DEPARTMENT OF

COMPUTER SCIENCE & APPLICATIONS

EXTENSION LECTURES

Pingle Govt. College for Women (A), Waddepally

AUTONOMOUS

HANUMAKONDA -506370, TELANGANA

DEPARTMENT OF
COMPUTER SCIENCE AND APPLICATIONS

2022 – 2023

EXTENSION LECTURES

ABSTRACT OF Extension Lectures

Year	Name of the Extension Lectures	Name of the Resource Person	Number of Participants	Date
2022 - 2023	Extension Lecture on Latest technologies in computer science	Dr. G. Bapuji	150	17-02-2023
2022 - 2023	Extension Lecture on Normalization	V. Poorna Chander	75	21-11-2022

Letter for Extension Lecture approval

To

The Principal
Pingle Govt. College for women(A), Waddepally
Hanumakonda.

Respected Sir,

Sub: Conducting of Extension Lecture - Department of Computer Science and Applications - req.reg.

With reference to the subject cited, I' am herewith placing a request to accord the permission for conducting Extension Lecture for all Computer students B.Sc.(Phy. Science & Life Science) in the month of 17th Febrauary 2023. In this regard, I request you to accept the appeal and do the needful.

Thanking you sir,

Yours faithfully

(T. Aruna)
Department Of Computer Science and Applications

The Aims and objectives:

The aim of the latest technologies in computer science are multifaceted and far-reaching, encompassing a broad spectrum of goals

Objectives:

- Automate tasks, optimize processes, and tackle complex challenges that were previously intractable.
- Create more intuitive and natural interactions with technology, enhance learning and training experiences, and provide immersive entertainment.
- Technologies: Natural language processing (NLP), augmented reality (AR), virtual reality (VR), 5G networks.
- Accelerate scientific discovery, improve healthcare, and develop innovative solutions for various challenges.
- Promote sustainability, enhance accessibility and inclusion, and facilitate global communication and collaboration.

Artificial Intelligence (AI) and Machine Learning (ML):

- Generative AI: This subfield focuses on creating new content, like music, images, and even code, using AI algorithms. Imagine AI designing clothes or composing personalized symphonies!
- Edge AI: Processing data closer to its source for faster, more efficient decision-making, especially in areas like autonomous vehicles and smart cities.

Quantum Computing:

- Harnessing the power of quantum mechanics to solve complex problems that are impossible for classical computers, revolutionizing fields like materials science and drug discovery.

Cybersecurity:

- With the increasing reliance on technology, securing our data and systems becomes ever more crucial. New AI-powered solutions are emerging to combat cyber threats and protect against evolving attacks.

Virtual and Augmented Reality (VR/AR):

- VR and AR are moving beyond gaming and entertainment, finding applications in training, education, and even remote surgery. Imagine attending a concert across the globe or learning anatomy through interactive 3D models.

Other exciting trends:

- **Digital Twins:** Creating virtual representations of physical systems, like factories or power grids, for real-time monitoring and optimization.
- **Robotics Process Automation (RPA)**: Automating repetitive tasks using software robots, freeing up human workers for more creative and strategic work.
- **Block chain:** This distributed ledger technology is not just for cryptocurrencies anymore. Its secure and transparent data management capabilities are finding uses in supply chain management and voting systems.

Conclusion:

The Extension Lecture will conclude with a summary of the topics covered and provide attendees with resources for further learning about the latest technologies in computer science.

Overall, the Extension Lecture aims to equip attendees with the necessary knowledge and skills to understand and latest technologies.

EXTENSION LECTURE BY

Dr. G. Bapuji,

Asst. Prof. in Computer Science

• ARTIFICIAL INTELLIGENCE

• Living beings are intelligent; but are man made non living beings also intelligent???

• Can a machine

➢make discoveries?

➢pass a ruling order in a court?

➢compose a symphony?

➢go for a PLAN B?

➢decide to wait or let go?

• ARTIFICIAL INTELLIGENCE SUBSETS

• MACHINE LEARNING

• ARTIFICIAL NEURAL NETWORKS

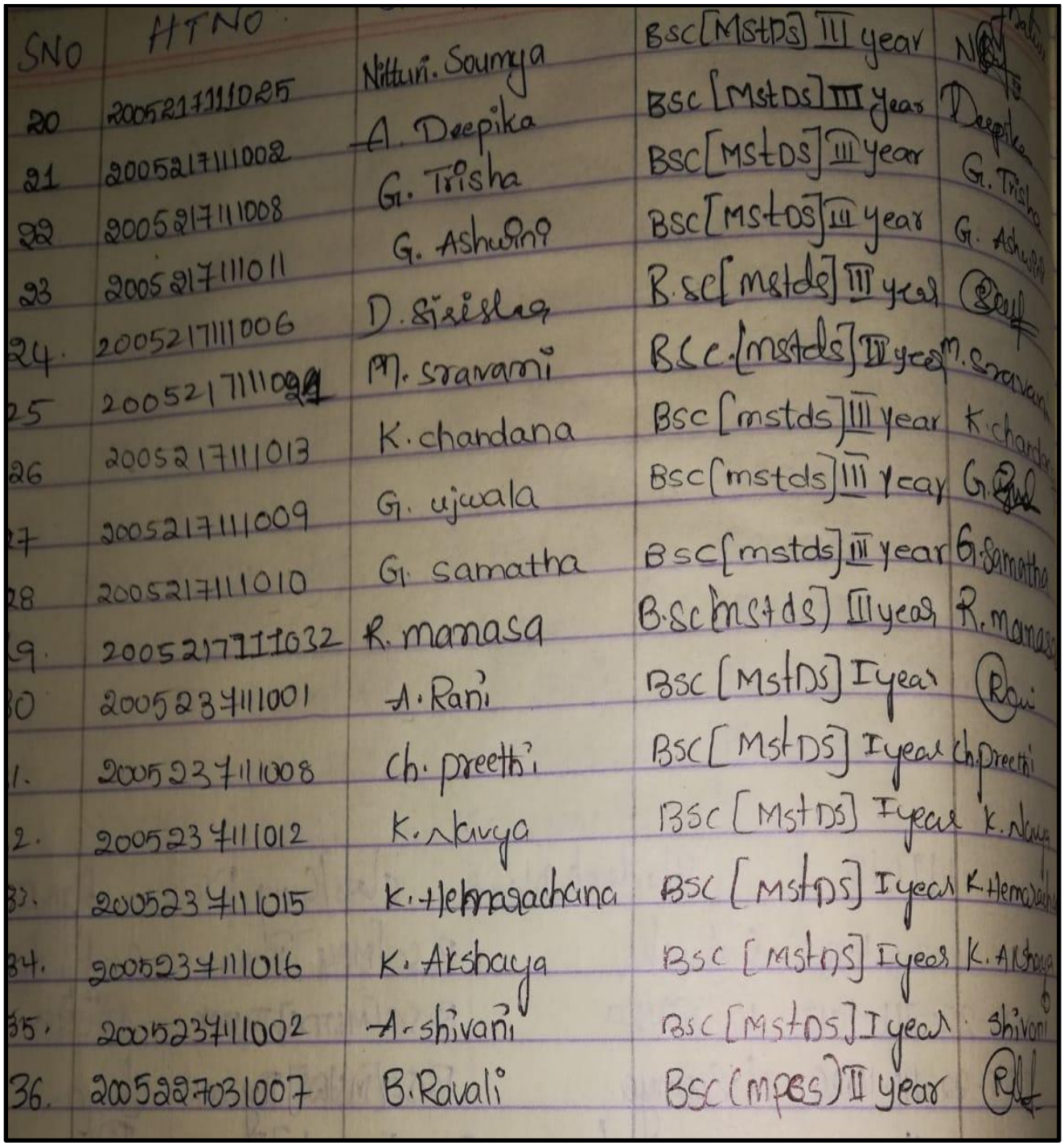
• DEEP LEARNING

• COMPUER VISION

• NATURAL LANGUAGE PROCESSING

• SPEECH RECOGNITION

The following students participated:



SNO	HTNO			
20	200521111025	Nitturi. Soumya	BSc [MStDS] III year	N
21	200521111002	A. Deepika	BSc [MstDS] III year	Deepika
22	200521111008	G. Trisha	BSc [MStDS] III year	G. Trisha
23	200521111011	G. Ashwini	BSc [MStDS] III year	G. Ashwini
24.	200521111006	D. Sirisha	B.Sc [mstds] III year	
25	200521111009	M. Sravani	BSc. [mstds] III year	M. Sravani
26	200521111013	K. chandana	Bsc [mstds] III year	K. chandana
27	200521111009	G. ujwala	Bsc [mstds] III year	G.
28	200521111010	G. samatha	Bsc [mstds] III year	G. Samatha
29.	200521111032	R. manasa	B.Sc [mstds] III year	R. manasa
30	200523411001	A. Rani	BSc [MstDS] I year	Rani
1.	200523411008	Ch. preethi	BSc [MstDS] I year	Ch. Preethi
2.	200523411012	K. Navya	BSc [MstDS] I year	K. Navya
33.	200523411015	K. Hemasachana	BSc [MstDS] I year	K. Hemasachana
34.	200523411016	K. Akshaya	BSc [MstDS] I year	K. Akshaya
35.	200523411002	A. shivani	BSc [MstDS] I year	shivani
36.	200522703100 7	B. Ravali	BSc (MPCS) II year	

Letter for Extension Lecture approval

To

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Hanumakonda.

Respected Sir,

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With reference to the subject cited, I am herewith placing a request to accord the permission for conducting Extension Lecture for all students of B.Sc. (Phy. Science & Life Science) in the month of November, 2022. In this regard, I request you to accept the appeal and do the needful.

Thanking you sir,

Yours faithfully

(T. Aruna)
Department Of Computer Science and Applications

The main aim of normalization in database design is to eliminate data redundancy and improve data integrity. This translates into several specific objectives:

Objectives:

- Reduce data redundancy
- Improve data integrity
- Enhance data consistency
- Minimize storage space
- Simplify data manipulation

Normalization:

Normalization is a process of organizing data in a database to reduce redundancy and improve data integrity. We will explore the different normal forms, their advantages and disadvantages, and how to apply normalization techniques to database design.

- **Normalization helps to eliminate duplicate data in a database, which can lead to several problems. These problems include:**

* Insertion anomalies: When inserting new data, you may need to insert the same data into multiple tables.
* Deletion anomalies: When deleting data, you may accidentally delete related data from other tables.
* Update anomalies: When updating data, you may need to update the same data in multiple tables.

Functional Dependencies:

- A functional dependency (FD) is a relationship between two attributes in a table, where the value of one attribute determines the value of another attribute.
- Example: In a customer table, the customer_id determines the customer_name.

Functional dependencies are important for understanding normalization because they can lead to data redundancy. If there is a functional dependency between two attributes, and both attributes are included in the same table, then the data for the dependent attribute may be duplicated.

Normal Forms

- Normalization involves applying a series of rules to a database schema to eliminate data redundancy.
- There are different levels of normalization, each with its own set of rules:
    - First normal form (1NF)
    - Second normal form (2NF)
    - Third normal form (3NF)
    - Boyce-Codd normal form (BCNF)

Each normal form builds upon the previous one, resulting in a more normalized database schema. The higher the normal form, the less data redundancy there is in the database.

First Normal Form (1NF)

- A table is in 1NF if:
    - All attribute values are atomic (cannot be further decomposed)
    - No repeating groups of attributes

A table is in 1NF if it does not contain any repeating groups of data. This means that each cell in the table should contain a single value, and there should be no nested tables or lists within cells.

Second Normal Form (2NF)

- A table is in 2NF if it is in 1NF and:
    - Every non-key attribute is fully dependent on the primary key

A table is in 2NF if it is in 1NF and there are no partial dependencies. A partial dependency occurs when a non-key attribute is dependent on only a part of the primary key.

Third Normal Form (3NF)

- A table is in 3NF if it is in 2NF and:
    - No non-key attribute is transitive

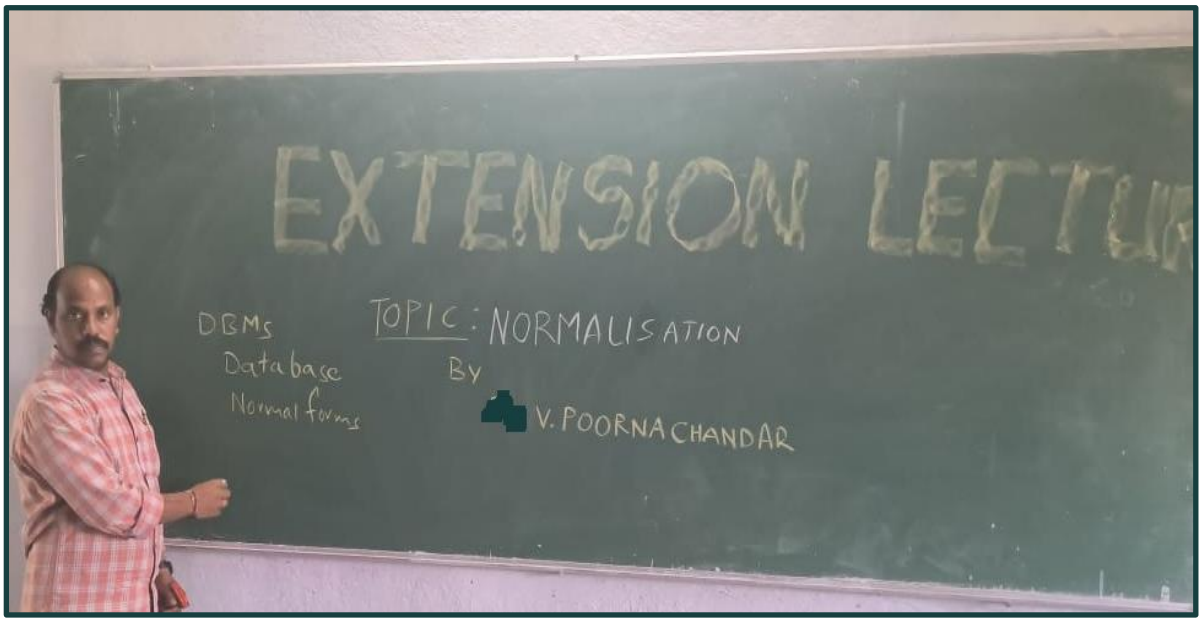
The key point of normalization is to organize data in a database to minimize redundancy and improve data integrity. This is achieved by:

Eliminating duplicate data: By storing data in separate tables based on their relationships, you avoid having the same information repeated in multiple places.

- Enhancing data consistency: Normalization ensures that data updates are reflected consistently across all related tables, reducing the risk of inconsistencies and errors.
- Improving data manipulation: With normalized tables, data retrieval, modification, and deletion become more efficient and straightforward.
- Minimizing storage space: By removing redundant data, normalization helps to optimize storage space and reduce overall database size.

Conclusion: The extension lecture will conclude with a summary of the topics covered and provide attendees with resources for further learning about Normalization

EXTENSION LECTURE BY
V. Poorna Chander,
Lecturer in Computer Science and Application



1) DEFINE NORMALIZATION

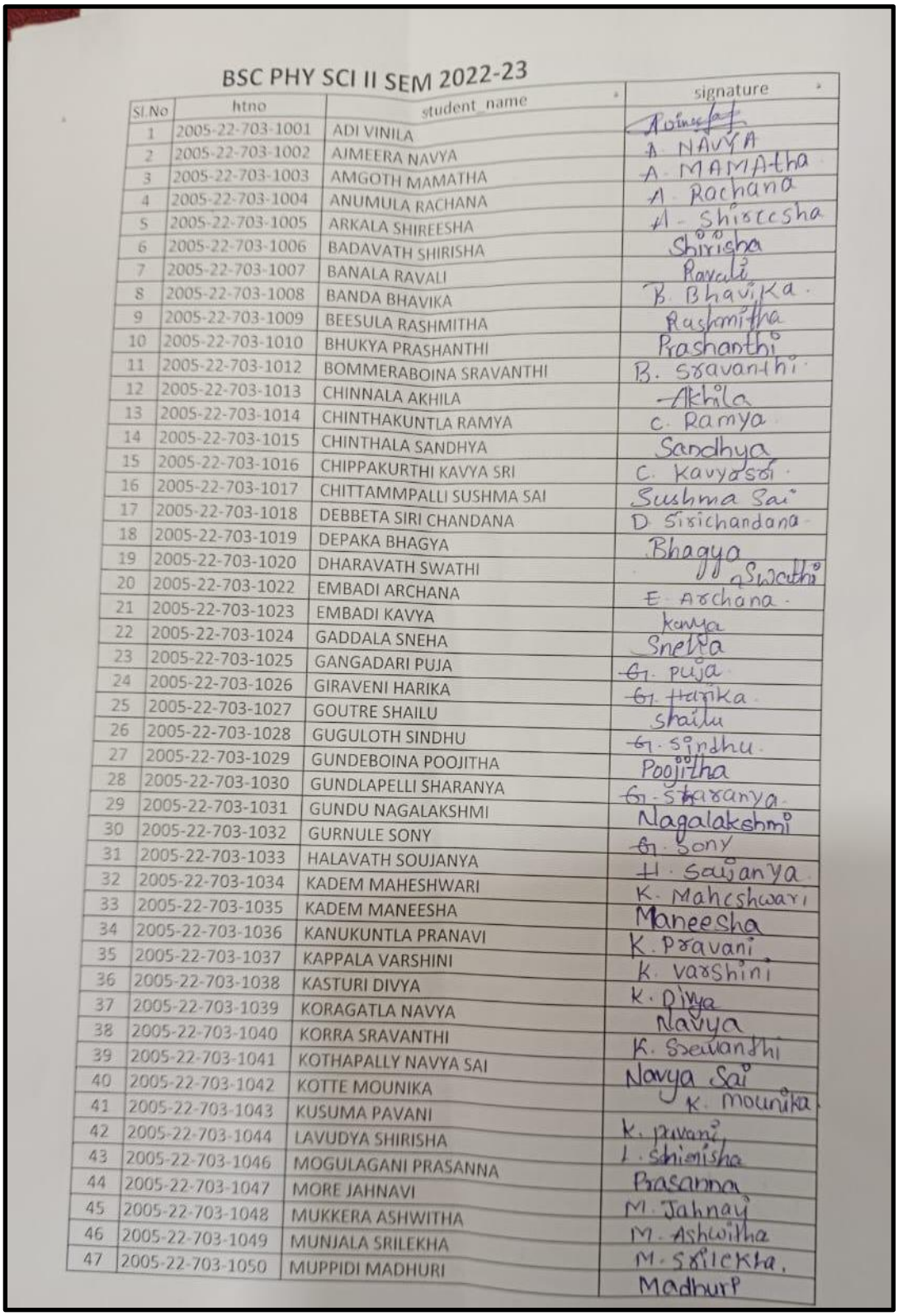
Normalization can be defined as :-

- A process of organizing the data in database to avoid data redundancy, insertion anomaly, update anomaly & deletion anomaly.
- A process of organizing data into tables in such a way that the results of using the database are always unambiguous and as intended. Such normalization is intrinsic to relational database theory. It may have the effect of duplicating data within the database and often results in the creation of additional tables.

Types of normalization

- First Normal Form (1NF)
- Second Normal Form (2NF)
- Third Normal Form (3NF)
- Boyce-Codd Normal Form (BCNF)
- Fourth Normal Form (4NF)
- Fifth Normal Form (5NF)

The following students participated:



BSC PHY SCI II SEM 2022-23

Sl.No	htno	student_name	signature
1	2005-22-703-1001	ADI VINILA	
2	2005-22-703-1002	AJMEERA NAVYA	A. NAVYA
3	2005-22-703-1003	AMGOTH MAMATHA	A. MAMAtha
4	2005-22-703-1004	ANUMULA RACHANA	A. Rachana
5	2005-22-703-1005	ARKALA SHIREESHA	A. Shireesha
6	2005-22-703-1006	BADAVATH SHIRISHA	Shirisha
7	2005-22-703-1007	BANALA RAVALI	Ravali
8	2005-22-703-1008	BANDA BHAVIKA	B. Bhavika
9	2005-22-703-1009	BEESULA RASHMITHA	Rashmitha
10	2005-22-703-1010	BHUKYA PRASHANTHI	Prashanthi
11	2005-22-703-1012	BOMMERABOINA SRAVANTHI	B. Sravanthi
12	2005-22-703-1013	CHINNALA AKHILA	Akhila
13	2005-22-703-1014	CHINTHAKUNTLA RAMYA	C. Ramya
14	2005-22-703-1015	CHINTHALA SANDHYA	Sandhya
15	2005-22-703-1016	CHIPPAKURTHI KAVYA SRI	C. Kavyasri
16	2005-22-703-1017	CHITTAMMPALLI SUSHMA SAI	Sushma Sai
17	2005-22-703-1018	DEBBETA SIRI CHANDANA	D. Sirichandana
18	2005-22-703-1019	DEPAKA BHAGYA	Bhagya
19	2005-22-703-1020	DHARAVATH SWATHI	Swathi
20	2005-22-703-1022	EMBADI ARCHANA	E. Archana
21	2005-22-703-1023	EMBADI KAVYA	Kavya
22	2005-22-703-1024	GADDALA SNEHA	Sneha
23	2005-22-703-1025	GANGADARI PUJA	G. Puja
24	2005-22-703-1026	GIRAVENI HARIKA	G. Harika
25	2005-22-703-1027	GOUTRE SHAILU	Shailu
26	2005-22-703-1028	GUGULOTH SINDHU	G. Sindhu
27	2005-22-703-1029	GUNDEBOINA POOJITHA	Poojitha
28	2005-22-703-1030	GUNDLAPELLI SHARANYA	G. Sharanya
29	2005-22-703-1031	GUNDU NAGALAKSHMI	Nagalakshmi
30	2005-22-703-1032	GURNULE SONY	G. Sony
31	2005-22-703-1033	HALAVATH SOUJANYA	H. Saujanya
32	2005-22-703-1034	KADEM MAHESHWARI	K. Maheshwari
33	2005-22-703-1035	KADEM MANEESHA	Maneesha
34	2005-22-703-1036	KANUKUNTLA PRANAVI	K. Pravani
35	2005-22-703-1037	KAPPALA VARSHINI	K. Varshini
36	2005-22-703-1038	KASTURI DIVYA	K. Divya
37	2005-22-703-1039	KORAGATLA NAVYA	Navya
38	2005-22-703-1040	KORRA SRAVANTHI	K. Sravanthi
39	2005-22-703-1041	KOTHAPALLY NAVYA SAI	Navya Sai
40	2005-22-703-1042	KOTTE MOUNIKA	K. Mounika
41	2005-22-703-1043	KUSUMA PAVANI	K. pavani
42	2005-22-703-1044	LAVUDYA SHIRISHA	L. Shirisha
43	2005-22-703-1046	MOGULAGANI PRASANNA	Prasanna
44	2005-22-703-1047	MORE JAHNAVI	M. Jahnavi
45	2005-22-703-1048	MUKKERA ASHWITHA	M. Ashwitha
46	2005-22-703-1049	MUNJALA SRILEKHA	M. Srilekha
47	2005-22-703-1050	MUPPIDI MADHURI	Madhuri

83	2005-22-802-1089	MALYALA ARCHANA	
84	2005-22-802-1090	MAMIDI MANASA	M. Manasa
85	2005-22-802-1091	MARUPATLA REENA	M. Reena
86	2005-22-802-1092	MASOODA BEGUM	Masooda Begum
87	2005-22-802-1093	MD PARVEENA	MD. parveena
88	2005-22-802-1094	MD ZUBEDA	MD. zubeda
89	2005-22-802-1096	METTUPALLY PRATHYUSHA	M. Prathyusha
90	2005-22-802-1097	MOGILI RAMYA	M. Ramya
91	2005-22-802-1098	MOHAMMAD KARISHMA	MD. Karishma
92	2005-22-802-1099	MOHAMMAD PARVEEN	Parveen md
93	2005-22-802-1100	MOOD AKHILA	M. Akhila
94	2005-22-802-1101	MOOD LAVANYA	M. Lavanya
95	2005-22-802-1102	MOTE SREEJA	M. Sreeja
96	2005-22-802-1103	MOTE SRIVANI	M. Srivani
97	2005-22-802-1104	MUNDRATHI TEJA	M. Teja
98	2005-22-802-1105	MURAHARI AKHILA	M. Akhila
99	2005-22-802-1106	MUTHYALA SUSHMA	M. Sushma
00	2005-22-802-1107	NAGELLI RENUKA	N. Renuka
01	2005-22-802-1108	NEERATI EESHWANI	N. Eeshwani
02	2005-22-802-1109	NERELLA RAMYA	N. Ramya
03	2005-22-802-1110	NYALAM KEERTHANA	N. Keerthana
4	2005-22-802-1111	NYAYAM SAHITHI	N. Shahithi
5	2005-22-802-1112	ORRE PRAVALIKA	O. Pravalika
6	2005-22-802-1113	ORUGANTI DEEPIKA	O. Deepika
7	2005-22-802-1114	PAIDIPALLI RAJITHA	P. Rajitha
8	2005-22-802-1115	PALLAVENI ARSHITHA	P. ARSITHA
9	2005-22-802-1116	PALUKA SHYLAJA	P. Shylaja
	2005-22-802-1117	PANDUGA JYOTHIKA	P. Jyothika
	2005-22-802-1118	PEDDANABOINA SRAVANI	P. Sravani
	2005-22-802-1119	PITTALA CHITRA	P. chitra
	2005-22-802-1120	PITTALA PUJITHA	P. pujitha
	2005-22-802-1121	POLASA MANEESHA	P. Maneesha
	2005-22-802-1122	POTHARAJULA SRIJA	P. Srija
	2005-22-802-1123	PULICHERU JHANSI	P. Jhansi
	2005-22-802-1124	RACCHA AKHILA	R. Akhila
	2005-22-802-1125	RATHOD VYSHNAVI	R. Vyshnavi
	2005-22-802-1126	RAVULA SUSHMITHA	R. Sushmitha
	2005-22-802-1127	SADAM RAMYA	S. Ramya
	2005-22-802-1128	SAFIYA BEGUM	Safiya Begum
	2005-22-802-1129	SARVU RAKSHITHA	S. Rakshita
	2005-22-802-1130	SIDDABOINA RAMYA	S. Ramya
	2005-22-802-1131	SK AFREEN	SK. Afreen

41	2005-22-802-1043	DODLA RANI	D. Rani
42	2005-22-802-1044	DUGGI LAVANYA	D. Lavanya
43	2005-22-802-1045	EDUNURI SREEJA	E. Sreeja
44	2005-22-802-1046	ENUGALA ASHPA	E. Ashpa
45	2005-22-802-1047	ENUGALA BABY	E. Baby
46	2005-22-802-1050	FARHEEN BEGUM	farheen Begum
47	2005-22-802-1051	GADDAM ANJALI	G. Anjali
48	2005-22-802-1052	GUDEPU AKSHAYA	G. Akshaya
49	2005-22-802-1054	GUGULOTHU RAJITHA	G. Rajitha
50	2005-22-802-1056	GUNDLAPALLY SAI CHANDANA	G. Sai chandana
51	2005-22-802-1057	GUNTI VYSHNAVI	G. Vyshnavi
52	2005-22-802-1058	INALA SRILATHA	I. Srilatha
53	2005-22-802-1059	JAGARI AKANKSHA	J. Akanksha
54	2005-22-802-1060	JALTHARI ANUSHA	J. Anusha
55	2005-22-802-1061	JAMALPURI GNANESHWARI	Gnaneshwari
56	2005-22-802-1062	JAMPALA GOUTHAMI	Gouthami
57	2005-22-802-1063	JATOTHU KARUNA SRI	J. Karuna sri
58	2005-22-802-1064	JUTTU SRAVANTHI	J. Sravanthi
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66	2005-22-802-1072	KOMARAM MANASA	K. Manasa
67	2005-22-802-1073	KONDA RESHMA	K. Reshma
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75	2005-22-802-1081	LAKAVATH RAJESHWARI	L. Rajeshwari
76	2005-22-802-1082	LINGAMPELLI PUJITHA	L. pujitha
77	2005-22-802-1083	LUNAVATH SOUJANYA	L. Soujanya
78	2005-22-802-1084	MADARABOINA SHIRISHA	M. shirisha
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82	2005-22-802-1088	MALOTHU RANI	M. Rani