

**Proceedings of the Commissioner Collegiate Education,  
Telangana :: Hyderabad.**

**Present: Sri.Navin Mittal, IAS**

Sub Collegiate Education- Jignasa Student Study Projects-2021– List of Selected Student Study Projects for State Level Presentation- Instructions- Issued- Reg.

Ref: File No. CCE-AC/JIGN/1/2021-ACADEMIC CELL Dated:15.09.2021

Commissionerate of Collegiate Education gives prominence to provide the opportunity to the students of all Government Degree Colleges to explore problems and challenges which have real world applications through project based learning. Learning through projects also increases the possibility of long-term retention of what students have learnt and establishes the linkage between theory and practice.

In view of the above, the Department has received a total of 855 Study Projects from all the Government Degree Colleges in 15 subjects. The projects were evaluated by a committee consisting of subject experts who have an aptitude for research and innovation. Out of 855 Projects, 285 projects have been selected in 15 subjects for state level presentation.

The subject wise selected list of Jignasa Study Projects for State Level Presentations is placed in the Annexure - I

In this regard, all the Principals of GDCs as per the Annexure-I are directed to ensure that the Mentor/Supervising faculty shall guide the students and prepare them thoroughly for state level presentations. Further, the Principals also instructed to send the soft copies of full length Study Projects which are selected for State Level Presentations by 18<sup>th</sup> April, 2022 to [jignasa-ce@telangana.gov.in](mailto:jignasa-ce@telangana.gov.in) and instruct the faculty supervisors to submit the hard bound copies at the time of

presentations. **Dates and Venue for state level presentations shall be communicated shortly.**

The Principals also directed to instruct the faculty who have supervised the projects and got transferred in local cadre allotments to guide the faculty and students of the previous college.

### Annexure-I

### **JIGNASA 2021 -Student Study Projects – Selected list for State Level Presentations**

S.No	District	Name of the GDC	Subject	Name of the Project	Name of the Supervisor
1	Hyderabad	GDC (W) Begumpet	English	Assessment of Errors in Written and Spoken Language: A Study of Undergraduate Students in Government Degree College.	Dr. M. Nancy Serena
2	Hyderabad	GDC (W) Nampally	English	Contemporary Indian Women Writers and their Impact on the Society.	Mrs. Khaderunnisa
3	Hyderabad	GDC Khairatabad	English	COVID 19: Challenges of Online English Language Learning at UG Level	Sujatha Patwari
4	Hyderabad	GDCA Nayapul	English	Mother Tongue Influence On English Language Pronunciation : A Study	Dr.J.V.N.Malli karjuna
5	Khammam	GDC A Khammam	English	The Strategies to improve Academic Performance in English	Dr.G.Varalaxmi
6	Khammam	GDC Sathupally	English	Students from back ground- poor communication skills in English- A study	M. Rambabu
7	Mahabubnagar	GDC A Mahabubnagar	English	Linguistic ambiguity in newspapers headlines : A critical study	G. Ranga Suryanarayana

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
8	Mancherial	GDC Luxettipet	English	English language proficiency levels of undergraduate students from rural background - A Study	P.Rajkumar
9	Medak	GDC Narsapur	English	The use of English in Narsapur	B.Raghavendra
10	Nalgonda	GDCW Nalgonda	English	Adaptations of Shakespeare's plays into Indian classic and folk theatre	Dr. P.Mattaiah Yadav
11	Nalgonda	GDCA Nalgonda	English	Impact of Social Media on English Language Learning	Ch.Sudhakar
12	Narayanpet	GDC Narayanpet	English	Missing seeds	A.Bhaskar Reddy
13	Nirmal	GDC Bhainsa	English	Denotations and Connotations; A Survey Study on Perception of Meanings	G.Subhash
14	Nizamabad	GDCA Nizamabad	English	Mismatch between Spelling and Pronunciation: A Case study of Rural High School Students	1.S.John Sukumar 2.B.Pratibha 3.S.Lavanya
15	Nizamabad	GDC Morthad	English	Phobia of English in Telugu medium students-Analysis of the causes-A study in GDC-Morthad.	S.Ashok
16	Peddapalli	GDC Godavarikhan i	English	Effective ways of teaching English poetry to the rural students in Telangana.	A. Suresh
17	Ranga Reddy	GDC Hayathnagar	English	Bharish - Our Own Desi English	DSSR Krishna
18	Ranga Reddy	GDC Serilingampally	English	How much English is enough English?	Dr. Farhath Nazneen
19	Sangareddy	GDC A Sangareddy	English	Language Dynamics in Pharmacopoeia	Shareef Miya
20	Siddipet	GDC A Siddipet	English	Vocabulary levels of students studying Intermediate course	M.Srinivas

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
21	Adilabad	GDC (A&C) Adilabad	Telugu	డాక్టర్. సింగిరెడ్డి నారాయణ రెడ్డి జీవితం మరియు రచనలు	K. Rekha
22	Hanamkonda	GDC Hanamkonda	Telugu	తెలంగాణ భాష-విశేషాలు- పరిరక్షణ చర్యలు	డా. P. సాయిలు
23	Hanamkonda	GDC Parkal	Telugu	Upa Kulalu Maarmika Bhasha - Uniki, Asthitvam	Gajavelli Eeshwar
24	Hyderabad	GDC (W) Nampally	Telugu	Girijana samskruthi sahityam	Dr.B. Bheemamma
25	Hyderabad	GDC Nayapul	Telugu	Telangana Pathyagranthalu- Sahitya, Samskrutika, Charitraka, Samajika Mulalu	Dr.J.Neeraja
26	Jagtial	GDC Metpally	Telugu	దృశ్య మాద్యమంలో జానపద గేయాలు - పరిశీలన	డా.బూర్ల చంద్రశేఖర్
27	Jangaon	GDC Jangaon	Telugu	పాల్కురుకి సోమన సాహిత్య ప్రప్రయల్క- అధ్యయనం	B.Seetharam ulu
28	Kamareddy	GDC Kamareddy	Telugu	దోమకొండ సంస్థానం- సాహిత్యం	Dr.V.SHANKA RAIAH
29	Karimnagar	GDC (W) Karimnagar	Telugu	తెలుగు చలన చిత్రాలు- డా.సి.నారాయణ రెడ్డి విరచిత గీతాల్లో - "స్త్రీ "	Naroju Venkata Ramana
30	Mahabubabad	GDC Mahabubabad	Telugu	తెలంగాణ ఉద్యమం-పాట	Rama Rathnamala
31	Mahabubnagar	GDC (W) Mahabubnagar	Telugu	Telugu saamethalu (proverb)	V Pushpalatha
32	Mahabubnagar	GDC A Mahabubnagar	Telugu	పాలమూరు ప్రభాత వీచిక గోన. బుద్ధా రెడ్డి	Dr Laxmaiah
33	Mancherial	GDC Luxettipet	Telugu	బంజారా స్త్రీ గేయ సాహిత్యం - ఒక పరిశీలన	Dr. S. Harish Kumar
34	Mancherial	GDC Mancherial	Telugu	తెలంగాణకు హరిత హారం-కవిత ధోరణులు	M.V Patwardhan
35	Medak	GDC Medak	Telugu	Swatanthrya amrutotsavalu- Swatanthrya spoorthi	M.Venugopal Sharma

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36	Nagarkurnool	GDC Kalwakurthy	Telugu	Palamuru jilla janapada geyaalu-adhyayanam.	Saidaiah. M
37	Nagarkurnool	GDC Kondanagula	Telugu	Jignas on chenchula samskruthi	K Krishna Gopal
38	Nirmal	GDC Nirmal	Telugu	నిర్మల్ జిల్లా శతకవుల పరిచయం - పరిశీలన	టి .నర్సయ్య
39	Nizamabad	GDC A Nizamabad	Telugu	"ఇందూరు చిందు యక్షగానం సాంస్కృతిక వారసత్వం"	Dr N. Ambersingh
40	Ranga Reddy	GDC Hayathnagar	Telugu	Manam Marichina Mana Aatalu (Our Games which we forgotten)	Dr.Veldandi.S ridhar
41	Siddipet	GDC Gajwel	Telugu	డా.కూరేశ్వ.విఠలాచార్య విఠలేశ్వర శతకం -సామాజిక స్పృహ	Antati. Balaswamy
42	Adilabad	GDC (S) Adilabad	Hindi	Vignapanome Hindi Bhasha ka Prayog Ek Vishleshan	T. Pratap Singh
43	Hanamkonda	GDC Hanamkonda	Hindi	Online vidhya,Hindi patra-patrikayen evam saahitya ke shroth	Dr.Gopireddy Leelavathi
44	Hyderabad	GDC (W) Begumpet	Hindi	Pathrikaritha - kab, kaha kyu aur kaise?	Dr. J. Saritha
45	Hyderabad	GDC (W) Nampally	Hindi	Subhadra Kumari Chauhan ka Vyaktitva avam Kritisva	Bhagyavathi Shelar
46	Hyderabad	GDC Khairatabad	Hindi	Hindi bhasha-dev nagari lipi ka mahatv	Dr.K.Madhavi
47	Hyderabad	GDC Nayapul	Hindi	भारत में डिजिटल शिक्षा की आवश्यकता	Dr. H. K.Vandana
48	Karimnagar	GDC Karimnagar	Hindi	PREMCHAND KI 'SADGATI' KAHANI MEIN DALIT SAMVEDANA	Dr.V.Vara Prasad
49	Mahabubabad	GDC Mahabubabad	Hindi	Kabeerdas Samaj Sudarakh	Dr.V.Mamatha
50	Mahabubnagar	GDC A Mahabubnagar	Hindi	प्रस्तुत समाज में युवता। बदलते समाज में नव युवता	Dr.Swarupa Asst.Prof.in Telugu

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					(Incharge in Hindi)
51	Mahabubnagar	GDC Jadcherla	Hindi	Kabir das ke dohon mein vyaktitva-vikas (Dr.Babu Gulab Rai Ke Nibandh Charitra Sangathan Ke Aadhar Per)	Dr. Narsimha Rao Kalyani
52	Nalgonda	GDC (W) Nalgonda	Hindi	Yuvaon ke liye prerak hindi kavitayen	Dr.Aparna Chaturvedi
53	Nirmal	GDC Bhainsa	Hindi	Hindi patrakarita aur arambhik yug	Dr. Pavan kumar
54	Nizamabad	GDC A Nizamabad	Hindi	संचार माध्यमों में हिंदी का अस्थित्व	Dr.D. Hemalatha
55	Sangareddy	GDC A Sangareddy	Hindi	Swatantrata sangram mein Hindi ki bhumika	Rajendra Kumar
56	Sangareddy	GDC Patancheru	Hindi	Hindi mein Rozgaar ki sambhaavnaayen	Poonam Kumari
57	Hyderabad	GDC (W) Nampally	Urdu	Safarnaama ek jayez	Dr. Maimoona Begum
58	Hyderabad	GDC Chanchalguda	Urdu	اردو بحیثیت ذرائع ابلاغ کی زبان (جدید الیکٹرانک میڈیا کے حوالے سے) Urdu as a Mass Media Language (with reference to Modern Electronic Media)	Syeda Saifullah Basha
59	Hyderabad	GDC Nayapul	Urdu	Urdu Zaban Ka Faroog Tahafuz Aur Amli Eqdaamat	Dr. Rizwana Begum
60	Nizamabad	GDC A Nizamabad	Urdu	A study on urdu news portals in telangana importance and effectso	MOHD ABDUL RAHMAN
61	Nizamabad	GDC Bodhan	Urdu	The importance & necessity of children's literature	Naheeda Begum
62	Sangareddy	GDC (W) Sangareddy	Urdu	Urdu ki Moujuda Surat-e- Hall Masayel aur Imkanaat	Dr. Humera Sayeed

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63	Sangareddy	GDC Zaheerabad	Urdu	Urdu ki Taraqi Vo Farooq Mein Social Media Ka Kirdar	Dr. Ayesha Begum
64	Hanamkonda	GDC Hanamkonda	History	Architecture of Ramappa Temple- A world Heritage site in Telangana	S. Ganapathi Rao
65	Hyderabad	GDC (W) Begumpet	History	A Social History of the epidemics in the state of Hyderabad from 1897 to 1948; impact and attenuation	Dr.K.Vijay Kumar
66	Hyderabad	GDC (W) Nampally	History	Role of freedom moment for achieving independence	M.Shanthave ni
67	Hyderabad	GDC Khairatabad	History	Museum's in Nizam State	Dr. K. Padma
68	Hyderabad	GDC Narayanagud a	History	Temples in Hyderabad city: Historical Review	1) H.Geeta 2) Dr.Govind Vittal Rao Deshmukh
69	Hyderabad	GDC Nayapul	History	Social History of Medicine in Hyderabad State: The Story of Rupa Bai Furdoonji, World's First Female Anaesthetist	Dr. Dusi Srinivas
70	Hyderabad	GDC Vidyanagar	History	South Indian Temples (Need for a Different Orientation)	P.Venkat Easwar
71	Jagtial	GDC Jagtial	History	Importance of History in TSPSC exams	Dr.V.Rajesham
72	Jagtial	GDC W Jagtial	History	Kakatiya art and architecture	R.Madhavi
73	Jogulamba Gadwal	GDC Gadwal	History	Gadwal samsthanam	J. Bikya Naik & B.Pavan Kumar
74	Kamareddy	GDC Banswada	History	History of Telangana culture and heritage	S. Anitha

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75	Kamareddy	GDC Kamareddy	History	Nizam Sagar project	M.Ashok
76	Karimnagar	GDC (W) Karimnagar	History	UNESCO world heritage sites in South India	G. Radha
77	Karimnagar	GDC Jammikunta	History	A Study Project on history of Ellanthakunta Temple	P.Srinivas Reddy
78	Karimnagar	GDC Karimnagar	History	The Ramappa Temple -A Jewel of Kakatiya Era	K.Sudhakar
79	Khammam	GDC A Khammam	History	Irrigation projects in moden Telangana :A case study of Khammam District	T.Nagur
80	Mahabubnagar	GDC A Mahabubanagar	History	Buddhist stupas	Raghavendra Reddy
81	Medak	GDC Medak	History	Telanganalo charitraka, adhyathmika, paryataka varasathva sampada-Medak church	Dr.J. Vijay Kumar
82	Nalgonda	GDC Nakrekal	History	Historical Inscription in Chandupatla	Sk.Habib jani
83	Nirmal	GDC Bhainsa	History	Inscriptional History of Basara : An Epigraphical Study	K.Murali
84	Nizamabad	GDC Bodhan	History	Telangana Freedom Fighters	G. Srinivas
85	Nizamabad	GDC Morthad	History	Batukamma- A Historical perspective.	M.Bhoopathi
86	Sangareddy	GDC (W) Sangareddy	History	Kondapur Satavahana site	K.Krishnapriya
87	Hanamkonda	GDC (W) Warangal	Political Science & Public Administration	Issues and challenges of women at workplace -A case study of Revenue Department in Hanamkonda District	Dr.D. Ramakrishna Reddy



**File No.CCE-AC/JIGN/1/2021-ACADEMIC CELL**

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
88	Kamareddy	GDC Banswada	Political Science & Public Administration	Empowerment of rural women through the 73rd Constitutional Amendment Act	P.Srinivas
89	Kamareddy	GDC Kamareddy	Political Science & Public Administration	Policy making and implementation - A tool for an efficient management to achieve the objective of an organization Telangana government	Dr.T.Kavitha
90	Karimnagar	GDC Huzurabad	Political Science & Public Administration	Political empowerment of women in Panchayat raj institutions	G.Swapna
91	Karimnagar	GDC Karimnagar	Political Science & Public Administration	NGOs Role in Village Development--A Study of an NGO--PHC	Ch.praveena
92	Khammam	GDC A Khammam	Political Science & Public Administration	Effects of Covid -19 on citizens	Lt. Kongala Sukumar
93	Mahabubnagar	GDC A Mahabubnagar	Political Science & Public Administration	Causes and Preventive measures of Student Suicides	D.Suresh
94	Mancherial	GDC Luxettipet	Political Science & Public Administration	73 Rd Amendment act,11th schedule	K Sandhya rani
95	Medak	GDC Medak	Political Science & Public Administration	A structural – functional analysis of Indian political system during pandemic(2020-2021)	V. Manasa Manoharini
96	Mulugu	GDC Mulugu	Political Science & Public Administration	Telangana state welfare scheme Telaganaku Harithaharam	N.Muthyalu
97	Nalgonda	GDC (W) Nalgonda	Political Science & Public Administration	"Role of the Voters in Election Process"	Y. Suneetha
98	Nalgonda	GDC A Nalgonda	Political Science & Public Administration	Empowerment of women through political participation – A case study of	S.Yadagiri

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
				Nalgonda Municipality	
99	Nalgonda	GDC Miryalguda	Political Science & Public Administration	Human Rights in India	S. Sunanda
100	Nirmal	GDC Nirmal	Political Science & Public Administration	The role of cyber law in cyber crime	Afreen Sultana
101	Ranga Reddy	GDC Hayathnagar	Political Science & Public Administration	Issues and Challenges of Social Acceptance of Transgenders in India - A review of Yogyakarta Principles	M. Samuel Praveen Kumar
102	Sangareddy	GDC (W) Sangareddy	Political Science & Public Administration	తెలంగాణలో నూతన పథకాల అమలు- సంగారెడ్డి జిల్లాలో అమలు అవుతున్న తీరు	P. Sujatha
103	Sangareddy	GDC A Sangareddy	Political Science & Public Administration	A Study on Sexual Assault Against Children with reference to POCSO ACT	Dr. Challoyu Jyothsna
104	Sangareddy	GDC Patancheru	Political Science & Public Administration	E- learning implications on education	J Nagaratnam
105	Siddipet	GDC A Siddipet	Political Science & Public Administration	Socio- Economic and Political Conditions of the Semi-Nomadic Tribes –Study in Siddipet District of Telangana State	Dr.K.Hussain
106	Yadadri Bhuvanagiri	GDC Ramannapet	Political Science & Public Administration	Raith Bandhu	Shaik peer saheb
107	Adilabad	GDC (A&C) Adilabad	Economics	Implementation of Rythu Bandhu scheme in Adilabad	T. Swapna
108	Bhadradi Kothagudem	GDC Bhadrachalam	Economics	Awareness of Early Marriage risks-A case study at Bhadrachalam division ITDA	K.Surya Rao

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109	Hyderabad	GDC (W) Begumpet	Economics	Impact of pandemic on consumer behaviour	DR.N. Vijaya Raghavi
110	Hyderabad	GDC (W) Golconda	Economics	Regulated markets in India - an insight	Dubbalaboina Sadanand
111	Hyderabad	GDC Khairatabad	Economics	An Empirical analysis of Cess in Telangana ( with special reference to Cess on Petrol)	Dr. P. Sujatha
112	Jagtial	GDC Metpally	Economics	వ్యవసాయ రంగంలో అల్ప ఉత్పాదకత- ప్రభావాలు	కే. వెంకయ్య
113	Karimnagar	GDC (W) Karimnagar	Economics	Impact of Goods and Services Tax on Consumers : A Study in Karimnagar District	Markonda Shakunthala
114	Karimnagar	GDC Jammikunta	Economics	Performance of women SHGs in women development in Jammikunta Area Jammikunta	M. Rama Mohan Rao
115	Khammam	GDC (W) Khammam	Economics	Violence against women	K.Indira
116	Mahabubabad	GDC Garla	Economics	Social security through aasara pension scheme (A case study of Mahabubabad District)	Dr.B. Lakshmana Rao
117	Mahabubnagar	GDC (W) Mahabubnagar	Economics	Water conservation program under Jatashakthi abiyana a case study on Girakonda village	S. Siva Prasad
118	Mahabubnagar	GDC A Mahabubnagar	Economics	Employment patterns and income earning activities of the Yerukala tribe _A Study in Nagarkurnool district of the Telangana State	Ch.Venkat Reddy & R Srinivas
119	Mahabubnagar	GDC Jadcherla	Economics	Impact of GST on consumers (A Study of Jadcherla Town)	R Nagaraju

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120	Medak	GDC Narsapur	Economics	Economic and social impact of Covid-19 on education system in Narsapur town	A. Anasurya
121	Medchal	GDC Malkajgiri	Economics	Study on the skin dwellers in Hyderabad	Dr. S. Ramesh
122	Nagarkurnool	GDC Kondanagula	Economics	A case study on Raithu welfare schemes in Telangana state	Ravi Parangi
123	Nizamabad	GDC Armoor	Economics	Impact of Food Fortification on Health	Dr. M.Kotaiah
124	Nizamabad	GDC Morthad	Economics	A study on Mission Bhagiratha	N.Rajaiah
125	Siddipet	GDC A Siddipet	Economics	MGNREGA: Source of Livelihood During The Pandemic Period – Evidence from Siddipet District in Telangana State	Dr.M. Sraddanandam
126	Siddipet	GDC Dubbak	Economics	తెలంగాణ వ్యవసాయ రంగంలో ప్రత్యామ్నాయ పంటల ఆవశ్యకత - నారాయణరావు పేట గ్రామం ఒక ప్రత్యేక అధ్యయనం	Ponnala.Sunita
127	Bhadradri Kothagudem	GDC Paloncha	Commerce	Consumer perception on e-banking transactions through mobile phones during Covid-19 pandemic	Parelli Sreenivas
128	Hanamkonda	GDC Hanamkonda	Commerce	"Awareness on Entrepreneurship Development and Start-ups among Rural Youth - A Case Study of Warangal District	Dr.S.Vinodar Rao
129	Hyderabad	GDC Nayapul	Commerce	The study of Cryptocurrency growth and Assessment of Volatility with reference to Bitcoin and Ethereum currencies	Dr.K.Mallikarjuna Rao

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130	Hyderabad	GDC Vidyanagar	Commerce	Equity research analysis in selected banks in Telangana State	Dr. Kola Anjaneyulu,
131	Jagtial	GDC W Jagtial	Commerce	Attitude towards ethics in Social Media- A study with special reference to college students	Dr. Harjoth Kaur
132	Kamareddy	GDC Kamareddy	Commerce	A study on consumer rights and awareness on rural consumers a special reference to Kamareddy district	B. Sharath Reddy
133	Karimnagar	GDC Karimnagar	Commerce	Impact of COVID-19 Pandemic on MSMEs: A Study of Karimnagar District	Dr. M. Malla Reddy
134	Khammam	GDC A Khammam	Commerce	A Study on impact of modern retailing on traditional retailing in Khammam	S Ramesh
135	Mulugu	GDC Mulugu	Commerce	A study of two wheeler policyholders in Mulugu area	Dr. Md.Yakub
136	Nizamabad	GDC Morthad	Commerce	Risk and returns analysis of Nifty and Sensex	M.Avanthi
137	Nalgonda	GDC (W) Nalgonda	Commerce	A study on self-help group in Nalgonda town	Sapavat Raju
138	Nalgonda	GDC A Nalgonda	Commerce	Influence of social media and marketing on youth	Dr.Ch.Madhu
139	Nalgonda	GDC Devarakonda	Commerce	A Study on Consumer Practices Among College Students in Devarakonda	S.Sarada Devi
140	Narayanpet	GDC Narayanpet	Commerce	Role of co-operative societies in economical development. "A Case study of the seva mutually aided co-operative credit	Shaik Sujath Ali

S.No	District	Name of the GDC	Subject	Name of the Project	Name of the Supervisor
				society Mahabubnagar"	
141	Nizamabad	GDC A Nizamabad	Commerce	"The New Way of Business with special reference to Food Booking APPs" (A Comprehensive Study on ZOMATO in Nizamabad)	Dr. G. Linganna
142	Rajanna Sircilla	GDC Agraharam	Commerce	Impact of covid-19 on financial status of Weavers of Textile industry in Sircilla Town	Y.Narsaiah & T Aravind
143	Siddipet	GDC A Siddipet	Commerce	'Direct Marketing of Vegetables through Rythu Bazaars – A Case Study of Siddipet Town in Siddipet (Dt) Telangana'	Rodda Prameela
144	Siddipet	GDC Gajwel	Commerce	Customer perception towards GST	J.Laxminarsai ah
145	Wanaparthy	GDC Wanaparthy	Commerce	E-Commerce Business Before and after Covid-19 and Role Of Cryptocurrency in E-Commerce in Future	Dr.N.Srinu
146	Warangal	GDC Narsampet	Commerce	A study on the saving and investment habit of small investors	Dr. B. Vishnu Kumar
147	Warangal	GDC Rangasaipet	Commerce	A study on youth perception and awareness towards entrepreneurship in erstwhile Warangal	Dr M. Somaiah
148	Adilabad	GDC (S) Adilabad	Physics	Effect of size of the bob on the time period of the simple pendulum	A. Zakeer Hussain & J.Thirupathi

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
149	Bhadradri Kothagudem	GDC Paloncha	Physics	"The Impact of Fly Ash produced in Thermal power plants and Industries Remedial measures & Alternatives"	S.Rambabu
150	Hanamkonda	GDC Hanamkonda	Physics	Energy Audit - KGC Hanamakonda - A case study	Dr.K.Narendr
151	Hyderabad	GDC (W) Begumpet	Physics	Swachch Antariksh	Dr. Ch.Kanchana Latha
152	Hyderabad	GDC (W) Nampally	Physics	Some studies on eco-friendly glasses	Dr.P.Indira
153	Hyderabad	GDC Khairatabad	Physics	Salt -Physics approach	Chandana.N
154	Hyderabad	GDC Narayanaguda	Physics	Biomaterial Preparation and Applications for Medical Applications	Devaiah
155	Hyderabad	GDC Nayapul	Physics	The Role of physics in Criminal Investigation : An Empirical Study.	Dr.S.E.Naina Vinodini
156	Hyderabad	GDC Vidyanagar	Physics	Disaster Management - A Case Study of Recent Floods ( 2020 & 2021) in Hyderabad	Dr.J.Chinna Babu
157	Kamareddy	GDC Banswada	Physics	Water overflow alarm	B Vinay Kumar
158	Karimnagar	GDC Karimnagar	Physics	Exhibition of diffraction of laser light by using non-scientific (Non-conventional) materials	S.Krishna Prasad
159	Medchal	GDC Kukatpally	Physics	Concave Face - An Optical Illusion	Dr. N. Vijaya Lakshmi
160	Medchal	GDC Malkajgiri	Physics	Mechanical Oscillations of Lungs and Removal of Excess Mucus in COPD and Corona patients	Veera Reddy Vippala
161	Nalgonda	GDC A Nalgonda	Physics	Mobile robot in hospital logistics	M.Venkat Reddy

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
				(working model)	
162	Rajanna Sircilla	GDC Agraharam	Physics	Photo acoustic spectroscopy	Rajesh.K
163	Ranga Reddy	GDC Hayathnagar	Physics	Study of Marangoni Flow on Fluid Surfaces	Dr.Parvathalu Kalakonda
164	Sangareddy	GDC Sadasivpet	Physics	The solar heating and night cooling of surfaces	P.Rajireddy
165	Siddipet	GDC Gajwel	Physics	The Importance of energy audit at institutional level	M. Bhavani
166	Wanaparthy	GDC (W) Wanaparthy	Physics	Water Analysis (TDS, pH and Temperature ) in GDC Women Wanaparthy	R.Manjula , G. Vishnumurthy
167	Yadadri Bhuvanagiri	GDC Alair	Physics	Investigation of Urine Glucose using Refractometric Analysis	Dr. K.Haritha
168	Yadadri Bhuvanagiri	GDC Ramannapet	Physics	Electrical energy consumption in the college- A case study	Madhu Dharmapuri
169	Bhadradi Kothagudem	GDC Bhadrachalam	Chemistry	Determination of vitamin c in various fruits and vegetables and the role of vitamin c in Covid 19	D Veeranna & V Raga Suma
170	Hanamkonda	GDC Hanamkonda	Chemistry	Studies on Bio Ethanol production from waste Banana and Orange Fruits using Ecologically friendly methods	Dr. Vasam Sreenivas
171	Hyderabad	GDC (W) Begumpet	Chemistry	Hydrogen-fuel of the future	1. Dr. G.Pranitha, 2. Dr. Rafia Sultana
172	Hyderabad	GDC Nayapul	Chemistry	"Controlled release of Volatile organic compound by pH sensitive hydrogels"	Dr.Dayanand & Dr Viplav Duth shukla
173	Jangaon	GDC Jangaon	Chemistry	Assessment of Heavy Metals in Contaminated Soil and	Dr.J.Uma Rani



S.No	District	Name of the GDC	Subject	Name of the Project	Name of the Supervisor
				Plants around the Landfills in Jangaon	
174	Jayashankar Bhupalpally	GDC Bhupalpally	Chemistry	An evaluation of the potential dangers of potassium bromate in bread upon health	Sandhya Rani. Bandi
175	Jogulamba Gadwal	GDC Gadwal	Chemistry	Biosynthesis of Silver nanoparticles using alternanthera sessilis leaf extract, and it's antibacterial, antifungal study	Haribabu
176	Jogulamba Gadwal	GDC Shantinagar	Chemistry	Estimation of fluoride	Dr K Chandra Mohan
177	Kamareddy	GDC Yellareddy	Chemistry	Food Adulteration	V. Shashidhar
178	Karimnagar	GDC (W) Karimnagar	Chemistry	Analysis of effect of Temperature on iodine content in common salt and its implications on Thyroidism	A.Shalini
179	Mancherial	GDC Bellampally	Chemistry	Comparative study on removal of fluoride from ground water by cost effective adsorbents	P.Swamy
180	Mancherial	GDC Chennoor	Chemistry	Analysis of soft drinks	U. Srinivas
181	Medak	GDC Narsapur	Chemistry	Determination of the hardness of water samples	L. Narender
182	Medchal	GDC Kukatpally	Chemistry	Biosynthesis of Silver nanoparticles from Mulberry fruit extract and their antioxidant activity	Dr.Vani Inavolu & Dr.P.Vinod Kumar Goud
183	Nizamabad	GDC Armour	Chemistry	Effect of TDS on paddy crop yield	Rajesh A
184	Nizamabad	GDC Bheemgal	Chemistry	Soaps and detergents	B.Ravinder
185	Rajanna Sircilla	GDC Agraharam	Chemistry	Effect of temperature on solubility of Ionic solids	Dr B.Upender Reddy
186	Sangareddy	GDC (W)	Chemistry	Quantitative	A. Surya

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<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
		Sangareddy		estimation of casein in various milk samples	kumari
187	Sangareddy	GDC Jogipet	Chemistry	Effect of environmental pollution on water bodies of study of Singoor project	Ch.Srikanth
188	Siddipet	GDC A Siddipet	Chemistry	Identification of elements affecting the soil health in and around Siddipet	Dr. Veerabathini Manohar
189	Suryapet	GDC Huzurnagar	Chemistry	To study the foaming capacities of soaps	K.Ravikumar
190	Wanaparthy	GDC (W) Wanaparthy	Chemistry	Water analysis – A study in various village of GDC(W) Wanaparthy students	Dr. K. Damodhar Reddy, Dr. K. Jagadeeswar aiah
191	Hanamkonda	GDC Hanamkonda	Mathematics	Golden Ratio and Its Applications	M.Venugopal & M. Radhika
192	Hyderabad	GDC (W) Begumpet	Mathematics	Application of mathematics in validation and verification of check digit	K Sri Koteswar Rao
193	Hyderabad	GDC Khairatabad	Mathematics	Magic squares and their Applications	Dr K.Venkatesw arlu
194	Hyderabad	GDC Nayapul	Mathematics	Application of Linear programming for Profit Maximization and Cost Minimization : A case study of SP Accure Labs Private limited ~ Pharmacy company in Hyderabad	Dr. K. Sarada, KM.Swarna Latha
195	Hyderabad	GDC Vidyanagar	Mathematics	Applications of Mathematics in Nanotechnology	Dr.D. Malleswari
196	Kamareddy	GDC Kamareddy	Mathematics	Cryptography	A.Rajendher
197	Karimnagar	GDC (W) Karimnagar	Mathematics	Tricks in Vedic Mathematics	V.Radhakisha n
198	Karimnagar	GDC Karimnagar	Mathematics	Large numbers in Ancient India	Dr.M.Archana

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
199	Khammam	GDC A Khammam	Mathematics	Symmetric Key Cryptography - Coding and Decoding using Permutations	V.Sambasiva Rao
200	Mahabubnagar	GDC (W) Mahabubnagar	Mathematics	Balancing stochieometry equations using algebra of matrices	T Rajeshwari
201	Medak	GDC Medak	Mathematics	Curve fitting- population growth in India	J. Pashupathi Sharma
202	Medak	GDC Narsapur	Mathematics	Applications of Differential Equations	V.Hemanth Kumar Chary
203	Nagarkurnool	GDC (S) Nagarkurnool	Mathematics	Vedic Mathematics	M. Anjaiah
204	Nalgonda	GDC (W) Nalgonda	Mathematics	Extension of corollary of Euler's theorem for functions of three variables	K.Venkateshwarlu, CH.Narasimha Raju
205	Nalgonda	GDC A Nalgonda	Mathematics	Creating the barcodes and decodes the barcodes on various objects	D Madhukar
206	Narayanpet	GDC Narayanpet	Mathematics	Differential Equations and It's applications	G.Ranga Reddy , Surekha
207	Nizamabad	GDC A Nizamabad	Mathematics	Applications of Geometry in Various Fields	S. Jayaprasad
208	Nizamabad	GDC Morthad	Mathematics	Mathematics in Nature	P. Byula
209	Rajanna Sircilla	GDC Agraharam	Mathematics	Matrices and their applications	M.Rajesh
210	Ranga Reddy	GDC Shadnagar	Mathematics	Logo Design with Mathematical Shapes	Tirumala Srikrishna
211	Sangareddy	GDC Narayankhed	Mathematics	Application of Linear Algebra in real life	N. Hari
212	Vikarabad	GDC Kodangal	Mathematics	Mensurtion	K. Ramesh babu
213	Warangal	GDC Rangasaipet	Mathematics	A Study on Cryptography and Elliptic Curve Cryptography	R Rudrani
214	Hanamkonda	GDC Parkal	Botany	Harithaharam concern	Dr G.Odelu

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
				with Social Forestry	
215	Hyderabad	GDC (W) Nampally	Botany	Biodegradation of Plastic Low Density Polyethylene	Dr. B.S.Rajitha
216	Hyderabad	GDC Khairatabad	Botany	Effect of covid-19 on students Health and Psychology	Dr.P.Vijaya
217	Hyderabad	GDC Narayanaguda	Botany	Barren to green - innovative and novel	Dr.N.Ravi Babu & E. M.Sunitha
218	Kamareddy	GDC Kamareddy	Botany	Estimation of Carbon Sequestration in Eucalyptus	Sucharan Moshe Dayan
219	Karimnagar	GDC (W) Karimnagar	Botany	Gums and resin yielding plants in gums and resin yielding plants in Northern Telangana and their importance	R. Jyothirmai
220	Khammam	GDC A Khammam	Botany	An Ethno botanical Survey of Medicinal	Dr. N. Naga Sameera
221	Mahabubnagar	GDC A Mahabubnagar	Botany	Study of toxicity of Zinc metal ion in Bajra and Sorghum	M.Chandrasekhar
222	Nagarkurnool	GDC (S) Nagarkurnool	Botany	Common medicinal plants their	Quamar Sultana & K.Gangadhar
223	Nagarkurnool	GDC Kalwakurthy	Botany	Formation of Cosmetic using Medicinal	A.Raju
224	Narayanpet	GDC Narayanpet	Botany	Role of Medicinal Plants in Human Life	G.Sangeetha
225	Nirmal	GDC Nirmal	Botany	Devastation of golasukattu chair type tanks in Nirmal: A case study.	S.Pavan Kumar
226	Nizamabad	GDC A Nizamabad	Botany	Effect of Brassinosteroids on the Morphological	Deepak Parmar
227	Rajanna Sircilla	GDC Gambhiraopet	Botany	Perception of farmers on crop diversification	Smt B.Srivalli
228	Sangareddy	GDC A Sangareddy	Botany	Innovative method of nutrient enriched	Dr.O.Padmaja

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<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
229	Siddipet	GDC (W) Siddipet	Botany	Garbage is recyclable & reusable for vermicompost	Sangi Godavari
230	Siddipet	GDC A Siddipet	Botany	Role of wheat grass juice in enhancement of Hb levels in college students	Dr.A.Shailaja
231	Suryapet	GDC Huzurnagar	Botany	identification of abundant freshwater algae in	M.Anil Kumar
232	Vikarabad	GDC Kodangal	Botany	Study of Diminishing Traditional Wealth for	R.Srinivas
233	Warangal	GDC Narsampet	Botany	Campus flora of Government Degree	Medisetti Narendar
234	Hanamkonda	GDC Hanamkonda	Zoology	Impact of Covid-19 in India.	Dr. V. Anil kumar , P. Shubashini, Dr. K. Ganesh
235	Hyderabad	GDC (W) Nampally	Zoology	FASD (Fatal Alcohol Spectrum Disorders)	Aamruth Kumar Lakkineni
236	Hyderabad	GDC Khairatabad	Zoology	A study on the ecological succession state of few surface water bodies (Lakes and Ponds) in Hyderabad for sustainable use as water resources.	Dr.K.Vijaya Prasada Rao
237	Hyderabad	GDC Nayapul	Zoology	Prevalence and risk factors of type 2 diabetes in several parts of Telangana state	Dr. Sridevi
238	Kamareddy	GDC Kamareddy	Zoology	Bio accumulation of heavy metals in fresh water	Tirumala. Malsoor
239	Karimnagar	GDC (W) Karimnagar	Zoology	Food Consumption And Lifestyle Pattern Of Obese Adolescents And The Impact Of Nutrition Intervention In Karimnagar District	Dr. S.SWETHA

<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
240	Khammam	GDC A Khammam	Zoology	Vermicomposting, worms are farmers friends	Dr.M.VenkateswaraRao
241	Mahabubnagar	GDC Jadcherla	Zoology	Knowledge Attitude Practice Study On Balanced Diet	K.Neeraja
242	Medak	GDC Medak	Zoology	Biodiversity in Pocharam forest in Medak Dist.	Dr.J.Veshwanadham
243	Nagarkurnool	GDC (S) Nagarkurnool	Zoology	Blood groups	1)L.Kodandar amulu, 2)E.Dasharatham
244	Nalgonda	GDC (W) Nalgonda	Zoology	Impact of nutritional counselling on BMI & haemoglobin percentage in students of GDC (W), Nalgonda.	R.Naresh
245	Nalgonda	GDC A Nalgonda	Zoology	Body mass index of first year undergraduate students for self-evaluating the physical strength	V. Nanda Kumar
246	Nalgonda	GDC Miryalguda	Zoology	Sewage treatment of rice industries in Miryalaguda	J.Narender Reddy
247	Narayanpet	GDC Narayanpet	Zoology	A Study on the Nutrition and Health Status of Adolescent Girl's in Government Schools of Narayanpet	Dr. Md. Riyaz Khan
248	Nizamabad	GDC A Nizamabad	Zoology	A Study and Survey On The Preservation Of Stem Cells In Nizamabad	1.G.Srinivas Reddy 2. Dr.Rafiya Yasmeen
249	Nizamabad	GDC Bodhan	Zoology	Prabhu Vaddepally	Prabhu Vaddepally
250	Peddapalli	GDC Godavarikhan	Zoology	Menstrual cycle disorders	Kiranmai.D
251	Rajanna Sircilla	GDC Agraharam	Zoology	Oligodynamic action of metals on enteric bacteria isolated from Manair water	Y.Narayana

S.No	District	Name of the GDC	Subject	Name of the Project	Name of the Supervisor
252	Sangareddy	GDC A Sangareddy	Zoology	Antifeedant activity of certain plant extracts against teak leaf skeletonizer, Eutectona machaeralis	L. Mahesh
253	Sangareddy	GDC Jogipet	Zoology	TITLE "Descriptive Analysis of awareness about Soil pollution with its causes and effects among the citizens " OF ANDOLE MANDAL	A.Gopal
254	Wanaparthy	GDC (W) Wanaparthy	Zoology	Estimation of Haemoglobin levels in our college students	G. Sravanthi
255	Yadadri Bhuvanagiri	GDC Ramannapet	Zoology	Biodiversity of soil Arthropods in cotton field	Pattem Brahmam
256	Hanamkonda	GDC (W) Warangal	Biotechnology & Microbiology	Experimental Study of Microbial Fuel Cell for electricity generation: Performance Characterization and Capacity improvement	Dr. G.Renuka
257	Hanamkonda	GDC Hanamkonda	Biotechnology & Microbiology	Green Synthesis of silvernanoparticles using achyranthes and its antimicrobial activity	R.Shyamala Chandra
258	Hyderabad	GDC (W) Begumpet	Biotechnology & Microbiology	Study of milk adulteration in Hyderabad	Dr.A.Madhuri, K.Bharathi Bai
259	Hyderabad	GDC Khairatabad	Biotechnology & Microbiology	Insilico analysis of efficacy of Remdesiver, Chloroquine, Hydroxy chloroquine and 2DG on Covid 19	Dr.Y.Venkateswarlu
260	Hyderabad	GDC Nayapul	Biotechnology & Microbiology	Status of Cervical Cancer and HPV Vaccination in Telangana	Dr. T. Raga Sudha
261	Medchal Malkajgiri	GDC Kukatpally	Biotechnology & Microbiology	A study on biocontrol of bacterial wilt disease of tomato	R.V.Ramchandrar

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<b>S.No</b>	<b>District</b>	<b>Name of the GDC</b>	<b>Subject</b>	<b>Name of the Project</b>	<b>Name of the Supervisor</b>
262	Nalgonda	GDC A Nalgonda	Biotechnology & Microbiology	Aloe Plastic	G.Anjaiah
263	Nizamabad	GDC A Nizamabad	Biotechnology & Microbiology	Global Dynamic Mapping of Omicron	Shaikh Akbarpasha
264	Sangareddy	GDC A Sangareddy	Biotechnology & Microbiology	Evaluating antimicrobial activity of Hand sanitizers against Bacterial and Fungal Pathogens	Dr.K.Jyothi
265	Siddipet	GDC A Siddipet	Biotechnology & Microbiology	Evaluation of bacterial contamination of biometric devices used by college students and staff	Dr. G. Madan Mohan
266	Adilabad	GDC (S) Adilabad	Computer Science & Applications	Social distance monitoring using deep learning.	G.Vidyarani, & Ravikumar.
267	Hanamkonda	GDC Hanamkonda	Computer Science & Applications	E-Waste Re-Cycling Service System	K.Ramesh, V.Ramesh & K.Sravana Kumari
268	Hyderabad	GDC (W) Begumpet	Computer Science & Applications	Word search Game	Dr G.Rajitha Devi
269	Hyderabad	GDC (W) Nampally	Computer Science & Applications	Automated Library Management System Coping with Ambiguous Words	Syed Mujahed H.
270	Hyderabad	GDC Narayanaguda	Computer Science & Applications	Automation of Sea Breeze front detection using Satellite Imagery and Digital Image Processing	Dr. Sambasiva Rao Baragada
271	Hyderabad	GDC Nayapul	Computer Science & Applications	Data Analysis Using Big Data Tools	Dr. P.NAGESHWAR
272	Jagtial	GDC (W) Jagtial	Computer Science & Applications	A Case Study on " Technical Hurdles in Online Learning "	S.Satyam
273	Kamareddy	GDC Banswada	Computer Science & Applications	Cloud based bus pass system	G.Mahander
274	Kamareddy	GDC Kamareddy	Computer Science & Applications	College Info App	J.Ramprasad



S.No	District	Name of the GDC	Subject	Name of the Project	Name of the Supervisor
275	Karimnagar	GDC Karimnagar	Computer Science & Applications	Demonstration of EDUQFIX for implementation in GDC's of Telangana State	K.Samuel Praneeth Chowdary
276	Khammam	GDC A Khammam	Computer Science & Applications	Online examination system	Dr.K.Nageswar Rao
277	Mahabubabad	GDC Garla	Computer Science & Applications	Face detection	Aleti Rajesh
278	Mahabubnagar	GDC A Mahabubanagar	Computer Science & Applications	Cyber Crime and Security	Shylaja
279	Mancherial	GDC Luxettipet	Computer Science & Applications	Development of website for samajik charitable trust	T.Sathish
280	Mulugu	GDC Eturunagara m	Computer Science & Applications	Student Information Management System	Pudota. Jeevaveni
281	Mulugu	GDC Mulugu	Computer Science & Applications	Creating an education web portal: A Study	Tejavath Srinu
282	Nalgonda	GDC A Nalgonda	Computer Science & Applications	Face recognition based attendance system	Mohd Thousif Ahemad and SP Venkata Ramana
283	Nizamabad	GDC A Nizamabad	Computer Science & Applications	G-tutor	P.Vivekanand & M.Kiran Kumar
284	Sangareddy	GDC Patancheru	Computer Science & Applications	Cyber Security-credit card fraud detection	R. Vishwa Bharathi
285	Siddipet	GDC A Siddipet	Computer Science & Applications	Women's Technological status	Mansoor Ahmed

(Orders of CCE have been obtained in the Note File)

**Signed by D Thiruvengala Chary**  
**Date: 17-03-2022 15:58:29**  
**Reason: Approved**

For Commissioner of Collegiate Education

**GOVERNMENT DEGREE COLLEGE FOR WOMEN  
WANAPARTHY  
DEPARTMENT OF PHYSICS**



**A Project Work on**  
**WATER ANALYSIS IN GOVERNMENT DEGREE COLLEGE FOR  
WOMEN WANAPARTHY**

- 1) K Rishitha (B.Sc 2<sup>nd</sup> Year )
- 2) S Akhila (B.Sc 2<sup>nd</sup> Year )
- 3) S Hemalatha (B.Sc 2<sup>nd</sup> Year )
- 4) T Nikitha (B.Sc 2<sup>nd</sup> Year )
- 5) T Susmitha (B.Sc 2<sup>nd</sup> Year )

**Guided by:**

**R Manjula**

**G Vishnumurthy**

# CERTIFICATE

This is to certified that

- 1) K Rishitha (B.Sc 2<sup>nd</sup> Year )
- 2) S Akhila (B.Sc 2<sup>nd</sup> Year )
- 3) S Hemalatha (B.Sc 2<sup>nd</sup> Year )
- 4) T Nikitha (B.Sc 2<sup>nd</sup> Year )
- 5) T Susmitha (B.Sc 2<sup>nd</sup> Year )


Have completed their project work on Water Analysis in GDC (W) Wanaparthy. They have successfully prepared this project report in the Department of Physics in GDC (W) Wanaparthy.

Signature of the Supervisor

1. R Manjula



2. G Vishnumurthy



**PRINCIPAL**  
Govt. Degree College For Women  
WANAPARTHY Dist.-509 103.  
Signature of the Principal

# ACKNOWLEDGMENT

The authors, K Rishitha (B.Sc 2<sup>nd</sup> Year) ,S Akhila (B.Sc 2<sup>nd</sup> Year) S Hemalatha (B.Sc 2<sup>nd</sup> Year) T Nikitha (B.Sc 2<sup>nd</sup> Year) T Susmitha (B.Sc 2<sup>nd</sup> Year) thank all the students for giving their support to carry out the work. The authors also thank the lectures of Department of Physics for the financial support and Principal Govt. Degree College for women Wanaparthy for the facilities to carry out the work.

# DECLARATION

We the following students studying B.Sc II year at Govt. Degree college for women, Wanaparthy during the academic year 2021-22 hereby declared that this is our original project work on “Water Analysis in Government Degree College for Women Wanaparthy” and submitted under the guidance of R Manjula and G Vishnumurthy lectures of Physics Department.

S.NO	HALL TICKET NO.	NAME OF THE STUDENT	SIGNATURE
1	20033019468043	K Rishitha	K. Rishitha
2	20033019468073	S Akhila	S. Akhila.
3	20033019468072	S Hemalatha	S. Hemalatha
4	20033019468080	T Nikitha	T. Nikitha
5	20033019468081	T Susmitha	T. Susmitha

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## Aim:

Analysis of TDS pH and Temperature of Water in Government Degree College For women Wanaparthi .

Operators: TDS Meter Ph Meter and Thermometer.



## Objectives:

### WHAT IS TDS?

TDS stands for total dissolved solids, and represents the total concentration of dissolved substances in water. TDS is made up of inorganic salts, as well as a small amount of organic matter. Common inorganic salts that can be found in water include calcium, magnesium, potassium and sodium, which are all cations, and carbonates, nitrates, bicarbonates, chlorides and sulfates, which are all anions. Cations are positively charged ions and anions are negatively charged ions.

### HOW DO THESE SOLIDS END UP DISSOLVED IN WATER?

These minerals can originate from a number of sources, both natural and as a result of human activities. Mineral springs contain water with high levels of dissolved solids, because the water has flowed through a region where the rocks have a high salt content. The water in the Prairie provinces tends to have high levels of dissolved solids, because of high amounts of calcium and magnesium in the ground.

These minerals can also come from human activities. Agricultural and urban runoff can carry excess minerals into water sources, as can wastewater discharges, industrial wastewater and salt that is used to de-ice roads.

# INTRODUCTION

## WHAT HAPPENS TO THE WATER WHEN THE TDS LEVEL IS HIGH?

Alone, a high concentration of dissolved solids is usually not a health hazard. In fact, many people buy mineral water, which has naturally elevated levels of dissolved solids. The United States Environmental Protection Agency (EPA), which is responsible for drinking water regulations in the United States, includes TDS as a secondary standard, meaning that it is a voluntary guideline in the United States. While the United States set legal standards for many harmful substances, TDS, along with other contaminants that cause aesthetic, cosmetic and technical effects, has only a guideline.

Most people think of TDS as being an aesthetic factor. In a study by the World Health Organization, a panel of tasters came to the following conclusions about the preferable level of TDS in water:

Level of TDS (milligrams per litre)	Rating
Less than 300	Excellent
300 - 600	Good
600 - 900	Fair
900 - 1,200	Poor
Above 1,200	Unacceptable

Taste of Water with Different TDS Concentrations;



However, a very low concentration of TDS has been found to give water a flat taste, which is undesirable to many people. Increased concentrations of dissolved solids can also have technical effects. Dissolved solids can produce hard water, which leaves deposits and films on fixtures, and on the insides of hot water pipes and boilers. Soaps and detergents do not produce as much lather with hard water as with soft water. As well, high amounts of dissolved solids can stain household fixtures, corrode pipes, and have a metallic taste. Hard water causes water filters to wear out sooner, because of the amount of minerals in the water. The picture below was taken near the Mammoth Hot Springs, in Yellowstone National Park, and shows the effect that water with



high concentrations of minerals can have on the landscape. The same minerals that are deposited on these rocks can cause problems when they build up in pipes and fixtures.

However, while TDS itself may be only an aesthetic and technical factor, a high concentration of TDS is an indicator that harmful contaminants, such as iron, manganese, sulfate, bromide and arsenic, can also be present in the water. This is especially true when the excessive dissolved solids are added to the water as human pollution, through runoff and wastewater discharges.

### WHAT ARE THE GUIDELINES FOR TDS?

In Canada, substances that are considered to be dangerous in high amounts are listed as Maximum Acceptable Concentrations (MACs) in the Canadian Guidelines for Drinking Water Quality. However, substances that are not considered dangerous at their MAC, such as TDS, are given an aesthetic objective in the Guidelines. The Canadian guideline for TDS is less than 500 milligrams per litre (which is the same as 500 parts per million). However, since the Canadian guidelines are not enforceable, each province is free to choose whether or not they will follow the guidelines. Saskatchewan has water that naturally contains high concentrations of TDS, so the province has chosen to not follow the Canadian guideline of 500 parts per million, and to implement its own guideline of 1,500 parts per million.

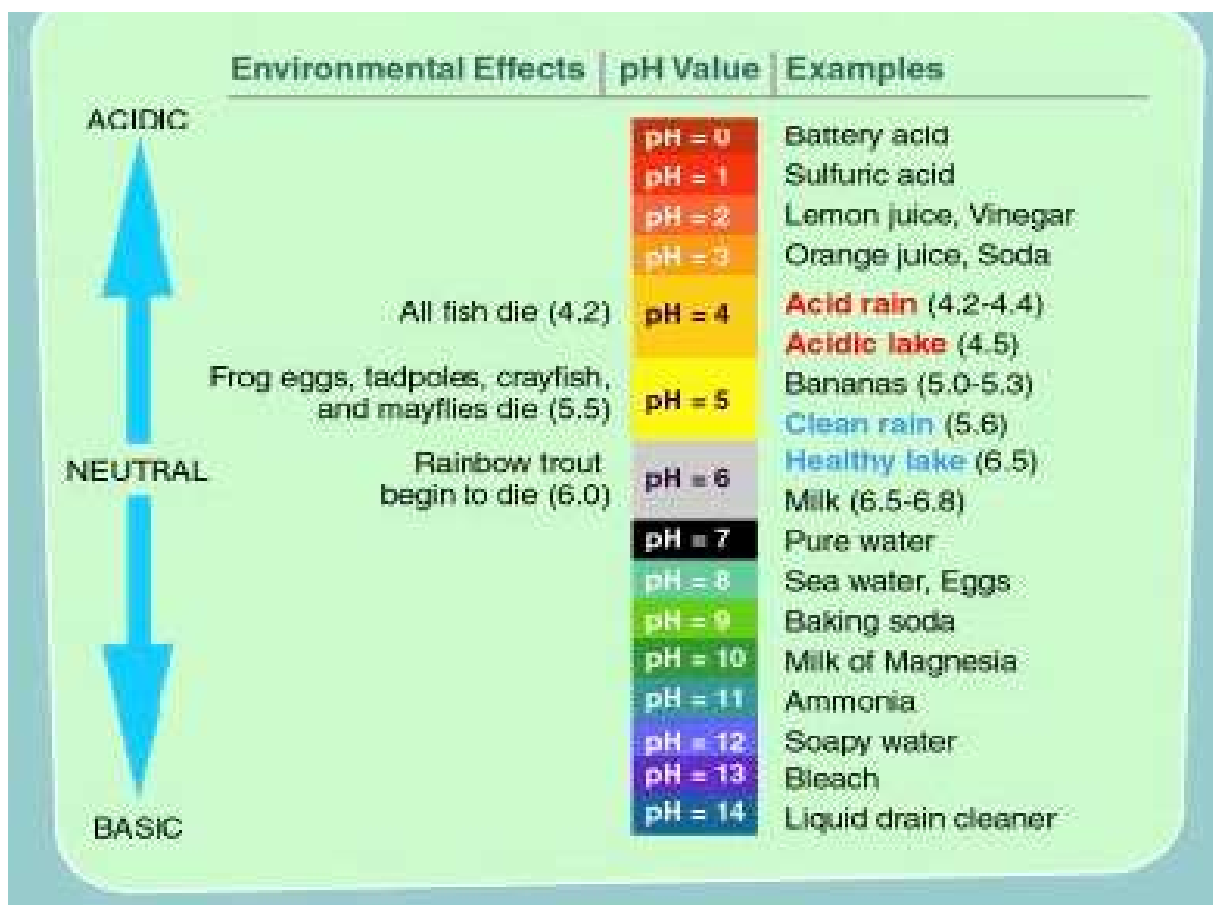
In the United States, substances that are health-based have Maximum Contaminant Levels (MCLs), and are enforceable by law. However, TDS, and other substances that are considered aesthetic, are given Secondary Maximum Contaminant Levels (SMCLs), but are not enforced, because they do not pose as great a health risk as the primary contaminants do. The United States guideline for TDS is also 500 parts per million.

### HOW CAN WATER TREATMENT FACILITIES REMOVE TDS?

Water treatment facilities can use reverse osmosis to remove the dissolved solids in the water that are responsible for elevated TDS levels. Reverse osmosis removes virtually all dissolved substances, including many harmful minerals, such as salt and lead. It also removes healthy minerals, such as calcium and magnesium, and ideally such water should be filtered through a magnesium and calcium mineral bed to add the minerals to the water. The mineral bed also increases the pH and decreases the corrosive potential of the water. For more information about reverse osmosis, see the Ultrafiltration, Nanofiltration and Reverse Osmosis fact sheet.

## WHAT IS PH?

The pH value of a water source is a measure of its acidity or alkalinity. The pH level is a measurement of the activity of the hydrogen atom, because the hydrogen activity is a good representation of the acidity or alkalinity of the water. The pH scale, as shown below, ranges from 0 to 14, with 7.0 being neutral. Water with a low pH is said to be acidic, and water with a high pH is basic, or alkaline. Pure water would have a pH of 7.0, but water sources and precipitation tends to be slightly acidic, due to contaminants that are in the water.



### pH Scale

The pH scale is logarithmic, which means that each step on the pH scale represents a ten-fold change in acidity. For example, a water body with a pH of 5.0 is ten times more acidic than water with a pH of 6.0. And water with a pH of 4.0 is 100 times more acidic than water with a pH of 6.0

## HOW DOES THE PH OF A WATER SOURCE CHANGE?

Surface water typically has a pH value between 6.5 and 8.5 and groundwater tends to have a pH between 6.0 and 8.5. The pH of a water source can vary naturally. Some types of rock and soil, such as limestone, can neutralize acid more effectively than other types of rock and soil, such as granite. Or, when there are a large number of plants growing in a lake or river, they release carbon dioxide when they die and decompose. When the carbon dioxide mixes with the water, a weak carbonic acid is formed; this can then cause the pH of the water body to decrease.

A number of human activities have a harmful effect on the pH of nearby water sources. When sulfur dioxide and nitrogen oxides are emitted, through industrial operations and vehicles, acid rain can be produced. For more information about acid rain, see the [Acid Rain fact sheet](#).

Chemical pollution, from industrial operations, individuals and communities, can cause a water body to become acidic. These chemicals can enter the water through illegal discharges or after inadequate wastewater treatment. For more information about chemical pollution, including ways in which you can minimize pollution, see the [Water Pollution fact sheet](#).

## WHAT HAPPENS WHEN THE PH OF THE WATER CHANGES?

A change in the pH of water can have a number of consequences. In the environment, many plants and animals are harmed, or even killed, as a result of acidification. Many varieties of fish and aquatic life are extremely sensitive to changes in water temperature and composition. The below diagram illustrates the pH that is required for a number of aquatic species. Notice that when the pH is around 6.0 to 7.0 (which is natural for many lakes and streams), the biodiversity within the ecosystem is wide. As the pH decreases and the acidity increases, fewer and fewer organisms can survive.

	pH 6.5	pH 6.0	pH 5.5	pH 5.0	pH 4.5	pH 4.0
TROUT	Survives	Survives	Survives	Survives	Does not survive	Does not survive
BASS	Survives	Survives	Survives	Does not survive	Does not survive	Does not survive
PERCH	Survives	Survives	Survives	Survives	Survives	Does not survive
FROGS	Survives	Survives	Survives	Survives	Survives	Survives
SALAMANDERS	Survives	Survives	Survives	Survives	Does not survive	Does not survive
CLAMS	Survives	Survives	Does not survive	Does not survive	Does not survive	Does not survive
CRAYFISH	Survives	Survives	Survives	Does not survive	Does not survive	Does not survive
SNAILS	Survives	Survives	Does not survive	Does not survive	Does not survive	Does not survive
MAYFLY	Survives	Survives	Survives	Does not survive	Does not survive	Does not survive

#### Required pH Level for the Survival of Common Species of Fish

Acidic water is synergistic, which means that a combination of a low pH and an increased concentration of certain substances is far more harmful than the sum of the parts. For example, aluminium, lead and mercury are potentially dangerous substances, but when the pH of the water source is already low, these substances can have extremely detrimental consequences for aquatic life.

Acidic water can also cause problems for human consumption. While slightly acidic water is not dangerous, on its own, it can be quite dangerous when combined with other compounds. Water with a pH that is less than 6.5 can leach metal ions, including iron, manganese, copper, lead and zinc from plumbing fixtures and pipes. This, in return, can be quite dangerous. On the other end of the pH scale, water that has a pH greater than 8.0 can be difficult to disinfect. The World Health Organization recommends that the pH of the water be less than 8.0, because basic water does not allow for effective chlorination.

## WHAT ARE THE GUIDELINES FOR PH?

Like TDS, pH is given an aesthetic objective in Canada. The Canadian Guidelines for Drinking Water Quality suggest that the pH of drinking water should be between 7.0 and 10.5. The Saskatchewan Drinking Water Standards and Objectives recommend that the pH of drinking water be between 6.5 and 9.0.

In the United States, pH is, like TDS, a secondary standard; the Secondary Maximum Contaminant Level for pH is between 6.5 and 8.5. According to the EPA, the noticeable effects of a pH that is less than 6.5 include a bitter, metallic taste and corrosion. The noticeable effects of a pH above 8.5 include a slippery feeling, soda-like taste and deposits.

## HOW DO WATER TREATMENT FACILITIES CHANGE THE PH OF WATER?

There are several methods that can increase the pH of water, before disinfection. The pH is commonly increased using sodium carbonate and sodium hydroxide, but a better way of dealing with low pH is to use calcium and magnesium carbonate, which not only will increase pH levels, but will also make the water less corrosive and both calcium and magnesium are of health benefits as opposed to sodium.

## WHY IS IT IMPORTANT TO MONITOR TDS AND PH?

It is important to monitor the TDS level and the pH of drinking water for several reasons. When a water source has a high level of TDS or a low pH, it is likely that there are other harmful contaminants in the water. Both TDS and pH are also easy to measure and if something is happening to a water, such as pollution, chances are both TDS and pH levels will change so keeping track of those changes can act as an early warning signal that something is happening to the water. For these reasons, it is important to monitor the TDS and pH levels, so that if they change, action can be taken immediately.

For more information about TDS and pH, including the ways in which you can use these tests on your drinking water, see the Operation Water Pollution program.

The Safe Drinking Water Foundation has educational programs that can supplement the information found in this fact sheet. Operation Water Drop looks at the chemical contaminants that are found in water; it is designed for a science class. Operation Water Flow looks at how water is used, where it comes from and how much it costs; it has lessons that are designed for Social Studies, Math, Biology, Chemistry and Science classes. Operation Water Spirit presents a First Nations perspective of water

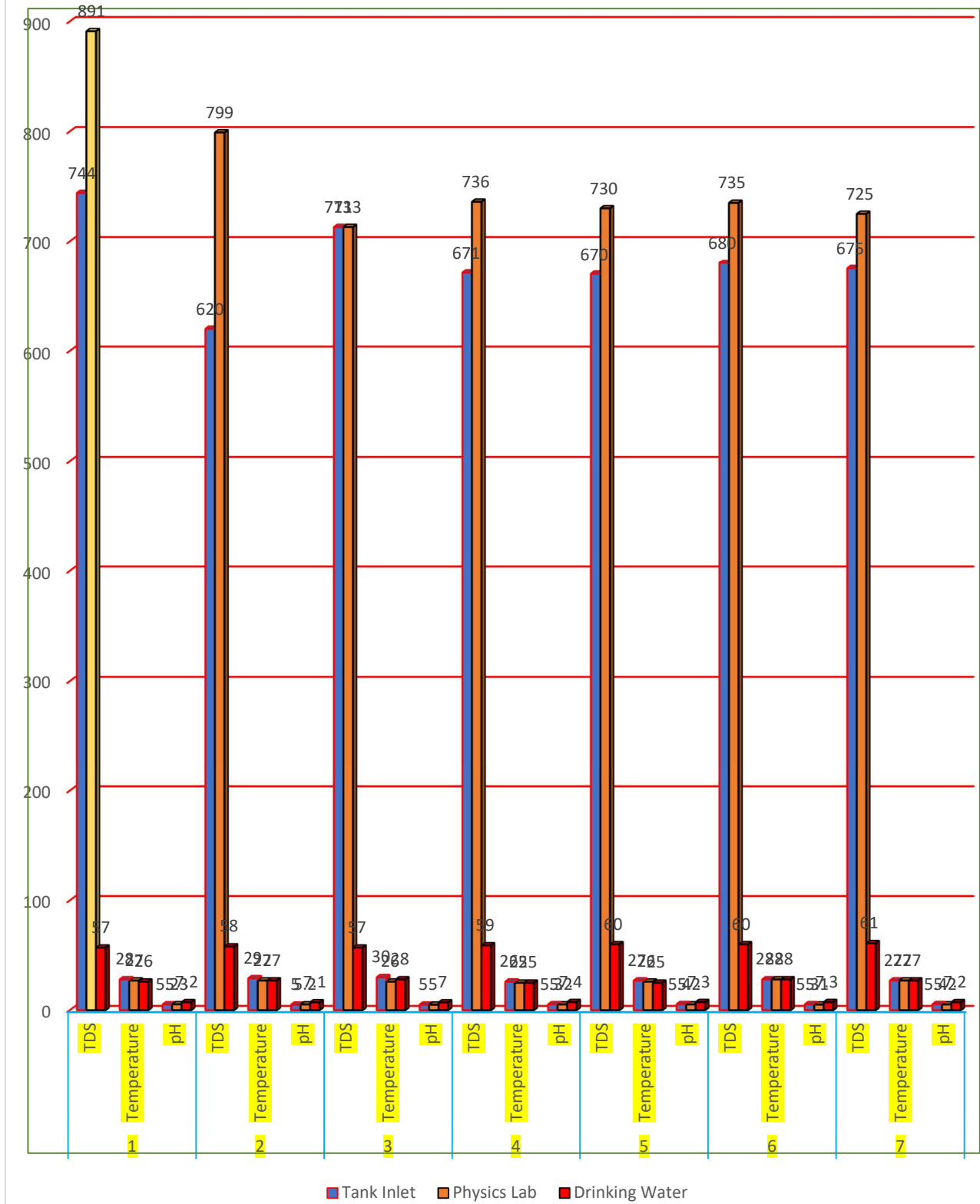
and the surrounding issues; it is designed for Native Studies or Social Studies classes. Operation Water Health looks at common health issues surrounding drinking water in Canada and around the world and is designed for a Health, Science and Social Studies collaboration. Operation Water Pollution focuses on how water pollution occurs and how it is cleaned up and has been designed for a Science and Social Studies collaboration. To access more information on these and other educational activities, as well as additional fact sheets, visit the Safe Drinking Water Foundation website at [www.safewater.org](http://www.safewater.org).

## Analysis

### WATER ANALYSIS IN GOVERNMENT DEGREE COLLEGE FOR WOMEN WANAPARTHY

Sl.No	Day	Scales	Tank Inlet	Physics Lab	Drinking Water
1	1	TDS	744	891	57
2		Temperature	28	27	26
3		p <sup>H</sup>	5.2	5.3	7.2
1	2	TDS	620	799	58
2		Temperature	29	27	27
3		p <sup>H</sup>	5	5.2	7.1
1	3	TDS	713	713	57
2		Temperature	30	26	28
3		p <sup>H</sup>	5	5	7
1	4	TDS	671	736	59
2		Temperature	26	25	25
3		p <sup>H</sup>	5.3	5.2	7.4
1	5	TDS	670	730	60
2		Temperature	27	26	25
3		p <sup>H</sup>	5.4	5.2	7.3
1	6	TDS	680	735	60
2		Temperature	28	28	28
3		p <sup>H</sup>	5.3	5.1	7.3
1	7	TDS	675	725	61
2		Temperature	27	27	27
3		p <sup>H</sup>	5.4	5.2	7.2

## Water Analysis





## Conclusion

### TDS

From the Observations Day 1 to Day 7, we will conclude that, the average TDS of inlet water comes from the borewell is 681 units & at physics lab 761 as well as at drinking water point 58.8 from those values, we conclude that the water is not used for the drinking at department of physics lab so we will suggest install One water filter (or) water purifier and at drinking water point water is used for the drinking because at this point, we have sufficient TDS value there is no advice.

### pH

From the observations the inlet average PH is 5.22 so it is not drinkable and at department of physics the avg pH is 5.17 so, it is also not drinkable. At the drinking water point We have average pH 7.21 So it is suitable for the drinking. We advise establish another water plant at the dep of physics

### Temp

From the observations we have a normal temperature at inlet and outlets of the water supplies. there are no advices.

The final conclusion is establishing another one or two water plants for the drinking purpose because, our college has the heavy strength. So, one water plant is not suitable for Students.

Water is used in every cell of our body. water travels throughout our body. Carrying to and nutrients, oxygen, from our cell's organs. Water keeps our body cool as part of for our body's temperature regulating System, water cushions our joints, and protects our tissue and from shock and damage. So, we conclude that the PH value Maintained and we also used good level so we use Reverse osmosis water plant for the students and staff to maintain good water level in the Body, because everyone should remember health is wealth.



**PICTURE 1: Water Inlet Point**



**PICTURE 2: Water Inlet Point**



**PICTURE 3: Physics Lab Point**



**PICTURE 4: Drinking Water Point**



*Thank You*

