

Enrollment No: _____ Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Power Electronics

Subject Code: 4TE06PEL1

Branch: B.Tech (IC)

Semester: 6

Date: 04/05/2018

Time: 02:30 To 05:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q-1 Attempt the following questions: (14)

- 1) Draw the symbol of TRIAC and its V-I characteristics.
- 2) Give any two differences between signal diode and power diode.
- 3) Draw the symbol of Power Mosfet and IGBT.
- 4) Define: Latching Current.
- 5) How many thyristors are required in a full wave bridge rectifier?
- 6) How many junctions exist in a SCR?
- 7) An inverter converts DC power into _____ power.
- 8) What is the function of free wheeling diode in a phase controlled rectifier circuit?
- 9) Which power electronic converter is also known as frequency changer?
- 10) Holding current of a SCR is always greater than latching current. Determine whether the given statement is true or false.
- 11) Draw only the circuit diagram of series inverter.
- 12) What is the difference between step up chopper and step down chopper?
- 13) How many power switches are used in single phase half bridge inverter?
- 14) Give any two applications of power electronics.

Attempt any four questions from Q-2 to Q-8

Q-2 Attempt all questions (14)



- a) Draw the circuit diagram of class *B* chopper and explain its operation. **07**
- b) Explain how snubber circuit is useful in over voltage protection for thyristor. **07**

