6032
BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 2019
DIPLOMA IN ELECTRONICS AND COMMUNICATIONS ENGINEERING
ELECTRONIC DEVICES & POWER SUPPLIES
FIRST YEAR 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. What is the importance of power rating and tolerance of a resistor
2. List the core materials used at different frequencies in inductors
3. What is thermistor?
4. List the applications of a relay
5. List the steps involved in screen printing for making PCBs
6. Draw energy band diagram of a pure semiconductor with its fermilevel
7. List the specifications of PN Junction diode
8. Compare CB and CC configurations of transistor.
9. List the advantages of MOSFET over JFET
10. What is the need for a swinging choke in filter circuits?

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

Note 1:Answer any five questions and each 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. a. Explain the use of ferrites in the construction of high frequency inductor

    b. List the applications of AF and RF chokes

12. a. Explain Surface mount technology

    b. List the steps involved in making double sided PCB

13. a. Describe intrinsic semiconductor and Fermi level

    b. State the conductivity equation of semiconductor for electrons and holes

14. Describe the working of PN junction diode with forward bias and reverse bias

15. Explain the construction of PNP and NPN transistor

16A. Explain diode equation

B. Draw and explain input characteristics of a transistor in a CE configuration

17. Draw and explain the transfer characteristics of enhancement type MOSFET

18. Draw the circuit of a zener regulator and explain its working

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