



C16-AEI-302

6214

BOARD DIPLOMA EXAMINATION, (C-16)

JANUARY/FEBRUARY—2022

DAEI - THIRD SEMESTER EXAMINATION

ELECTRONIC CIRCUITS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :**
- (1) Answer **all** questions.
 - (2) Each question carries **three** marks.
 - (3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List any three advantages of JFET over BJT.
2. Give the expression for Intrinsic Standoff Ratio (η).
3. Define DC Load Line.
4. Define stability factor (s).
5. Classify amplifiers based on frequency.
6. Draw the block diagram of voltage series negative feedback amplifier.
7. List any three applications of power amplifier.
- * 8. Draw the circuit diagram of RC phase shift oscillator.
9. List the Barkhausen Criterion conditions for an amplifier to work as an oscillator.
10. Define Sweep Voltage.

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PART—B

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the working of N-channel JFET and draw its drain characteristics. 10
12. Explain potential divider method of biasing. 10
13. Explain the operation of two stage transformer coupled amplifier with circuit diagram. 10
14. (a) Classify power amplifier circuits on the basis of frequency, period of conduction and configurations. 4
(b) Explain darlington amplifier circuit. 6
15. (a) Compare voltage amplifiers and power amplifiers. 5
(b) Explain how transistor works as a switch in CE mode. 5
16. Draw and explain the working of Hartley Oscillator with circuit diagram. 10
17. State any five reasons and remedies for instability in oscillators. 10
18. Draw and explain the working of transistorised astable multivibrator with waveforms. 10

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