
|---------|---|--------------|---|
| 1       | Indian National<br>Moment<br>Development of<br>Indian<br>Constitution   | 01           | The student gains detail knowledge on Indian<br>National moment and Learning of<br>Constitutional Assembly, Drafting Committee.<br>Basically I give Silent features of Indian<br>Constitution     |
| 2       | Fundamental<br>Rights and<br>Directive<br>Principles of<br>State Policy | 02           | The Secondary concepts of introduced to the<br>student with Fundamental Rights and<br>Directive Principles of State Policy including<br>Fundamental Duties.                                       |
| 3       | Social and<br>Political<br>moments in<br>India                          | 03           | The student gains knowledge on Indian<br>moments of Dalith, Tribal Environmental<br>Women's moment and Revolution Farmers   |
| 4       | Union<br>government   | 04           | Student acquire knowledge on President<br>Election Powers and Functions, Function of<br>Parliament.<br>Powers and Functions<br>Supreme Court Power and Functions<br>Supreme Court Rules of Review |
| 5       | State<br>Government   | 05           | The student learning knowledge on Governor<br>Qualifications, Elections and Power and<br>Functions.   |
|         | • •   |              | Chief Minister's Powers and Functions<br>High Court powers and functions<br>Federal System of Indian Unity  |

## DEPARTMENT OF POLITICAL SCIENCE COURSE OUTCOMES

### **SEMISTER-4**

| Sl<br>No. | Paper Title &<br>Code                                  | Co<br>Number | Course outcomes  |
|-----------|--|--------------|--|
| 1         | Union and State<br>Relations                           | 1            | Student gains knowledge on features of Indian<br>Federal System, Union and State Relations and<br>discuss recent trends in Centre, State<br>Relations.   |
| 2         | Local<br>Government                                    | 2            | The student understands Panchayathi Raj<br>Institutions, 73rd Constitutional Amendments<br>and Urban Local Bodies 74th Constitutional<br>Amendments learns by the Student.                       |
| 3         | Political Powers                                       | 03           | Students acquire knowledge on General Indian<br>Political Party System and National Parties<br>INC. BJP, CPI, CPM, BSP, Regional Parties: TDP,<br>TRS, SMY, AIAMDMK, YSRC learning by<br>student |
| 4         | Electoral Politics                                     | 04           | A basic understanding of the systematic of<br>study of students Election commission power<br>and function they are studying voting behavior<br>and economic factors, Electoral reforms           |
| 5         | Statutory<br>commission for<br>Production of<br>Rights | 05           | and economic factors, Electoral reforms  |

| 1         | DEPARTMENT OF POLITICAL SCIENCE<br>SEMISTER-5<br>International relations 19th, 20th Century 1 |              |  |  |
|-----------|---|--------------|--|--|
| Sl<br>No. | Paper Title &<br>Code   | Co<br>Number | Course outcomes  |  |
| 1         | Introduction  | Co-1         | Student gains knowledge n in International<br>Relations: Definition Evolution Scope and<br>Significance Emergence of Sovereignty, State<br>System also covered in course                 |  |
| 2         | History of<br>International<br>Relations  | Co-2         | Student acquires knowledge on Colonialism:<br>Causes Phases and Impact and student gives<br>knowledge the first world war the second<br>world war causes and consequences                |  |
| 3         | Post War<br>development   | Co-3         | The student understands and Decolonization<br>emergence of third World Problems, Prospects<br>and cold war – causes phases and Impact  |  |
| 4         | Concepts  | Co-4         | A basic understanding of systemic of concepts<br>power National Power super power Regional<br>Power and Bi Polarity: Unipolarity Medity<br>Polarity and peace Security learn by student. |  |
| 5         | International<br>Organizations  | Co-5         | The learner understands International<br>organizations E.U., ASEAN, SAARC, BRICS,<br>Global Development.   |  |

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|           | DEPARTMENT OF POLITICAL SCIENCE<br>SEMISTER-5<br>Medieval Political Thought |              |   |  |
|-----------|---|--------------|---|--|
| Sl<br>No. | Paper Title &<br>Code   | Co<br>Number | Course outcomes   |  |
| 1         | Introduction  | Co-1         | Student gains knowledge no basic Political<br>thought Nature methods and significance.<br>Western and Indian Political though learned<br>by student.  |  |
| 2         | Ancient and<br>Medieval<br>Political Thought                                | Co-2         | Student acquire knowledge with the Palalo<br>theory of Justice.<br>Aristotle Classification of Governments and<br>Constitutions and Theory of Revolutionalry<br>Manu Darma, Kacetilya Saptanga Siddantham,<br>Thomas Aquinas Theory of Law. |  |
| 3         | Early Modern<br>Western Political<br>Thought                                | Co-3         | The student gains knowledge of Church, State<br>Controversy<br>Nicolo Machiavelli as a modern political<br>theory.  |  |
| 4         | Social<br>Contractualists   | Co-4         | Basic understanding of systematic study of<br>Thomas Hobbers Individualism and absolute<br>Sovereignty. Student discuss John Locke<br>Natural Rights and Rousseau General Will  |  |
| 5         | Untilitarians   | Co-5         | Explain the dynamic Political Thinker Jermy<br>Benthan. Principles of Untilitarianirianism<br>and J.S. Mill On Liberty, Representative<br>Government  |  |

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#### DEPARTMENT OF POLITICAL SCIENCE COURSE OF SEMISTER-6 WESTERN & INDIAN POLITICAL THOUGH SEMISTER-6

| Sl<br>No. | Paper Title &<br>Code                            | Co<br>Number | Course outcomes  |
|-----------|--|--------------|--|
| 1         | Idealist   | Co-1         | Student gains knowledge on basic G.W.F. Hegel<br>Dialectics and Theory of State and TH. Green –<br>Rights and Political Obligation also covered in<br>course.                                    |
| 2         | Marxist<br>Philosophy-II                         | Co-2         | Student acquire knowledge on Mao Ze Dong.on<br>Contradictions Mew Democratic Revolution<br>and Anstonio Gramsci Hegemony and Civil<br>Society by the Students learning                           |
| 3         | Marxist<br>Philosophy-III                        | Co-3         | Students gains knowledge on basic Karl Marx :<br>Dialectical and Historical Materialism by the<br>learning of students.  |
| 4         | Indian Political<br>Thought &<br>Indian Thinkers | Co-4         | The student gains knowledge of Introduction<br>of Budha Social and Political Ideas. Dhamm<br>and Sangha Basava Social Ideas and Jyothi Rao<br>Phule Critique of Bhramanism Social<br>Revolution. |
| 5         | Indian<br>Nationalist<br>Political<br>Thought-II | Co-5         | The basic knowledge of Indian Political<br>thinkers M.K. Gandhi, Nehru Democratic<br>socialism and Doctor B.R. Ambedkar Caste and<br>socialism studies acquire by the students.                  |

## DEPARTMENT OF POLITICAL SCIENCE **SEMISTER-6**

| Sl<br>No. | Paper Title &<br>Code                         | Co<br>Number | Course outcomes  |
|-----------|---|--------------|--|
| 1         | International<br>Political<br>Economy         | Co-1         | Student gains knowledge on basic Neo-<br>Colonism, North south Dialogues. South<br>Cooperation given for knowledge I.B.R.D., IMF<br>WTO and MNCs and Globalization also covered<br>in course |
| 2         | International<br>Security                     | Co-2         | Student acquire knowledge with the<br>International Security Arms Race Arms<br>Control Disaster management issues in<br>Nuclear Politic Learned by the students.                             |
| 3         | Emerging Area<br>in International<br>Relation | Co-3         | A basic Understanding of systemic study of<br>Environment, Human Rights and Terrorism<br>learned by the students.  |
| 4         | Foreign Policy                                | Co-4         | The students gains knowledge of Introduction<br>of Foreign Policy –Determinations. Indian<br>Foreign Policy – Features non-alignment –<br>Relevance  |
| 5         | India's Bilateral<br>Relations                | Co-5         | The student gains detail knowledge on Indian<br>and major Power(U.S.A., Russia)<br>Indian and Neighbouring countries(China &<br>Pakistan)  |
|           |   | 2.0 X        | of the international pece.   |

INTERNATIONAL RELATIONS IN 19TH AND 20TH CENTURY

| DEPARTMENT OF POLITICAL SCIENCE<br>SEMISTER-VI<br>GOVERNMENT AND POLITICS IN TELANGANA |   |              |  |
|--|---|--------------|--|
| Sl<br>No.  | Paper Title &<br>Code                               | Co<br>Number | Course outcomes  |
| 1  | Committees<br>And<br>Commissions<br>On<br>Telangana | Co-1         | Student gains knowledge in basic structure<br>Girglani Commission<br>Rosaiah Committee<br>Justice Sri Krishna Committee  |
| 2  | Role of Political<br>Parties                        | Co-2         | Student acquire knowledge on National<br>Parties INC, BJP, CPI, CPM, BSP,<br>Regional Parties: T.R.S., T.D.P., MIM, YSRCP<br>and Role of ML parties, New Democracy, Jana<br>Shakti and Maoist party. |
| 3  | Role of Non-<br>Party and Civil<br>Society Actors   | Co-3         | The students understand and non-party the<br>basic Civil Society, Student JAC, Political JAC,<br>Other JAC, Cultural JAC, Employees, JAC,<br>Lawyers JAC, Caste and community JAC, Role<br>of Media  |
| 4  | Emergence of<br>Telangana State                     | Co-4         | Student acquire knowledge on communal process and formation of Telangana State   |
| 5  | Political Parties<br>and Elections                  | Co-5         | Party Politics and Elections in Telangana gains<br>knowledge on Electoral alliance 204 to 2009<br>and 2014 and promises and formation of T.R.S.<br>Government.                                       |

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| DEPARTMENT OF POLITICAL SCIENCE COURSE OF<br>SEMISTER-VI<br>PUBLIC HEALTH AND HYGIENE |                       |              |  |
|---|-----------------------|--------------|--|
| Sl<br>No.   | Paper Title &<br>Code | Co<br>Number | Course outcomes  |
| 1   | Nutrition             | Co-1         | Student gains knowledge on Relationship of<br>Nutrition to Health, Food Habits and Culture<br>and Classifications of foods, balanced diet. |
| 2   | Environment           | Co-2         | Student acquire knowledge on Environment<br>and health Industrial Agricultural and Health.   |

| <b>DEPARTMENT OF</b> | POLITICAL SCIENCE COURSE OF |
|----------------------|-----------------------------|
|                      | SEMISTER-VI                 |
| PERSONALITY          | DEVELOPMENT AND SOFT SKILLS |

| Sl<br>No. | Paper Title &<br>Code          | Co<br>Number | Course outcomes   |
|-----------|--------------------------------|--------------|---|
| 1         | Personality<br>Development     | Co-1         | Student gains knowledge on basic structure of<br>Personality Development, Development<br>Characteristics and significance – Principles of<br>Learning students. |
| 2         | Self Management                | Co-2         | Student acquire knowledge Self Management,<br>Attitude Development Managing, Building<br>Positive Attitude Achievement Motivation,                              |
| ×         | 20<br>17<br>1947 11 - \$2 1951 | -            | Characteristics – Significance Strategies of<br>developing emotional Intelligence, Fear Anger<br>and Anxiety, Learning by students.                             |