

B.Voc Solar Technology
Subject: Power Electronics
Subject Code: EE-602
Semester: Third
September 2022
Theory (External): 35 Marks
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 mark.
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)
(10x1=10 Marks)

- A) Define FET?
- B) Define Amplification factor in JFET?
- C) Define Drain resistance.
- D) What are the three terminals of TRIAC?
- E) What do you mean by Enhancement type CMOS?
- F) In a UJT, the p-type emitter is heavily doped. (True/False)
- G) Power electronics essentially deals with control of a.c. power at which frequency?
- H) Define half wave rectification.
- I) What is the principle of Cyclo-Converter?
- J) What are the application of TRIAC?

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SECTION -B (ESSAY TYPE QUESTIONS)
(5x5=25 Marks)

- Q1 What are the important features of FET?
- Q2 Compare P channel and N channel JFET.
- Q3 Explain Diac V-I Characteristics.
- Q4 Define holding current of SCR and draw the two transistor model of SCR.
- Q5 Draw and Explain Uni Junction Transistor Equivalent Circuit.
- Q6 Explain 1800 variable half wave rectifier.
- Q7 Explain UJT Triggered SCR phase control operation.
- Q8 Explain Single phase to single phase circuit step down Cyclo-Converter.

==END OF PAPER==