



GOVERNMENT DEGREE
COLLEGERAMPACHODAVARAM
Alluri Seetha Ramaraju District
www.gdcrapachodavaram.ac.in



DEPARTMENT OF PHYSICS

CERTIFICATE COURSE

In

ELECTRICAL WIRING

Course Co-ordinator

- Dr.G.Manikya Rao,
M.Sc, Ph.D.

PRINCIPAL
Government Degree College
Rampachodavaram

A Brief Report

The Department of Physics, Government Degree College, Rampachodavaram, conducted a Certificate course in Electrical Wiring for Students of the college from 20-10-2021 to 30-11-2021 (30 Hours).

Initially the Department of Physics met the Principal to seek approval of the Syllabus for the Certificate Course. The Principal scrutinized the Syllabus and permitted to conduct the course and suggested to conduct an entry level test for Students.

The entry level test was conducted on 19-10-2021 to assess the knowledge of students in the basics of Electricity and Electric Tools. Every day from 9.a.m to 10a.m classes were held for students to complete the course. Some practical sessions were also conducted to give practical experience for the students. The Principal frequently visited the Classes and assessed the knowledge acquired by the students. A total of fifteen students were participated in the Certificate course.

On the final day, theory examination for 25 marks was conducted under the supervision of principal and Physics Department in-charge. The results were published and certificates were issued.


(Dr. G. Manikya Rao)


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DEPARTMENT OF PHYSICS
CERTIFICATE COURSE
IN
ELECTRICAL WIRING

Course Structure

- | | |
|------------------------|----------------|
| 1. Theory | : 20 hours |
| 2. Hands on experience | : 10 hours |
| 3. Entry test | : 10 marks |
| 4. Final test | : 30 marks |
| 5. Grading | : A , B, C & D |

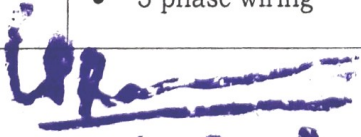


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G. Manikya Rao
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SYLLABUS

MODULE I – Fundamentals of electricity–safety measures and precautions, first aid tools and equipments (10 hours)		
I	Fundamentals of electricity-safety measures and precautions, first aid Tools and equipments	• Safety handling Tools & Equipment (Fire Fighting and use of fire extinguishers) • Electric conductor, insulator and resistance • Concept of basic Electricity, Single phase & three phase circuits • Measurement of Electrical quantities like Voltage, Current, Resistance, Impedance, power factor and energy. • Fires in electrical Circuits & Precautions • General Safety of Tools & equipment • Tools required for marking, punching, cutting, drilling, filing, stripping, crimping, socketing and fixing glands & screws etc. • Measuring tools, wire gauges etc. Classification • Identification of the electrical equipments, cables, wires and electrical accessories
II	Testing procedure of voltage and current, Importance of Earthing	• Definition and testing procedure of voltage, current, power, MCB and bus bars • Earthing Connection, Different earthing systems
MODULE II – Basic Electrical Circuits - 5 hours		
I	Basic Electrical Circuits, Wiring & installations	• Concept of basic Electricity, Single phase & three phase circuits • Serial connection-diagram • Series and Direct Board, different types
MODULE III - Wiring & installations - 5 hours		
I	Different types of electrical wiring & installations	• Two way switch-wiring • Lodge wiring / go down wiring • Theatre wiring / master switch wiring- • Hospital wiring / room wiring • 3 phase wiring


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**GOVERNMENT DEGREE COLLEGE
RAMPACHODAVARAM
Department of Physics**

“Certificate Course on Electrical Wiring”

Entry Level Test

Time: 30 minutes

Max. Marks: 10

Answer ALL the following Questions

Each question carries 1 mark.

(10x1=10)

1. A person qualified to perform electrical work must possess []
 - a) Skills/techniques to distinguish live parts from other parts of electrical equipment
 - b) Skills and techniques to determine the nominal voltage of exposed live parts
 - c) Knowledge on the use of PPE, insulating and shielding materials, and insulated tools
 - d) All of the above

2. Electrical injuries are commonly caused by []
 - a) Unsafe equipment or installations
 - b) An unsafe environment
 - c) Unsafe work practices
 - d) All of the above

3. Which step is followed for treating a person from an electric shock? []
 - a) Provide water
 - b) Keep the victim cold
 - c) Cover the victim with a coat
 - d) Move the victim to a ventilated place

4. What we do in first action to be taken, in case of an electric shock? []
 - a) Call to doctor
 - b) Take support to others
 - c) Switch OFF the electric power

- d) Call to ambulance
5. What is current? []
- a) Flow of Neutrons
- b) Flow of Electrons
- c) Flow of Protons
- d) Flow of Resistance
6. What is the unit of current? []
- a) Ampere
- b) Volts
- c) Ohms
- d) Ammeter
7. Which is produced by AC generators? []
- a) Direct current
- b) Positive current
- c) Alternating current
- d) Negative current
8. Conductors offer little resistance to the flow of electric current. (True/False)
9. Electrical shock can cause damage to tissue, muscle, and internal organs. (True/False)
10. Grounding conductors are usually black in colour. (True/False)



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**GOVERNMENT DEGREE COLLEGE
RAMPACHODAVARAM
Department of Physics**

“Certificate Course on Electrical Wiring”

Question Paper

Time: 1 Hr

Max. Marks: 30

Answer ALL the following Questions

Each question carries 2 marks

(15x2=30)

1. What is the use of fire extinguishers?
2. Define electric conductor and insulator?
3. What are the causes for electrical short circuits?
4. Which meters are used to measure the voltage and current in an electric circuit?
5. What is the importance of earthing in home?
6. What are single phase and three phase wiring connections?
7. What are series and parallel wiring connections?
8. What is the first aid treatment for an electric shock?
9. What is MCB? Write its use.
10. Write the safety measures to avoid an electric shock?
11. What are the general safety tools of electricity?
12. Distinguish between AC and DC?
13. Write about different earthing systems.
14. How can you measure the impedance and power factor in an electric circuit?
15. How many types of wires are used in a household electric circuit?



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(Dr. G. Manikya Rao)

STUDENTS LIST

S.No	Year	Regd. No.	Name of the student	Class	Duration	Dates of Course	
						From	To
1	2021-22	19017101002	J.NANDESWARI	III BSC-MPC	30 hours	20.10.21	30.11.21
2	2021-22	19017101004	K.V.KRUSHNA REDDY	III BSC-MPC	30 hours	20.10.21	30.11.21
3	2021-22	19017101005	K.A.B.MURALI KRISHNA REDDY	III BSC-MPC	30 hours	20.10.21	30.11.21
4	2021-22	19017101006	K.NAVVEN KUMAR REDDY	III BSC-MPC	30 hours	20.10.21	30.11.21
5	2021-22	19017101007	K.ASWANI	III BSC-MPC	30 hours	20.10.21	30.11.21
6	2021-22	19017101008	K.GANESH DARA	III BSC-MPC	30 hours	20.10.21	30.11.21
7	2021-22	19017101009	M.PRASANTH KIRAN	III BSC-MPC	30 hours	20.10.21	30.11.21
8	2021-22	19017101010	M.PUJITHA	III BSC-MPC	30 hours	20.10.21	30.11.21
9	2021-22	19017101011	M.SYAM KUMAR	III BSC-MPC	30 hours	20.10.21	30.11.21
10	2021-22	19017101012	M.SATYA NARAYANA	III BSC-MPC	30 hours	20.10.21	30.11.21
11	2021-22	19017101013	M.SAI KIRAN REDDY	III BSC-MPC	30 hours	20.10.21	30.11.21
12	2021-22	19017101014	M.SARASAWATHI DEVI	III BSC-MPC	30 hours	20.10.21	30.11.21
13	2021-22	19017101016	P.ASHOK KUMAR	III BSC-MPC	30 hours	20.10.21	30.11.21
14	2021-22	19017101017	P.RAMAYAMMA	III BSC-MPC	30 hours	20.10.21	30.11.21
15	2021-22	19017101018	P.SUBBHA LAKSHMI	III BSC-MPC	30 hours	20.10.21	30.11.21


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Certificate course Attendance and Results

S.No	Year	Regd. No.	Name of the student	Class	Attendance	Grade
1	2021-22	19017101002	J.NANDESWARI	III BSC-MPC	29	A
2	2021-22	19017101004	K.V.KRUSHNA REDDY	III BSC-MPC	28	B
3	2021-22	19017101005	K.A.B.MURALI KRISHNA REDDY	III BSC-MPC	29	B
4	2021-22	19017101006	K.NAVVEN KUMAR REDDY	III BSC-MPC	28	A
5	2021-22	19017101007	K.ASWANI	III BSC-MPC	29	A
6	2021-22	19017101008	K.GANESH DARA	III BSC-MPC	28	B
7	2021-22	19017101009	M.PRASANTH KIRAN	III BSC-MPC	28	B
8	2021-22	19017101010	M.PUJITHA	III BSC-MPC	29	A
9	2021-22	19017101011	M.SYAM KUMAR	III BSC-MPC	28	B
10	2021-22	19017101012	M.SATYA NARAYANA	III BSC-MPC	29	A
11	2021-22	19017101013	M.SAI KIRAN REDDY	III BSC-MPC	29	A
12	2021-22	19017101014	M.SARASAWATHI DEVI	III BSC-MPC	30	A
13	2021-22	19017101016	P.ASHOK KUMAR	III BSC-MPC	28	B
14	2021-22	19017101017	P.RAMAYAMMA	III BSC-MPC	29	B
15	2021-22	19017101018	P.SUBBHA LAKSHMI	III BSC-MPC	30	A


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