

[85]

SEAT No. \_\_\_\_\_

No. of Printed Pages : 02

**SARDAR PATEL UNIVERSITY V.V.NAGAR**  
**S.Y.B.Sc. (Sem- III<sup>rd</sup>) EXAMINATION- Nov.-2018**  
**Electronic Devices(newcourse)**

SUB. CODE:-US03CELE21

DATE:-22/11/2019, ~~Friday~~ TIME:-2:00 pm to 5:00 pm

MARKS-70

[10]

Q-1 Choose correct answer

1. Reactance of inductor is given by  $X_L =$  \_\_\_\_\_  
(A)  $2\pi fL$  (C)  $2fL$   
(B)  $1/2\pi fL$  (D) None of these
2. Cermet resistor are made from metal & \_\_\_\_\_  
(A) Glass (C) conductor  
(B) semiconductor (D) None of these
3. Diode clamper circuit is used in \_\_\_\_\_  
(A) TV. (C) radio  
(B) power supply (D) None of these
4. Pure semiconductor material is referred as \_\_\_\_\_ material.  
(A) intrinsic (C) extrinsic  
(B) doped (D) None of these
5. A tunnel diode is some times called as \_\_\_\_\_  
(A) Esaki diode (C) BJT  
(B) FET. (D) None of these
6. Thermistor has \_\_\_\_\_ temperature coefficient.  
(A) Positive (C) Negative  
(B) Zero (D) None of these
7. Basically VVC device is a simply a \_\_\_\_\_ biased diode.  
(A) Reverses (C) Forward  
(B) Zero (D) None of these
8. Doped semiconductor material is known as \_\_\_\_\_ material.  
(A) Intrinsic (C) Extrinsic  
(B) Metallic (D) None of these
9. In amplitude modulation, the \_\_\_\_\_ of carrier signal as per modulating signal.  
(A) amplitude (C) phase  
(B) frequency (D) None of these
10. The barrier potential is Negative on P-side and \_\_\_\_\_ on N-side.  
(A) P.side (C) both (A) and (B)  
(B) N-side (D) None of these

[20]

Q-2 Short answer type question. (any ten)

1. Draw a diagram of wire wound resistor.
2. Write a note on variable capacitor..
3. List different types of inductors ,Explain any one in brief.

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CP.T.O.)

4. Write a note on P-type semiconductor
5. Explain temperature effects in reverse biased PN junction diode.
6. Write a note on N-type semiconductor.
7. Draw the basic circuit of linear diode detector.
8. List different applications of Thermistor and draw figure of any one.
9. Draw the symbol of voltage variable capacitor and tunnel diode.
10. Draw the characteristic of tunnel diode.
11. Define amplitude modulation.
12. Define modulation.

Q.3 List different types of fixed resistor and explain any two fixed capacitors in detail. [10]

OR

Q.3 List different types of fixed capacitor and explain any two fixed capacitors in detail. [10]

Q.4 Give an account of step voltage response of RL circuit. [10]

OR

Q.4 Give an account of Forward bias PN junction diode and Reverse bias PN junction diode and also discuss temperature effects in Forward biased PN junction diode.. [10]

Q.5 Give an account of amplitude modulation . [10]

OR

Q.5 Write a note on voltage doubler and peak rectifier. [10]

Q.6 Write a note on voltage variable capacitor diode. [10]

OR

Q.6 Give an account Thermistor. [10]

