



C16-EE-105

**5036**

**BOARD DIPLOMA SUPPLEMENTARY (INSTANT)  
EXAMINATION, (C-16)**

JUNE - 2019

**DEEE - FIRST YEAR EXAMINATION  
ELECTRICAL ENGINEERING MATERIALS**

Time : 3 Hours]

[Total Marks : 80

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**PART - A**

**2×15=30**

- Instructions :**
- (1) Answer any 15 questions.
  - (2) Each question carries 2 marks.
  - (3) Answer should be brief and straight to the point and shall not exceed five simple sentences.

- 1 Define Annealing.
- 2 State any two applications of Nichrome.
- 3 Distinguish between copper and Aluminum in two aspects.
- 4 State any two applications of Carbon.
- 5 Define intrinsic semiconducting material.
- 6 Define Extrinsic semiconducting material.
- 7 List the applications of Insulating materials.
- 8 State the factors affecting Insulating materials.
- 9 Define Polarization.
- 10 State Relative Permittivity of (a) Bakelite (b) Mica.

5036 ]

1

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- 11 Write about Curie point.
- 12 Define Magnetostriction.
- 13 Define Ampere-Hour Efficiency.
- 14 Define Fuse.
- 15 State the Importance of Nano Materials.
- 16 Write about the need of Protective materials.
- 17 What is soldering ?
- 18 List any two applications of Maintenance Free Batteries.
- 19 What is Trickle charging ?
- 20 State the factors affecting Capacity of Battery.

**PART - B**

**10×5=50**

**Instructions :**

- (1) Answer any **FIVE** questions.
- (2) Each question carries **TEN** marks.
- (3) Answer should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 21 (a) Write about ACSR conductor and its properties. **5**  
(b) Write about Tungsten material and also state its applications. **5**
- 22 (a) State the main requirements of Low Resistive Materials. **5**  
(b) List the colour codes of resistors as per BIS. **5**
- 23 (a) Distinguish between P type and N type semi-conductors. **6**  
(b) Write about formation of N type semiconductor. **4**

- 24 (a) Classify Insulating materials on the basis of Temperature. 6  
(b) State the effects of filler and stabilizer on P.V.C. 4
- 25 (a) Explain about Dielectric loss. 5  
(b) What is Galvanising and write the process of Galvanising. 5
- 26 (a) Write about Hysteresis Loop. 6  
(b) What is Eddy current loss and how it can be reduced. 4
- 27 Explain the Charging and Discharging process of Lead Acid Battery with equations. 5+5
- 28 (a) Explain about charging of Battery by constant voltage method. 5  
(b) Compare Lead acid cell with Nickel iron cell in five aspects. 5
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