6241

BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 2019
DIPLOMA IN ELECTRICAL AND ELECTRONICS ENGINEERING
ELECTRONICS ENGINEERING - I
THIRD SEMESTER EXAMINATION

Time: 3 Hours **Total Marks: 80**

PART - A (3m x 10 = 30m)

Note 1:Answer all questions and each question carries 3 marks

2:Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. Define α and β of a transistor
2. Draw the V-I characteristics of zener diode
3. Compare HWR and FWR
4. Draw the circuit diagram of centre tapped full wave rectifier
5. Classify the FETs
6. List any six applications of LCD
7. State various methods used for transistor biasing
8. Define Frequency response and Band width of an amplifier
9. Draw the circuit diagram of a single tuned amplifier
10. Distinguish between degenerative and regenerative feedback

PART - B (10m x 5 = 50m)

Note 1:Answer any five questions and each question carries 10 marks

2:The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Draw and explain the input and output characteristics of NPN transistor in CE configuration
12. (a) What are the advantages and disadvantages of bridge rectifier over center tapped full wave rectifier

    (b) State the need for a filter in power supplies and List different types of filters
13. Explain the construction and working of solar cell with neat diagram
14. Draw the transfer and drain characteristics of JFET and explain

15. **Explain collector to base biasing method with diagram**

16. a) Draw the Transformer coupled CE amplifier and explain the function of each component.

    b) Draw the frequency response of the transformed coupled amplifier.

17A. **Explain how transistor works as an amplifier**

B. **Explain different types of coupling methods in transistor amplifiers**

18. **a) Explain the effect of feedback on gain and bandwidth in amplifiers**

    b) Draw the block diagrams of voltage series and current shunt feedback amplifier

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