

VITHALBHAI PATEL & RAJRATNA P.T. PATEL SCIENCE COLLEGE
VALLABH VIDHYA NAGAR

T.Y. B.Sc. SEM: IV

INTERNAL TEST

DATE: 05th Oct. 2013

SUB: ELECTRONICS

TIME: 3:30 pm to 5:00 pm

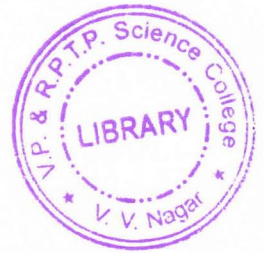
SUB CODE: US05CELE05

TOTAL MARKS: 30

Q. 1 Choose the correct answer.

[06]

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|--|-------------------------------|-------------------------------|
| (1) SCR is ____ type device. | (A) Uni directional | (C) Multi directional |
| | (B) Bi directional | (D) None of above |
| (2) Thyristor device mainly used for ____ . | (A) Rectification | (C) Power controlling |
| | (B) Amplification | (D) None of above |
| (3) UJT mainly used for ____ . | (A) Amplifier | (C) Power controlling |
| | (B) Relaxation oscillator | (D) None of above |
| (4) V_{Bo} in SCR refer as ____ . | (A) Break down voltage | (C) Break over voltage |
| | (B) Over voltage | (D) None of above |
| (5) ____ Connection of SCR used for controlling very high voltage. | (A) Series | (C) Parallel |
| | (B) Bi directional | (D) None of above |
| (6) Recommended method to TURN ON SCR is ____ . | (A) Triggering by D.C. signal | (C) Triggering by A.C. signal |
| | (B) Both (A) & (B) | (D) None of above |



Q.2 Answer the following in short.(Attempt Three, each two marks)

[06]

- (1) State function of gate in SCR.
- (2) Define holding current i_H .
- (3) Define revers recovery current i_{RR} .
- (4) Define string efficiency.
- (5) State any three important applications of thyristor device.
- (6) Differentiate between semiconductor and thyristor device.

Q.3 Discuss principle of operation and characteristics of SCR.

[06]

OR

Q.3 Discuss different method of turning on a SCR with TURN ON characteristics.

[06]

Q.4 Describe series operation of SCR giving necessary diagram.

[06]

OR

Q.4 Discuss parallel operation of SCR giving necessary diagram.

[06]

Q.5 With help of circuit diagram describe TURN OFF mechanism of SCR.

[06]

OR

Q. 5 Discuss characteristics and operation of UJT giving necessary diagram.

[06]

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