

GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF TECHNICAL EDUCATION

REGIONAL POLYTECHFEST 2024

KADAPA REGION

COMPREHENSIVE EVENT REPORT

Event Dates : 6th & 7th December 2024

**Venue : Government Polytechnic, Rajampeta, Annamayya Dist.,
A.P.**

Organized by : Govt. Polytechnic for Women, Kadapa (Nodal)
SVU Region | Tirupati

Prepared by: Dr. Yajaman Sudhakar, Principal, GPT Rajampeta

Date of Report: December 2024

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1. Executive Summary

The Kadapa Regional Polytechfest 2024 was conducted on 6th and 7th December 2024 at Government Polytechnic, Rajampeta under the auspices of the Department of Technical Education, Government of Andhra Pradesh. The event was organized by Government Polytechnic for Women, Kadapa (Code 057) acting as the Nodal Polytechnic. This flagship regional-level technical festival showcased innovative projects from polytechnic colleges and diploma-awarding institutions across the Kadapa Region.

17 Participating Institutions	129 Total Projects	374 Total Students	7 Departments
232 Male Students	142 Female Students	126 Projects Evaluated	9 Jury Members

The event featured 126 projects across 7 engineering and pharmacy disciplines. Projects were evaluated by a distinguished jury panel comprising Head of Departments from regional polytechnics and two Grand Jury members from industry and academia. The Grand Overall Winner was Project CM-08 – "Accident Detector, Fall Detector & Women Safety Device" from Loyola Polytechnic, Pulivendula, scoring 141 marks out of 150.

2. Event Overview & Background

2.1 About Polytechfest

The Regional Polytechfest is an annual initiative by the Department of Technical Education, Government of Andhra Pradesh, aimed at fostering technical innovation and project-based learning among diploma students. It provides a platform for students to demonstrate their applied knowledge, creativity, and problem-solving abilities through working models and prototype projects.

2.2 Event Particulars

Parameter	Details
Event Name	Kadapa Regional Polytechfest 2024
Dates	6th December 2024 (Day 1) & 7th December 2024 (Day 2)
Venue	Government Polytechnic, Rajampeta, Annamayya District, Andhra Pradesh
Nodal Polytechnic	Government Polytechnic for Women, Kadapa (Code: 057)
Organizing Principal	Dr. Yajaman Sudhakar, M.Pharm., Ph.D., GPT Rajampeta
Region	SVU Region, Tirupati
Reference Circular	Cir.No.EHE02-17/53/2024-HSEC-CTE-Part(1), Office of Director of Technical Education, AP, Mangalagiri
Registration Deadline	20th November 2024
Registration Email	techfestkdp@gmail.com
Platform (VC)	Webex

2.3 Pre-Event Activities

- Video Conference (VC) held on 14th November 2024 at 3:00 PM via Webex, chaired by the Regional Joint Director, SVU Region, Tirupati, involving Nodal/Organizing Principals.
- Principals and Head of Sections briefed on evaluation parameters, project standards, and registration requirements.
- Registration circulars issued on 20.10.2024 and 09.11.2024 via Office of the Director of Technical Education, AP, Mangalagiri.
- Jury letters dispatched to all regional member polytechnics for appointment of petit jury and grand jury panels.
- Committees constituted for registration, token distribution, identity verification, accommodation, and logistics.
- Letters sent to Police Department, Fire Officer, District Medical & Health Officer (DMHO), and AP Eastern Power Distribution Corporation for safety and support.

3. Organizing Committee & Administrative Setup

3.1 Key Officials

Role	Name / Institution
Nodal Polytechnic	Govt. Polytechnic for Women, Kadapa (057)
Organizing Polytechnic	Govt. Polytechnic, Rajampeta (176)
Principal/Organizer	Dr. Yajaman Sudhakar, M.Pharm., Ph.D., GPT Rajampeta
Nodal Principal	Smt. Ch. Jyothi, GPW Kadapa
Regional Authority	Regional Joint Director, SVU Region, Tirupati

3.2 Participating Institutions (2024)

S.No	Code	Institution	Type
1	022	Govt. Polytechnic, Proddatur	Govt
2	029	Loyola Polytechnic, Pulivendula	Private
3	057	Govt. Polytechnic for Women, Kadapa	Govt
4	118	Annamacharya College of Pharmacy	Private
5	154	Govt. Polytechnic, Obulavaripalli	Govt
6	171	Govt. Polytechnic, Jammalamadugu	Govt
7	172	Govt. Polytechnic, Vempalli	Govt
8	176	Govt. Polytechnic, Rajampeta	Govt
9	184	Govt. Polytechnic, Simhadripuram	Govt
10	199	Govt. Polytechnic, Kamalapuram	Govt
11	213	Govt. Polytechnic, Rayachoty	Govt
12	343	Sai Rajeswari Inst. of Technology, Proddatur	Private
13	344	Bharath College of Engg & Tech for Women, Kadapa	Private
14	348	Chaitanya Bharathi Inst. of Technology, Proddatur	Private
15	360	Global College of Engg & Technology, Kadapa	Private
16	450	Sri Sai Inst. of Technology & Science, Rayachoty	Private
17	602	Gowthami Inst. of Tech & Mgmt for Women, Proddatur	Private

4. Participation Statistics – Overview

4.1 Consolidated Summary

Category	Count	Details
Participating Institutions	17	11 Govt. + 6 Private/II-Shift
Government Polytechnics	11	Including 2 Women's Polytechnics
Private / II-Shift Institutions	6	Engineering College II-Shift Diplomas
Total Projects Submitted	129	Across 7 departments
Projects Evaluated by Jury	126	3 projects marked 0/absent
Total Students	374	232 Male + 142 Female
Total Faculty (Supervisors)	~70	2–4 per institution
Departments Represented	7	DCE, DCME, DECE, DEEE, DME, DPH, DMIN
Jury Members	9	7 Petit Jury + 2 Grand Jury
Evaluation Criteria	5 Parameters	Creativity, Scalability, Robustness, Impact, Design
Maximum Score	150	50 marks × 3 jury members

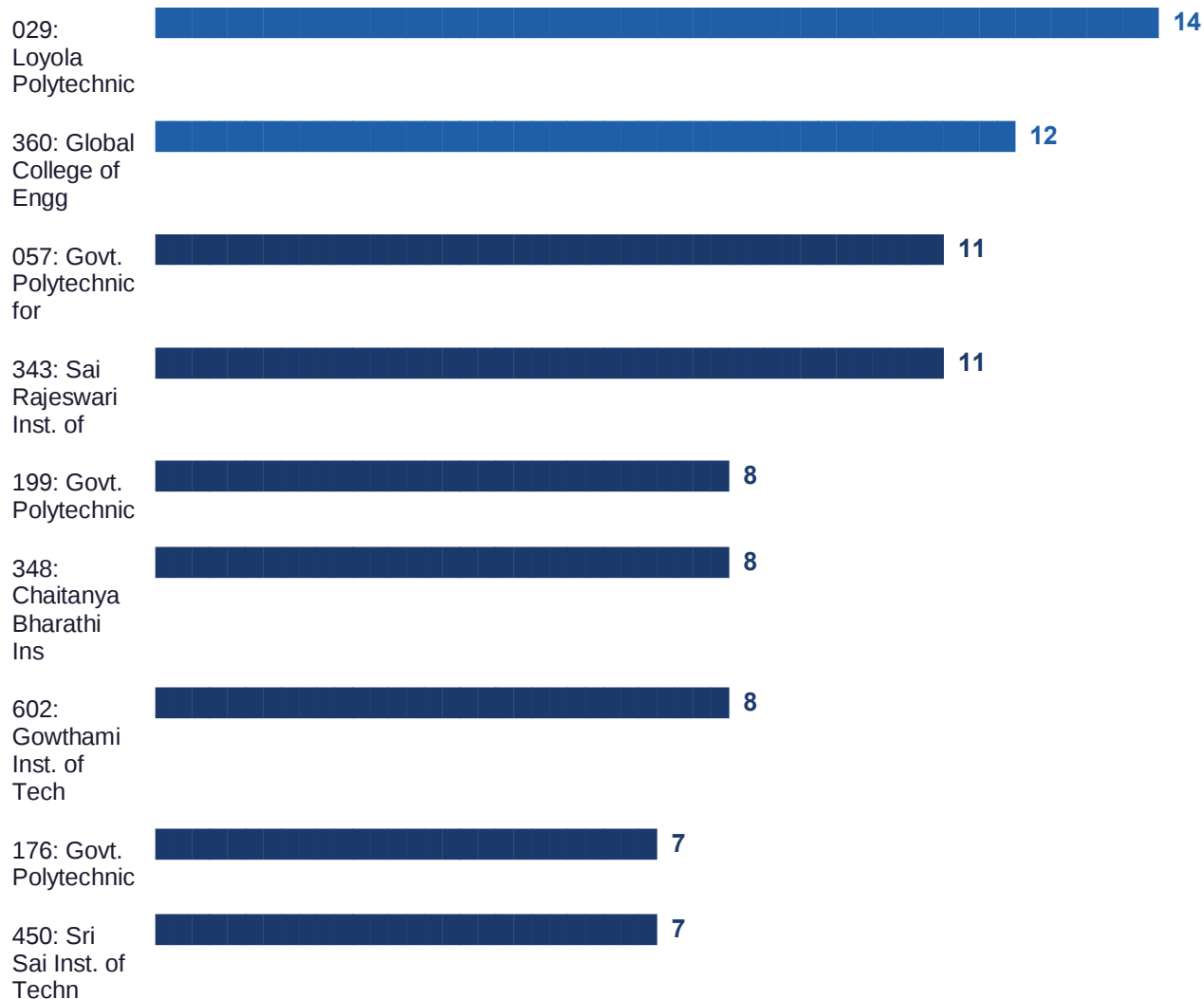
4.2 Institution Type Distribution

Category	Count	% of Total	Projects	Students
Government Polytechnics	11	64.7%	62	190
Private / II-Shift Institutions	6	35.3%	53	154
Women's Polytechnics (Govt.)	2	11.8% (of Govt.)	19	57
TOTAL	17	100%	129	374

5.1 Detailed College-wise Data

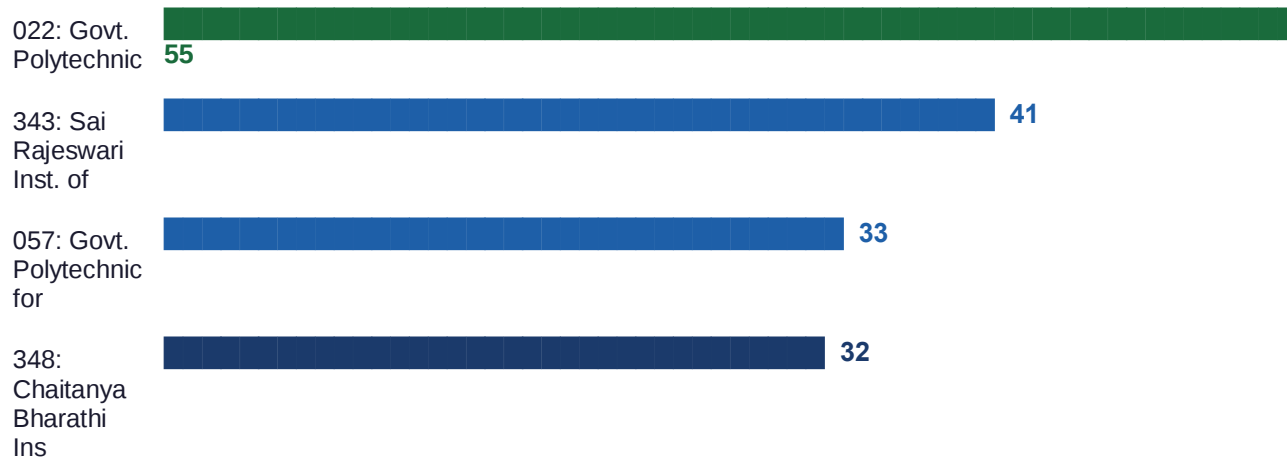
5.2 Top Contributing Colleges by Project Count

022: Govt. Polytechnic 15



5.3 Top Colleges by Student Participation

Students per College (Top 10)



029: Loyola Polytechnic		26
199: Govt. Polytechnic		24
602: Gowthami Inst. of Tech		24
176: Govt. Polytechnic		23
184: Govt. Polytechnic		21
360: Global College of Engg		21

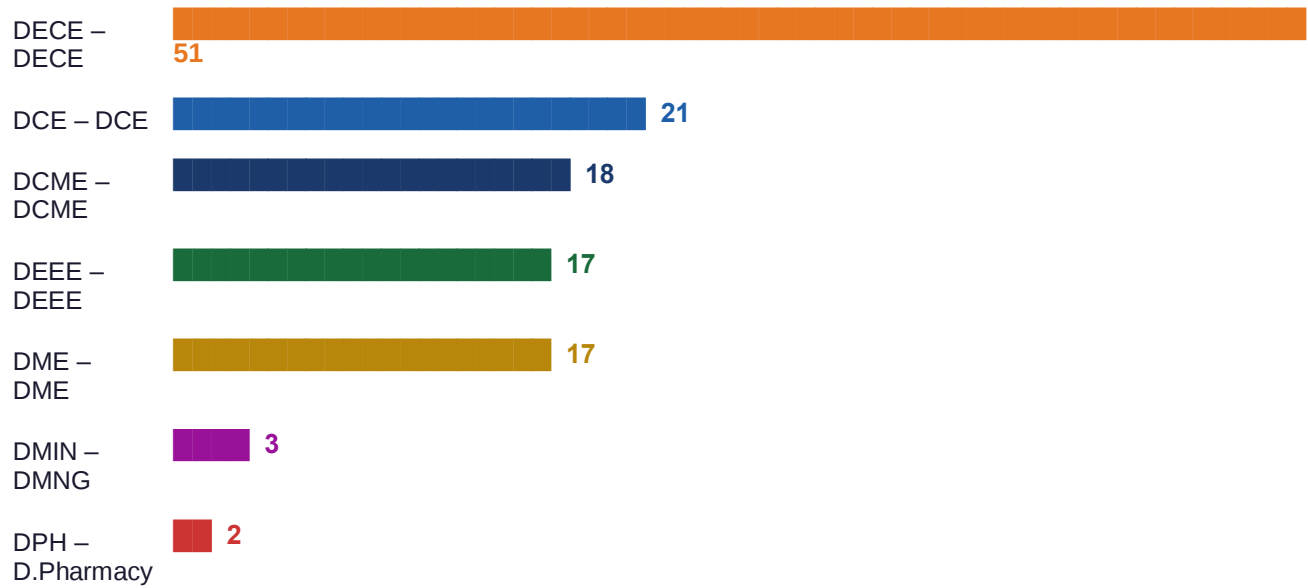
6. Branch-wise / Department-wise Statistics

6.1 Projects by Department

S.No	Department	Code	Projects	Theme	% Share
1	DCE (Civil Engg.)	DCE	21	Infrastructure & Construction	16.3%
2	DCME (Computer Engg.)	DCME	18	IT & Digital Systems	14.0%
3	DECE (Electronics)	DECE	51	Electronics & IoT	39.5%
4	DEEE (Electrical Engg.)	DEEE	17	Electrical Systems	13.2%
5	DME (Mechanical Engg.)	DME	17	Mechanical Innovations	13.2%
6	D.Pharmacy	DPH	2	Pharmaceutical Sciences	1.6%
7	DMNG (Mining)	DMIN	3	Mining Engineering	2.3%

6.2 Department-wise Project Distribution (Visual)

Projects by Department



6.3 Department Highlights

- DECE (Electronics & Communication) dominated with 51 projects – the highest across all departments, reflecting the growing interest in IoT, embedded systems, and smart devices.

- DCE (Civil Engineering) contributed 21 projects, showcasing models of bridges, dams, buildings, and smart infrastructure.
- DCME (Computer Engineering) featured 18 projects in areas of AI, ML, computer vision, cybersecurity, and IoT.
- DME (Mechanical Engineering) and DEEE (Electrical Engineering) contributed 17 projects each, covering robotics, energy harvesting, and automation.
- D.Pharmacy participated with 2 projects, extending the festival's reach to pharmaceutical sciences.
- DMIN (Mining) submitted 3 projects dealing with underground and open-cast mining simulations.

7. Gender-wise Participation Analysis

Gender	Count	Percentage	Notes
Male	232	62.0%	Across all departments
Female	142	38.0%	Notable presence in Women's Polytechnics
Total	374	100%	

7.1 Gender Visual Distribution

Gender Distribution



7.2 Women-Centric Institutions

Institution	Code	All-Female (Y/N)	Female Students	Projects
Govt. Polytechnic for Women, Kadapa	057	Yes	33	11
Bharath College of Engg & Tech for Women	344	Yes	16	4
Gowthami Inst. of Tech & Mgmt for Women	602	Yes	24	8

- GPW Kadapa (057) contributed all-female participation with 33 students across 11 projects.
- Bharath College for Women (344) brought 4 projects entirely by female students.
- Gowthami Institute for Women (602) demonstrated strong ECE participation with 8 all-female projects.
- Combined female student participation stands at 142 out of 374 (38.0%).

8. Project Listings by Department

8.1 DCE – Civil Engineering Projects (21 Projects)

#	College Code	Project Title	Type
1	022	SUSPENSION BRIDGE WITH SAFETY ALARM SYSTEM	Working Model
2	022	WATER ALARM SURFACE WATER TREATMENT	Working Model
3	029	LINKING OF CANALS IN RAYALASEEMA	Poster/Model
4	057	CONSTRUCTION OF MODULAR AIRPORT WITH INTERSECTING RUNWAYS	Working Model
5	057	MODEL OF A STRUCTURE WITH WASTE WATER BOTTLES	Working Model
6	172	PREPARATION OF ALKALINE WATER FROM RAIN WATER HARVESTING	Working Model
7	176	MODERN CITY	Working Model
8	176	ADVANCED MOVING HOUSE	Working Model
9	176	AYODHYA	Working Model
10	184	HEAVY CONSTRUCTION EQUIPMENT / POSTER	Poster
11	343	BRIDGE	Working Model
12	343	DAM	Working Model
13	343	HIGHWAY	Working Model
14	343	PERVIOUS CONCRETE	Working Model
15	343	GREEN BUILDING	Working Model
16	343	RCC BUILDING	Working Model
17	343	LIGHT WEIGHT BRICKS	Working Model
18	348	GOLDEN BRIDGE	Working Model
19	348	WATER TREATMENT PLANT	Working Model
20	172	EARTHQUAKE RESISTANT BUILDING	Working Model
21	176	ADVANCED HIGHWAY BRIDGE	Working Model

8.2 DCME – Computer Engineering Projects (18 Projects)

#	College Code	Project Title	Type
1	022	FACE RECOGNITION ATTENDANCE	Working Model
2	022	BIG DATA USING HADOOP TECHNOLOGY	Demonstration
3	029	MINI COMPUTER	Working Model

#	College Code	Project Title	Type
4	029	CYBER ATTACKS	Demonstration
5	029	ACCIDENT DETECTOR, FALL DETECTOR & WOMEN SAFETY DEVICE	Working Model
6	057	FATIGUE DETECTION USING COMPUTER VISION	Working Model
7	057	POLYTECHNIC INFORMATICS SYSTEM	Working Model
8	154	INSTITUTIONAL APP IN ANDROID	Working Model
9	172	OBJECT DETECTION	Working Model
10	184	SMART NOTIFIER	Working Model
11	360	5G WIRELESS TECHNOLOGY	Demonstration
12	360	GENERATIONS OF COMPUTERS	Display/Poster
13	360	ARTIFICIAL INTELLIGENCE	Demonstration
14	360	BLOCK CHAIN TECHNOLOGY	Demonstration
15	360	CYBER SECURITY	Demonstration
16	360	HIGH PERFORMANCE COMPUTING	Demonstration
17	360	INTERNET OF THINGS (IOT)	Demonstration
18	360	VIRTUAL REALITY	Demonstration

8.3 DECE – Electronics & Communication Projects (51 Projects)

#	Code	Project Title
1	022	RFID WATER CONTROL DISTRIBUTION SYSTEM
2	022	BLUETOOTH BASED HOME AUTOMATION
3	022	FINGERPRINT BASED DOOR ACCESS SYSTEM
4	022	RFID SECURITY SYSTEM
5	022	IOT BASED AGRICULTURE MONITORING SYSTEM
6	029	RADAR SYSTEM USING ULTRASONIC SENSOR
7	029	WIFI MODEL CAR
8	057	FIRE FIGHTING ROBOT
9	057	IOT BASED SMART SHOPPING TROLLEY
10	057	VEHICLE SPEED CONTROLLER IN SPECIFIC ZONES
11	057	HOME AUTOMATION USING VOICE CONTROL
12	154	SMART ATTENDER
13	172	ELECTRONIC SHOPPING TROLLEY IN SUPER MARKETS
14	172	FINGERPRINT BASED VOTING SYSTEM
15	184	DUAL SECURITY FOR DOORS USING FINGERPRINT & PASSWORDS
16	199	INDUSTRIAL ROBOT CONTROL WITH DEEP LEARNING & IOT
17	199	EMERGENCY SERVICES PRIORITIZING TRAFFIC LIGHT SYSTEM
18	199	FACE MASK DETECTION & DRY HANDWASHING MACHINE
19	199	SELF-ACTIVATING VEHICLE SPEED CONTROL SYSTEM
20	199	AUTOMATIC WATER DISPENSING SYSTEM FOR MINERAL WATER PLANT
21	199	SMART PILL DISPENSER FOR ELDERLY MEDICATION ADHERENCE
22	213	RFID AND GSM BASED ATTENDANCE ALERT SYSTEM
23	213	AUTOMATIC VEHICLE SPEED CONTROL USING RF TECHNOLOGY
24	213	SMART HELMET WITH ALCOHOL DETECTION SYSTEM
25	343	VOTING SYSTEM USING PYTHON
26	343	ELECTRONIC DICE
27	343	FREE ENERGY GENERATOR
28	343	RAIN DETECTOR ALARM
29	344	SHORT CIRCUIT INDICATOR
30	344	HOME APPLIANCES CONTROL VIA ANDROID BLUETOOTH
31	344	GSM REAL TIME STREET LIGHT CONTROLLING SYSTEM
32	348	EARTHQUAKE DETECTOR

#	Code	Project Title
33	348	PASSWORD DOOR LOCK SYSTEM
34	348	ELECTRONIC VOTING MACHINE
35	360	ACCIDENT PREVENTION MODEL USING MULTI SENSORS
36	450	RFID SECURITY SYSTEM
37	450	SMART HELMET SYSTEM
38	450	TOUCH LESS SENSOR SYSTEM
39	602	WiFi BASED AUTONOMOUS MOBILE ROBOT FOR REFINERY INSPECTION
40	602	HEART BEAT MONITOR WITH PC DISPLAY
41	602	ANTI-THEFT & SECURITY SYSTEM IN ATM CENTERS
42	602	TEMPERATURE BASED FAN SPEED CONTROLLER
43	602	INTELLIGENT ALCOHOL DETECTION FOR VEHICLES
44	602	WSN BASED ACCIDENT DETECTION & NOTIFICATION
45	602	SENSOR BASED WATER PUMPING SYSTEM IN CROPS
46	602	WOMEN SAFETY SYSTEM
47	029	ACCIDENT DETECTOR USING MULTIPLE SENSORS
48	199	IOT BASED HEALTH MONITORING SYSTEM
49	450	OFF GRID SOLAR SYSTEM
50	450	SMOKE AND FIRE DETECTION
51	450	IOT BASED SMART HEALTH MONITORING

8.4 DEEE – Electrical Engineering Projects (17 Projects)

#	Code	Project Title	Type
1	022	SMART HOME AUTOMATION USING BLUETOOTH	Working Model
2	029	PATIENT HEALTH MONITORING SYSTEM USING IOT	Working Model
3	029	AUTOMATIC RAILWAY GATE USING ARDUINO	Working Model
4	057	AUTOMATIC IRRIGATION SYSTEM & ANIMAL DETECTION	Working Model
5	057	PRODUCTION OF ELECTRICITY THROUGH PRESSURE SENSORS	Working Model
6	171	AUTOMATIC RAILWAY GATE CONTROL USING IR	Working Model
7	172	SMART IRRIGATION MONITORING AND CONTROLLING	Working Model
8	184	MOBILE CONTROLLED HOME AUTOMATION	Working Model
9	199	LINEMEN SECURITY SYSTEM USING ANDROID APP & BLUETOOTH	Working Model
10	199	INTEGRATED LOW COST HOME AUTOMATION USING IOT	Working Model
11	213	SMART DUST BIN	Working Model
12	344	GAS AND FIRE ACCIDENT AVOIDING SYSTEM	Working Model
13	348	SOCIAL DISTANCE IN SMART WAY	Working Model
14	348	LI-FI	Working Model
15	348	MAXIMUM UTILIZATION OF SOLAR PANELS	Working Model
16	360	AUTOMATIC STREET LIGHT CONTROL SYSTEM	Working Model
17	343	POWER QUALITY CHECKING OF MOTHER BOARD	Working Model

8.5 DME – Mechanical Engineering Projects (17 Projects)

#	Code	Project Title
1	022	ELECTRICITY GENERATION USING SPEED BREAKER
2	022	FIRE FIGHTING ROBOT
3	022	ZERO RADIUS TURNING & FOUR WHEEL STEERING SYSTEM / SOLAR CAR
4	022	MAGNETIC POWERED ENGINE
5	022	BEACH CLEANING ROBOT
6	022	REGENERATIVE BRAKING SYSTEM
7	029	PASSWORD DOOR LOCK
8	029	MICRO ROBOTIC ARM
9	171	AIR CONDITIONING USING THERMOELECTRIC EFFECT
10	171	MANUAL OPERATED SEED SOWING MACHINE
11	171	DOMESTIC S-TYPE WIND TURBINE

#	Code	Project Title
12	172	AUTOMATIC DOOR STOPPING MECHANISM FOR TRAIN
13	184	SOLAR PARAMETERS MONITORING & WIRELESS CHARGING
14	176	SOLAR GLASS CUTTER
15	176	SOLAR WATER HEATING SYSTEM
16	022	HYBRID VEHICLE
17	022	MICRO SERVO ROBOTIC ARM

8.6 D.Pharmacy & Mining Projects (5 Projects)

#	Code	Project Title	Department
1	057	Haemodialysis	D.Pharmacy
2	118	Awareness on Primary Prevention of Cardiovascular Diseases	D.Pharmacy
3	029	Underground Metal Mining	DMIN
4	029	Drilling & Blasting in Open Cast Mining	DMIN
5	029	Open Cast Lime Stone Mine	DMIN

9. Jury Panel & Evaluation Criteria

9.1 Petit Jury (Department-wise)

Department	Jury Member	Institution & Designation
DCE	Dr S R Lakshmi Prasad	HCES, GPT Vempalli
DCME	K. Sudharani	HCMES, GPW Kadapa
DECE	Dr S. Lalitha	HECES, GPT Kamalapuram
DEEE	Dr A. Siva Sankar	HEEES, GPT Simhadripuram
DME	J. Ashok Babu	HMES, GPT Proddatur
DPH	Dr P. Sujatha	HPHS, GPW Kadapa
DMIN	Dr B. Prasad	HMNGS, Loyola Polytechnic, Pulivendula

9.2 Grand Jury

S.No	Name	Affiliation
1	K. Subramanyam Raju	Principal (Retd.), Govt. Polytechnic Satyavedu
2	P. Satheesh	Managing Director, Sapphire Granite Pvt. Ltd., Tirupati

9.3 Evaluation Parameters

Parameter	Max. Marks	Description
Creativity & Originality	10	Novelty of concept and innovation in approach
Scalability	10	Potential for scaling to larger applications
Robustness	10	Reliability and durability of the working model
Potential of Impact	10	Real-world applicability and societal benefit
Design	10	Aesthetics, presentation quality, and structural design
TOTAL (per jury)	50	Scored by 3 jury members → Max 150 marks

9.4 Score Distribution Analysis

Score Range	No. of Projects	Remarks
135–141 (Excellent)	6	Top-tier innovative projects with strong impact
120–134 (Very Good)	14	Well-executed projects with clear applicability
100–119 (Good)	22	Functional models meeting all evaluation criteria

Score Range	No. of Projects	Remarks
75–99 (Average)	32	Satisfactory projects with scope for improvement
Below 75	49	Projects requiring fundamental improvement
Zero / Absent	3	Did not demonstrate during evaluation

10. Results & Winners – Overall Rankings

The following are the official results based on combined scores from all three jury members (max 150 marks):

Rank	Code	Project Title	College	Branch	Score/150
1	CM-08	Accident Detector, Fall Detector & Women Safety Device	Loyola Polytechnic, Pulivendula	DCME	141
2	C-11	Suspension Bridge with Safety Alarm System	GPT Rajampeta (176)	DCE	139
3	M-08	Fire Fighting Robot	GPT Proddatur (022)	DME	138
4	EE-01	Smart Home Automation Using Bluetooth	GPT Proddatur (022)	DEEE	137
5	C-13	Linking of Canals in Rayalaseema	Loyola Polytechnic, Pulivendula	DCE	135
5	EC-15	Face Mask Detection & Dry Handwashing Machine	GPT Kamalapuram (199)	DECE	135
7	M-10	Electricity Generation using Speed Breaker	GPT Proddatur (022)	DME	134
8	EC-08	IOT Based Smart Shopping Trolley	GPW Kadapa (057)	DECE	133
9	EE-04	Automatic Irrigation System & Animal Detection	GPW Kadapa (057)	DEEE	132
10	EC-18	Smart Pill Dispenser for Elderly Medication Adherence	GPT Kamalapuram (199)	DECE	131

10.1 Grand Overall Winner

❑ GRAND OVERALL WINNER

Project Code: CM-08

"Accident Detector, Fall Detector & Women Safety Device"

College: Loyola Polytechnic, Pulivendula (Code: 029)

Department: DCME | Score: 141/150

Jury Scores: 45 + 48 + 48 = 141

11. Branch-wise Winners (1st Place per Department)

Branch	Code	Winning Project	College	Score
DCE	C-11	Suspension Bridge with Safety Alarm System	GPT Rajampeta (176)	139/150
DCME	CM-08	Accident Detector, Fall Detector & Women Safety Device	Loyola Polytechnic (029)	141/150
DECE	EC-08	IOT Based Smart Shopping Trolley	GPW Kadapa (057)	133/150
DEEE	EE-01	Smart Home Automation Using Bluetooth	GPT Proddatur (022)	137/150
DME	M-08	Fire Fighting Robot	GPT Proddatur (022)	138/150
DPH	PH-01	Haemodialysis	GPW Kadapa (057)	125/150
DMIN	MNG-01	Underground Metal Mining	Loyola Polytechnic (029)	124/150

11.1 Runner-up Projects (2nd Place) by Department

Branch	Code	Project Title	College	Score
DCE	C-13	Linking of Canals in Rayalaseema	Loyola Polytechnic, Pulivendula	135
DCME	CM-05	Fatigue Detection Using Computer Vision	GPW Kadapa (057)	129
DECE	EC-13	Emergency Services Prioritizing Traffic Light System	GPT Kamalapuram (199)	129
DEEE	EE-04	Automatic Irrigation System & Animal Detection (Arduino)	GPW Kadapa (057)	132
DME	M-10	Electricity Generation Using Speed Breaker	GPT Proddatur (022)	134
DPH	PH-02	Nutritional Therapy	GPW Kadapa (057)	63
DMIN	MNG-02	Drilling & Blasting in Open Cast Mining	Loyola Polytechnic (029)	110

12. Top 10 Projects – Complete Ranked List

Rank	Code	Project Title	College	Branch	Score
1	CM-08	Accident Detector, Fall Detector & Women Safety Device	Loyola Polytechnic (029)	DCME	141
2	C-11	Suspension Bridge with Safety Alarm System	GPT Rajampeta (176)	DCE	139
3	M-08	Fire Fighting Robot	GPT Proddatur (022)	DME	138
4	EE-01	Smart Home Automation Using Bluetooth	GPT Proddatur (022)	DEEE	137
5	C-13	Linking of Canals in Rayalaseema	Loyola Polytechnic (029)	DCE	135
5	EC-15	Face Mask Detection & Dry Handwashing Machine	GPT Kamalapuram (199)	DECE	135
7	M-10	Electricity Generation Using Speed Breaker	GPT Proddatur (022)	DME	134
8	EC-08	IOT Based Smart Shopping Trolley	GPW Kadapa (057)	DECE	133
9	EE-04	Automatic Irrigation System & Animal Detection	GPW Kadapa (057)	DEEE	132
10	EC-18	Smart Pill Dispenser for Elderly Medication Adherence	GPT Kamalapuram (199)	DECE	131

12.1 Score Distribution Visual

Top 10 Projects by Score (/150)

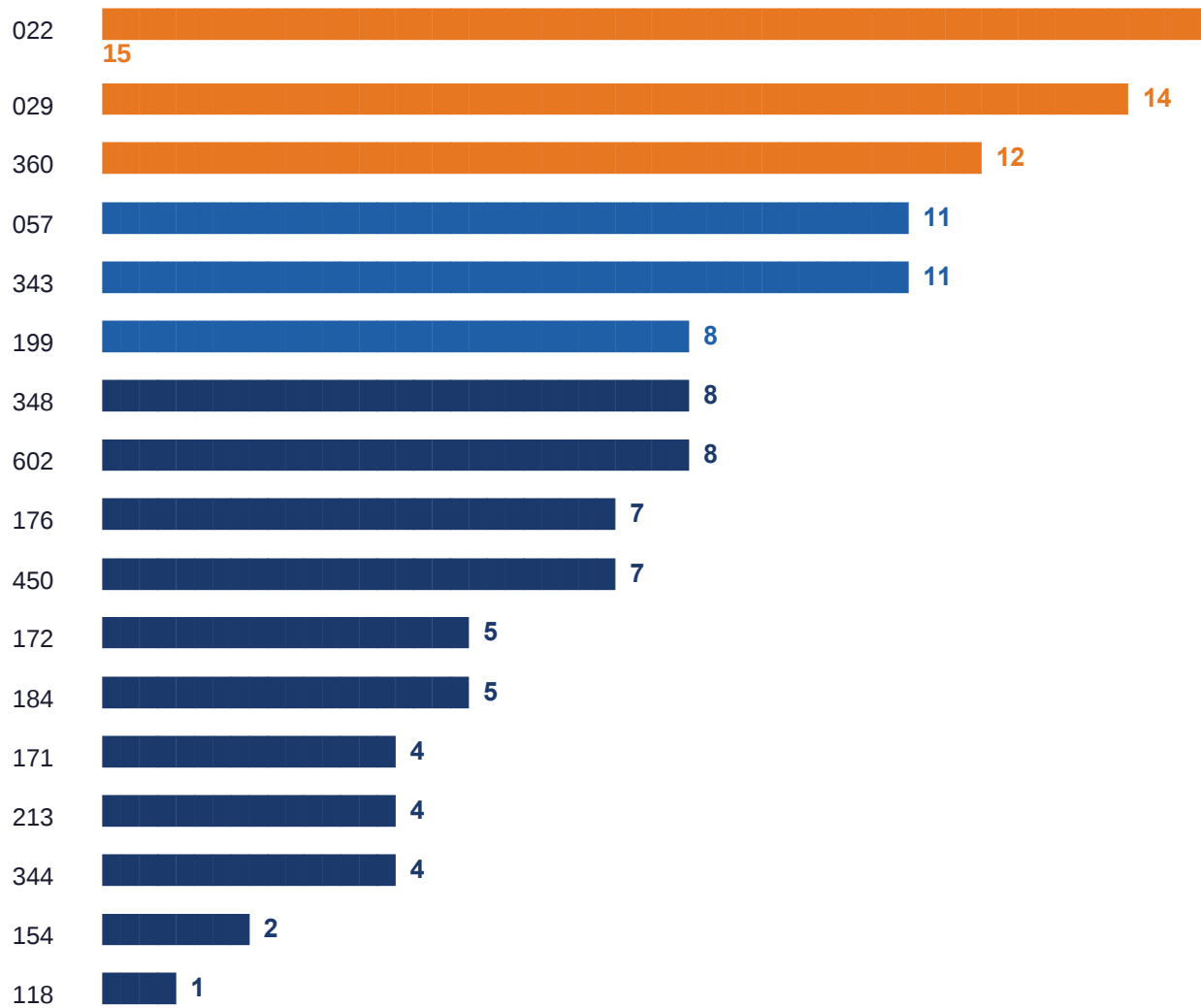


#8 EC- 08		133
#9 EE-04		132
#10 EC- 18		131

13. Statistical Analysis & Charts

13.1 Institution-wise Project Count

Projects per Institution

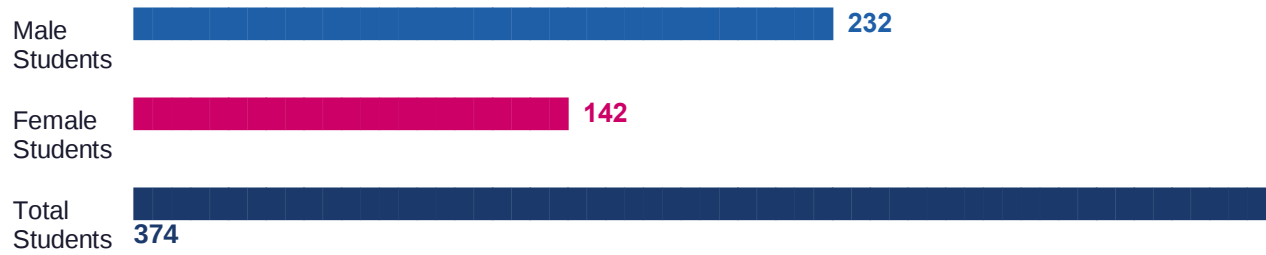


13.2 Branch-wise Project Share

Department	Projects	% Share	Visual
DECE (ECE)	51	40.5%	
DCE (Civil)	21	16.7%	
DCME (CME)	18	14.3%	
DEEE (EEE)	17	13.5%	
DME (Mech)	17	13.5%	
DMIN+DPH	5	4.0%	

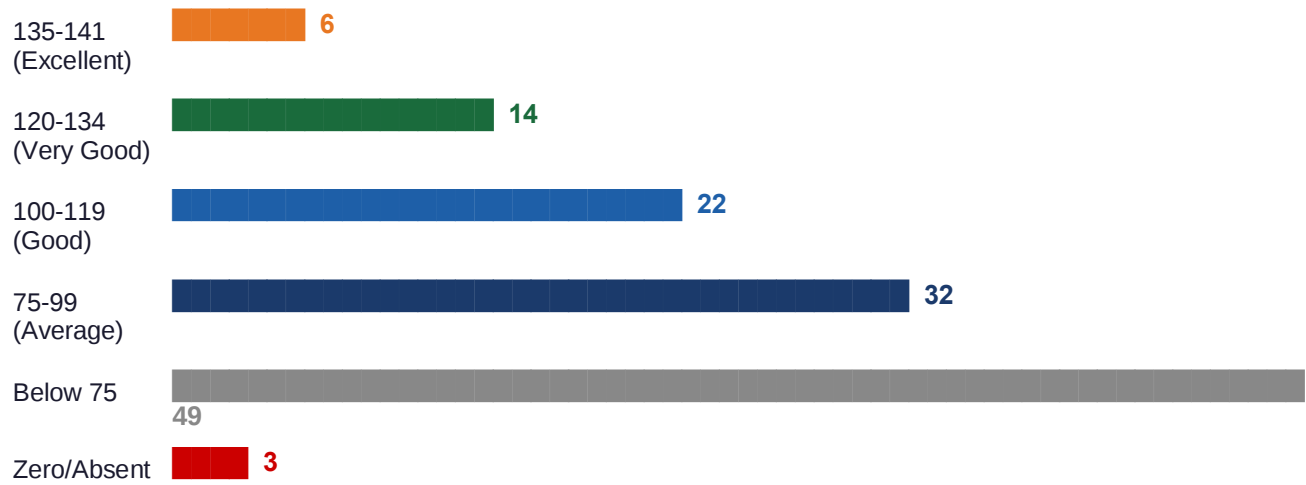
13.3 Gender Participation Visual

Gender-wise Student Participation



13.4 Score Band Distribution

Number of Projects per Score Band



14. Key Observations & Highlights

14.1 Academic Excellence

- A total of 126 out of 129 submitted projects were successfully evaluated, indicating strong preparation and commitment.
- 6 projects scored in the 'Excellent' band (135–141 marks), demonstrating world-class quality of innovative thinking.
- The highest-scoring project (CM-08, score 141) addressed a socially relevant problem – women's safety – integrating accident detection, fall sensing, and GPS alerting.
- ECE/Electronics emerged as the most popular department with 51 projects (40.5% of total), highlighting student interest in IoT, robotics, and smart systems.
- GPT Proddatur (022) contributed the most projects (15) and produced 3 of the Top 10 ranked projects.

14.2 Innovation Themes Observed

- Smart Automation & IoT: The highest trend with projects in home automation, agriculture, smart streets, and wearables.
- Safety & Surveillance: Multiple projects addressed accident detection, security systems, and emergency response.
- Renewable Energy: Projects on solar panel optimization, speed-breaker electricity generation, and wind turbines.
- Infrastructure Modeling: Rich variety of civil models including bridges, dams, roads, and smart buildings.
- Women Safety Technology: At least 3 projects specifically focused on women's security devices.
- Healthcare Technology: Smart pill dispensers, patient monitoring systems, and health wearables.
- AI & Machine Vision: Face recognition, fatigue detection using computer vision, and deep learning applications.

14.3 Institutional Performance

- GPT Proddatur (022) – Best Government Polytechnic: 3 projects in Top 10, strong across DCE, ECE, EEE, ME.
- Loyola Polytechnic, Pulivendula (029) – Best Private Institution: Grand Overall Winner (CM-08), strong DMNG participation.
- GPW Kadapa (057) – Best Women's Institution: 11 all-female projects, 2 in Top 10, strong DCME and ECE performance.
- GPT Kamalapuram (199) – 2 projects in Top 10, exemplary in ECE department.
- GPT Rajampeta (176) – 2nd place in overall rankings (C-11), best in Civil Engineering category.

15. Recommendations

15.1 For Students

- Encourage inter-disciplinary project teams combining Civil, ECE, and Mechanical skills for holistic solutions.
- Focus on real-world problems such as healthcare, agriculture, and disaster management for higher impact scores.
- Improve project documentation, poster presentation, and verbal explanation skills for better jury interaction.
- Begin project development at the start of the academic year to allow adequate testing and refinement.
- Incorporate open-source technologies (Raspberry Pi, Arduino, OpenCV) for cost-effective and scalable projects.

15.2 For Institutions

- Establish Maker Labs / Fab Labs with 3D printers, microcontrollers, and electronics workbenches.
- Conduct in-house project exhibitions at district level before the regional fest for quality screening.
- Assign dedicated project mentors from industry to provide practical guidance.
- Strengthen DCME (Computer Engineering) projects as AI/ML is a growing area with limited representation.
- Encourage women-only institutions to participate in all department categories beyond DECE.

15.3 For the Department of Technical Education

- Introduce online submission of abstracts with structured templates to improve quality control.
- Provide seed funding (₹5,000–₹10,000) per project to enable procurement of better components.
- Expand the jury panel with more industry professionals to provide commercial viability feedback.
- Stream the event live on YouTube/social media to increase visibility and student motivation.
- Establish a 'Best Innovation' award separate from 'Best Project' to encourage radical ideas.
- Publish a proceedings booklet with all project abstracts after the event.

16. Annexures

Annexure A: Complete Project Scores (All 126 Evaluated Projects)

#	Code	Project Title	J1	J2	J3	Total
1	CM-08	ACCIDENT DETECTOR, FALL DETECTOR & WOMEN SAFETY DEVICE	45	48	48	141
2	C-11	SUSPENSION BRIDGE WITH SAFETY ALARM SYSTEM	45	48	46	139
3	M-08	FIRE FIGHTING ROBOT	43	47	48	138
4	EE-01	SMART HOME AUTOMATION USING BLUETOOTH	40	49	48	137
5	C-13	LINKING OF CANALS IN RAYALASEEMA	42	46	47	135
5	EC-15	FACE MASK DETECTION & DRY HANDWASHING MACHINE	39	47	49	135
7	M-10	ELECTRICITY GENERATION USING SPEED BREAKER	40	47	47	134
8	EC-08	IOT BASED SMART SHOPPING TROLLEY	34	49	50	133
9	EE-04	AUTOMATIC IRRIGATION & ANIMAL DETECTION	40	47	45	132
10	EC-18	SMART PILL DISPENSER FOR ELDERLY	36	47	48	131
11	CM-05	FATIGUE DETECTION USING COMPUTER VISION	39	46	44	129
12	EC-13	EMERGENCY SERVICES PRIORITIZING TRAFFIC LIGHT	39	44	46	129
13	EE-10	LOW COST HOME AUTOMATION USING IOT	43	42	42	127
14	CM-02	INSTITUTIONAL APP IN ANDROID	33	48	45	126
15	M-04	ZERO RADIUS TURNING & FOUR WHEEL STEERING	36	45	45	126
16	PH-01	HAEMODIALYSIS	38	42	45	125
17	EC-19	RFID AND GSM BASED ATTENDANCE ALERT SYSTEM	34	44	46	124
18	EC-21	EARTHQUAKE DETECTOR	34	47	43	124
19	MNG-01	UNDERGROUND METAL MINING	41	40	43	124
20	C-18	ADVANCED MOVING HOUSE	44	39	40	123
21	C-03	ALKALINE WATER FROM RAIN WATER HARVESTING	47	40	35	122
22	C-05	EARTHQUAKE RESISTANT BUILDING	42	40	40	122
23	C-04	MODERN CITY	47	40	34	121
24	C-19	SELF CLEANING OF ROADS	40	36	45	121

#	Code	Project Title	J1	J2	J3	Total
25	EE-09	LINEMEN SECURITY SYSTEM	39	40	42	121
26	C-16	ADVANCED HIGHWAY BRIDGE	40	40	40	120
27	EE-12	GAS AND FIRE ACCIDENT AVOIDING SYSTEM	37	37	45	119
28	C-15	ROTATION OF BRIDGE	39	39	40	118
29	CM-03	POLYTECHNIC INFORMATICS SYSTEM	37	35	45	117
30	CM-04	SMART NOTIFIER	36	35	45	116
31	M-16	MANUAL OPERATED SEED SOWING MACHINE	35	35	45	115
32	EE-11	SMART DUST BIN	38	38	38	114
33	C-01	SUSPENSION BRIDGE	38	38	38	114
34	EE-05	ELECTRICITY FROM PRESSURE SENSORS	37	36	40	113
35	C-09	MODEL OF STRUCTURE WITH WASTE WATER BOTTLES	39	38	35	112
36	CM-09	MINI COMPUTER	37	35	40	112
37	EE-06	AUTOMATIC RAILWAY GATE USING IR	34	33	45	112
38	M-02	LOW COST AIR CONDITIONING	34	33	45	112
39	EC-22	PASSWORD DOOR LOCK SYSTEM	34	47	29	110
40	MNG-02	DRILLING & BLASTING IN OPEN CAST MINING	37	38	35	110

... (Projects ranked 41–126 available in supplementary data)

Annexure B: Colleges Not in Top 10 – Project Summary

Code	Institution	Projects Submitted	Best Score
154	GPT Obulavaripalli	2	126 (CM-02)
171	GPT Jammalamadugu	4	112 (EE-06)
343	SRIT Proddatur	11	120 (C-16)
344	Bharath College for Women, Kadapa	4	119 (EE-12)
348	CBIT Proddatur	8	110 (EC-22)
450	Sri Sai Inst. of Technology, Rayachoty	7	96 (EC range)
603	Gowthami Inst. for Women, Proddatur	8	63 (EC range)

Annexure C: List of Circulars & Reference Documents

- Cir.No.EHE02-17/53/2024-HSEC-CTE-Part(1), Office of Director of Technical Education, AP, Mangalagiri – dated 20.10.2024

- Cir.No.EHE02-17/53/2024-HSEC-CTE-Part(1), Office of Director of Technical Education, AP, Mangalagiri – dated 09.11.2024
- Instructions through Video Conference by RJD, SVU Region with Nodal/Organizing Principals – dated 13.11.2024
- Report on Video Conference – Kadapa Regional Polytechfest 2024 Approval of Dates – dated 14.11.2024
- Invitation Letter – dated 18.11.2024
- Jury Appointment Letters to Regional Polytechnics
- Letters to Police Department, Fire Officer, DMHO, and AP Eastern Power Distribution Corporation
- Regional Polytechfest 2024 Registration Form (Form 2) – dated 06.11.2024 & 07.11.2024

Report Prepared by:

Dr. Yajaman Sudhakar, M.Pharm., Ph.D.

Principal, Govt. Polytechnic, Rajampeta, Annamayya District, AP – 516126

Email: gptrajampeta@gmail.com | Mobile: 9010222176

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