

2107071

**DIPLOMA OF VOCATION**  
**Industrial Electronics**  
**Subject: Power Electronics**  
**Subject Code: EDPE-302**  
**Semester: Sixth**  
**July 2021**  
**Theory (External): 35 Marks**  
**Time: 03 Hours**

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**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									

**SECTION -A (SHORT/OBJECTIVE TYPE QUESTIONS)**  
(10x1=10 Marks)

- A) What is latching current in SCR?
- B) Define Amplification factor in JFET?
- C) What is hard switching of the thyristor?
- D) What are the three terminals of TRIAC?
- E) What do you mean by Enhancement type CMOS?
- F) What is meant by commutation?
- G) Power electronics essentially deals with control of a.c. Power at which frequency?
- H) What are the advantages of free wheeling diode in rectifier circuit?
- I) What is the principle of Cyclo-Converter?
- J) What are the types of inverter?

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

- Q1 What are the different methods to turn on the thyristor?
- Q2 Explain two transistor analogy of thyristor.
- Q3 Explain the switching characteristics of Thyristor.
- Q4 Explain single phase current source inverter with ideal switches.
- Q5 Explain the working of Snubber circuit.
- Q6 Explain the working of voltage commutated chopper with aid of circuit diagram and necessary waveforms. Derive an expression for its output voltage.
- Q7 What is the role of Buck converter?
- Q8 Explain Single phase to single phase circuit step down Cyclo-Converter.

==END OF PAPER==