

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

S.Y. B.Sc. SEM: III  
SUB: ELECTRONICS  
SUB CODE: US03CELE01

INTERNAL TEST

DATE: 5<sup>th</sup> October-2015  
TIME: 3:00 pm to 4:30 pm  
TOTAL MARKS: 25

Q. 1 Choose the correct answer.

[03]

- (1) A tunnel diode is also known as \_\_\_\_\_ diode.  
(A) Esaki (C) Resistance  
(B) Capacitor (D) None of above
- (2) Doped semiconductor material is called \_\_\_\_\_ material.  
(A) Extrinsic (C) Intrinsic  
(B) Insulating (D) None of above
- (3) Paper- capacitor use \_\_\_\_\_ as Dielectric.  
(A) Paper (C) Mica  
(B) Ceramic (D) None of above



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

[04]

- (1) Draw the figure of Abrupt junction and hyper abrupt junction VVC- diodes.  
(2) Draw the figure showing construction of Wire wound resistor.  
(3) Write a note on P-type semiconductor.

Q.3 List different types of fixed resistors and Explain any three in detail.

[06]

OR

Q.3 List different types of fixed capacitors and Explain any two in detail.

[06]

Q.4 Give an account of Step Response of an RL circuit.

[06]

OR

Q.4 (a) Explain in detail Forward Biased PN Junction diode.

[03]

(b) Explain in detail Reverse Biased PN Junction diode.

[03]

Q.5 Give an account of Voltage variable capacitor diode.

[06]

OR

Q. 5 (a) Explain working of reverse biased tunnel diode drawing band structure diagram.

[03]

(b) Explain working of forward biased tunnel diode drawing band structure diagram.

[03]

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