

D.Voc Mechanical Manufacturing
Subject: Basics of Electrical and Electronics
Engineering
Subject Code: EE-401
Semester: Fourth
Session-September 2022
Max. Marks: 35

Time: 03 hours

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 marks.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

Roll Number

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SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)
(10x2=20 Marks)

- A. Define Power and Energy.
- B. Define basic concept of charge.
- C. What are the unit and symbol for voltage?
- D. What is the application of Zener diode?
- E. What is Inverter?
- F. Define power factor.
- G. Define Kirchhoff's voltage law.
- H. What is the unit of Force and Energy?
- I. What is the difference between AC and DC?
- J. What is resistance?

SECTION –B (ESSAY TYPE QUESTIONS)
(5x10=50 Marks)

1. Define Ohm's Law and explain series-parallel resistance circuits.
2. Explain the concept of AC generation with voltage and current.
3. Write a short note on SMPS and UPS.
4. Explain different type of Semi-conductor materials.

5.
 - a. A 200 W refrigerator and 750 W Oven work for 5 hours. Calculate the energy consumed? (3)
 - b. Write a short note on P-N junction diode. (2)
6. What are the Metals, Semiconductors and Photo-electric emission?
7. Write a short note on Average and RMS value of an alternating current.
8. Define the following terms
 - a. Voltage Regulator
 - b. Forward and Reverse bias

END OF PAPER