

ID: 180931/170931/120931/030931/117531

Branch: Electrical, Power Station Engg., Elect. & Eltx. Engg., Fire Tech & Safety

Time Allowed : 3 Hrs.

MM:100

Note: Multiple Choice questions. All questions are compulsory.

10x1=10

- ## Section-B

Note: Objective type questions. All questions are compulsory.

10x1=10

- ## Section –C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen questions. 12x5=60

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|------|---|-------------------------|------------------------------|--------|
| Q.21 | Write short notes on: | a) Conducting Materials | b) Semi-Conducting Materials | |
| | | c) Insulating Materials | | (CO-1) |
| Q.22 | Draw and explain energy band for Insulating materials. | | | (CO-1) |
| Q.23 | Explain Superconductivity. | | | (CO-2) |
| Q.24 | What are different factors affecting resistivity of conductors? | | | (CO-2) |
| Q.25 | State and explain characteristics of good insulating material. | | | (CO-4) |
| Q.26 | What is an extrinsic semiconductor? | | | (CO-3) |
| Q.27 | Explain electrical properties of Insulating materials. | | | (CO-4) |

- Q.28 State the properties and applications of Bakelite. (CO-5)
Q.29 Differentiate between the thermosetting and thermoplastic materials. (CO-5)
Q.30 Classify the ferromagnetic material in detail. (CO-6)
Q.31 Differentiate between soft magnetic and hard magnetic materials. (CO-6)
Q.32 What is Fuse? State the important properties of a fuse wire. (CO-7)
Q.33 What is a thermocouple and its use? (CO-7)
Q.34 Write various engineering materials necessary for fabrication of DC Motor. (CO-8)
Q.35 Give a brief description of materials used in Electrical machines? (CO-8)

Section-D

Note: Long answer questions. Attempt any two questions out of three questions.

2x10=20

- Q.36 Discuss the important properties and applications of Aluminum. (CO-2)
Q.37 What are insulating materials? Explain different thermal properties of insulating materials. (CO-5)
Q.38 Explain various engineering materials necessary for fabrication of Transformer. (CO-8)