6233

BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 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. Draw the circuit diagram for diode bias compensation
3. Draw the circuit diagram of the two stage direct coupled amplifier.
4. Compare the negative feedback amplifiers with respect to the following parameters
   - Distortion
   - Input resistance
   - Output resistance
5. Draw the h parameter model of CE configuration of a transistor
6. List the distortion in power amplifiers
7. State the need of tuned circuit
8. Draw the circuit diagram for RC differentiator and give its output voltage equation
9. List the applications of clampers
10. List the applications of photovoltaic cells

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 need of biasing in amplifiers

    Draw the circuit diagram for fixed bias network

12. Explain the concept of selection of Q point at the following regions

    Q point at nearest to saturation region on DC load line

    Q point at the midpoint on DC load line

    Q point at nearest to cutoff region on DC load line

13. Draw the block diagram of negative feedback amplifier
    Explain the concept of feedback

14. Draw the practical transistor CE amplifier
    Explain the need for multistage amplifiers

15. List the performance measures of power amplifiers

    Explain the operation of class A power amplifier with suitable waveforms

16. Draw the circuit diagram of complementary push pull power amplifier

    Explain the working of complementary push pull power amplifier by using the above circuit

17. Draw the circuit diagram for RC differentiator

    Explain the RC differentiator circuit with waveforms

18. Explain the construction, working and characteristics of photodiode

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