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C09-EC–303

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BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2021

DECE - THIRD SEMESTER EXAMINATION

ELECTRONIC CIRCUITS - I

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. List the types of filters.

2. Define voltage regulation.

3. Draw the output wave forms of full-wave rectifier.

4. Classify the amplifiers based on coupling.

5. Define h parameters of a transistor.

6. Define bandwidth of an amplifier.

7. List the advantages of JFET over BJT.

8. List the applications of UJT.

9. Classify ICS based on level of integration.

10. Draw the symbol of operational amplifier.

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. Describe the working of half-wave rectifier.

12. Explain the operation of fixed positive voltage regulator.

13. Explain the operations of two-stage RC coupled amplifier with circuit diagram.

14. Explain potential divider method of biasing.

15. Draw and explain drain characteristics of JFET.

16. Explain the working of varacta diode.

17. Explain the differential amplifiers circuit with diagram.

18. List the specifications of ideal operation amplifier.

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