# 6233
## BOARD DIPLOMA EXAMINATION
## JUNE - 2019
## DIPLOMA IN ELECTRONICS AND COMMUNICATION ENGINEERING
## ELECTRONIC CIRCUITS
## 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 the stability factors and give their equations
2. State the significance of operating point or Q point of a transistor
3. Draw the block diagram of the negative feedback amplifier
4. Draw the circuit diagram of practical transistor CE amplifier
5. Draw the circuit diagram of the two stage transformer coupled amplifier
6. State the condition for an amplifier to work as an oscillator
7. List the types of power amplifiers based on the period of conduction
8. Draw the circuit diagrams for negative clamper and positive clamper
9. State the need of the wave shaping circuits
10. Draw the characteristics of phototransistor

## 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. Explain the concept of selection of Q point at cutoff point of the DC load line

    Explain the concept of selection of Q point at midpoint of the DC load line

12. Draw the circuit diagram of the fixed bias network
    Explain the fixed bias network using the above circuit

13. Derive the expression for the gain of negative feedback amplifier
    List the Types of negative feedback amplifiers

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14. Describe the voltage gain Power, gain frequency response and Bandwidth of an amplifier
    State the need for multistage amplifier

15. Draw the circuit diagram for class AB push pull power amplifier
    Explain the working of class AB push pull amplifier by using above circuit

16. Draw the frequency response of single tuned and double tuned amplifiers
    Draw the circuit diagram of tuned collector oscillator

17. Explain the operation of RC integrator circuit with waveforms
    Explain the operation of RC differentiator circuit with waveforms

18. Draw the circuit diagram for transistor shunt voltage regulator
    Explain the operation of transistor shunt voltage regulator

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