



C09-AEI-303

3213

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2021

DAEIE - THIRD SEMESTER EXAMINATION

ELECTRONIC CIRCUITS

Time : 3 hours ]

[ Total Marks : 80

**PART—A**

4×5=20

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

1. Define stability factor.
2. Draw the drain characteristics of UJT.
3. List the advantages of JFET over BJT.
4. Classify the amplifiers based on coupling.
5. Draw the frequency response of transformer coupled amplifier.
6. List the advantages of emitter follower circuit.
7. State the condition for an amplifier to work as an oscillator.
8. List the advantages of crystal oscillator over other types.
9. Define sweep voltage.
10. Classify multi-vibrators.

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**PART—B**

15×4=60

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

11. Explain why CE mode is widely used in amplifier circuits.
12. Explain the principle of operation of MOSFET.
13. Explain the principle of operation of two-stage transformer coupled amplifier with circuit diagram.
14. (a) Explain the principle of operation of differential amplifier.  
(b) List the applications of power amplifier.
15. Explain the principle of push-pull power amplifier.
16. Explain the working of Wien bridge oscillator circuit.
17. (a) State the reasons for instability in oscillator circuit.  
(b) Distinguish between voltage and current time base generator.
18. Draw and explain the working of Miller's sweep circuit using op amp.

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