

6032
BOARD DIPLOMA EXAMINATION
JUNE - 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. Draw the symbols of resistor, potentiometer and thermistor
2. Classify types of resistors
3. List specification of capacitor.
4. Classify relays based on principle of operation and polarization
5. What is the need of a PCB in electronic equipment?
6. Write three differences between P-type and n-type semiconductor.
7. List the applications of PN Junctions diode and Zener diode.
8. Define β and γ of a transistor
9. List the three regions of operation of JFET
10. State the need for regulated power supply

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 terms inductance and stray inductance
 b. List the types of core materials used at different frequencies in inductors
12. a. Explain Surface mount technology
 b. List the steps involved in making double sided PCB
13. a. Explain intrinsic semiconductor with energy band diagram
 b. Explain Conduction band, Valence band and forbidden band

14. a. Explain the V-I characteristics of PN diode with a neat sketch
b. Distinguish between Zener break down and Avalanche break down
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15. Explain the construction of PNP and NPN transistor
- 16A. Describe the construction and formation of zener diode
- B. Draw and explain output characteristics of a transistor in a CB configuration
17. Explain the construction and working of enhancement type MOSFET
18. Explain the construction and working of centre tap full wave rectifier with circuit diagram and input output waveforms

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