

DEPARTMENT OF PHYSICS-2021, RANGIA COLLEGE

HOME ASSIGNMENT -1 for SEMESTER IV(M), ELECTRONICS

TOTAL MARKS-10

Group A

Choose the correct one (1 x 10 = 10)

1. A transistor is an amplifier is
 - i) an active circuit
 - ii) a Passive circuit.
2. $\alpha=0.95$, then the value of β of the transistor is
 - i) 190
 - ii) 0.06
 - iii) 19
3. In the saturation region
 - i) Both the emitter junction and the collector junction is forward bias
 - ii) The emitter junction is forward bias and the collector junction is reversed bias
 - iii) The emitter junction is reversed bias and the collector junction is forward bias
4. In case of normal operation of a transistor in CE mode
 - i) Both the emitter junction and the collector junction is forward bias
 - ii) The emitter junction is reversed bias and the collector junction is forward bias
 - iii) The emitter junction is forward bias and the collector junction is reversed bias
5. The temperature coefficient of semiconductor in
 - a. positive
 - b. negative
 - c. ∞
6. The majority charge carrier of Ge p type semiconductor is
 - a. Electron
 - b. hole
 - c. ions
7. A semiconductor behaves at 0k as
 - a. an insulator
 - b. a good conductor
 - c semiconductor.
8. A.C load line is a
 - i) $\sin(\omega t)$ curve
 - ii) Circular curve
 - iii) Straight line.
9. The input resistance is highest for
 - i) a CB amplifier
 - ii) a CE amplifier
 - iii) a CC amplifier.
10. The output resistance is highest for
 - i) a CB amplifier
 - ii) a CE amplifier
 - iii) a CC amplifier.

.B. 1. Last date of submission 7th August 2021.

2. Submit the assignment at Google class room.

3. Write your Roll no and Assignment no as file name.

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HOME ASSIGNMENT -2 for SEMESTER IV(M), ELECTRONICS

Group A

Answer any two

5 x 2 =10

1. Distinguished between Conductor, Insulator and Semiconductor with special reference to energy band diagram.
2. Explain P type and N type semiconductor with example.
3. Explain the operation of a PN junction diode.
4. Explain the operation of a PNP transistor in Common emitter configuration.
5. Draw the characteristic curves of a transistor operation in CB configuration.

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