



C16-EC-302

**6233**

**BOARD DIPLOMA EXAMINATION, (C-16)  
AUGUST/SEPTEMBER—2021  
DECE - 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 the factors affecting the Q point.
2. State the importance of emitter bypass capacitor  $C_e$ .
3. Classify the amplifiers based on frequency.
4. Define gain, frequency response of an amplifier.
5. List any three merits of negative feedback amplifiers.
6. List the distortions in power amplifiers.
7. State the conditions for an amplifier to work as an oscillator.
8. List any three applications of clippers.
9. Classify multivibrators.
10. List any three applications of varactor diode.

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## PART—B

10×5=50

- 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 selection of proper operating Point.
12. Draw and explain the self bias network.
13. Explain the operation of two stage RC coupled amplifier with circuit diagram.
14. Draw the block diagrams of voltage series, voltage shunt, current series and current shunt feedback amplifiers.
15. Draw and explain the working of class-B push-pull amplifier circuit.
16. Draw and explain the working of Hartley oscillator.
17. Draw and explain the working of transistorized collector coupled astable multivibrator with waveforms.
18. Explain the construction and working of an LED.

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