

QUESTION BANK
ON
ELECTRICAL ENGINEERING MATERIAL



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ELECTRICAL ENGINEERING MATERIAL

BRANCH –ELECTRICAL & ELECTRONIC ENGINEERING

SEMESTER -3RD

SEASSION - Winter 2022-23

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CONDUCTING MATERIAL

1 Answer the following question ? (2 marks for each)

A Explain why conducting material like Copper and Alluminium are not used for making the element for electrical?

B What is Conducting Material?

C Why we study Electrical Engineering Material?

D Define Superconducting?

E Mention the specific uses of paper relating to insulating material?

F What is Resistivity?

G Which factor effect on Resistivity ?

H Define the uses of Conducting Material?

I What is Bundle Conductor and where it is used?

J What is Ductility?

K Copper is a which type of material?

L What is the resistivity of annealed copper?

M What is standard conductors?

N Define the uses of tungsten?

2 Answer the following question ? (5 marks for each)

- A What is Resistivity ? Describe the factor affecting on Resistivity?**
- B Describe Superconductivity?**
- C Explain the properties of Copper?**
- D Explain properties of Low Resistivity Material?**

3 Answer the following question ? (10 marks for each)

- A Explain High Resistivity Material and their application ?**
- B Explain Low Resistivity Material and their application ?**
- C Explain about the Standard Conductor with neat and sketch figure?**

SEMICONDUCTING MATERIALS

1 Answer the following question . (2 marks each)

- A What is Semiconductor ?**
- B What is Semiconducting Material?**
- C What is Intrinsic Semiconductor?**
- D Define Extrinsic Semiconductor?**
- E State N –Type Semiconductor ?**
- F State P-Type Semiconductor?**

G In N –type semiconductor the minority charge carrier is —— and majority charge carrier is —— ?

H Which Material we can say Semiconducting Material?

I Name The Semiconducting material?

J Application Of Thermister?

K What Is Photovoltaic Cells?

L What Is Photoconductive Cells?

M What is Varisters?

N What Is Transistors?

O Which place Photo Voltaic cells are used?

2 Answer the following question . (5 marks each)

A What is Semiconductor and Explain intrinsic and extrinsic semiconductor?

B Explain N-type semiconductor

C Explain the working with neat and sketch figure of Hall effect of generator ?

D State And Explain about Varisters?

3 Answer the following question . (10 marks each)

A Explain about semiconductor with N-type and P-type semiconductor?

B Describe the working principle of Solar Power with neat and sketch figure?

C Explain about the Hall effect generator with proper diagram?

INSULATING MATERIALS

1 Answer the following question . (2 marks each)

- A .What is insulating Material ?**
- B .Application of insulating Liquids ?**
- C .Application of Asbestos ?**
- D .Wood is which type of Material ?**
- E .Define Glass ?**
- F .Uses of insulating Material ?**
- G .State the general properties of Insulating Material ?**
- H .Which place mica are Used ?**
- I .Rubber is which type of Material ?**
- J .What is the main feature of Ceramics ?**
- K .What Is Pvc ?**
- L . Define Bakelite ?**
- M .Define uses of insulating Gases ?**
- N .Uses of Nitrgen And Hydrogen Gas ?**
- O . How many types Of Properties Of Insulating Material ?**
- P .What Is the Electrical Properties Of Insulating Material ?**
- Q .What Is the Thermal Properties Of Insulating Material ?**
- R .What Is the Ageing Properties Of Insulating Material ?**

2 Answer the following questions .

(5 marks each)

- A .Describe the mechanical properties of insulating materials ?**
- B .Describe the the PVC ?**
- C .Describe the dielectric constant ?**
- D . Describe the fibrous materials and impregated materials ?**
- E . Explain about Asbestos and Asbestos products ?**
- F . State the insulating Gases ?**

3 Answer the following questions .

(10 marks each)

- A . Classification of insulating materials with it's application ?**
- B . Describe the commonly used insulating glasses ?**
- C .Explain about the electrical properties of insulating materials ?**
- D . Describe the insulating liquids, fibrous material and glass with its uses ?**

DIELECTRIC MATERIALS

1 Answer the following question ?

(2 marks for each)

- A What is dielectric material ?**
- B Define polarization ?**
- C What is dielectric loss ?**
- D Define properties of di electric material ?**

E Application of dielectric material ?

F Uses of electrolytic capacitor ?

G What is liquid di electric ?

H Define gaseous dielectric ?

I What is permittivity ?

J State solid di electric ?

2 Answer the following question . (5marks for each)

A Explain the polarization of a dielectric material with proper diagram ?

B Explain about di electric loss ?

C State the gaseous dielectric ?

D Define properties of di electric material ?

E Describe the application of dielectric material ?

3 Answer the following question . (10 marks for each)

A Explain the working of polarization ?

B Describe the gaseous dielectric with proper diagram ?

C State And Explain the electrolytic capacitor ?

MAGNETIC MATERIALS

1 Answer the following question ? (2 marks for each)

- A . What is magnet?**
- B. Define magnetic material?**
- C . How many types of magnetic material are there?**
- D . What is the name of magnetic material ?**
- E . What is diamagnetic material?**
- F. State paramagnetic materials?**
- G. What is ferro magnetic materials?**
- H. Define soft magnetic materials?**
- i . Define soft magnetic materials?**
- J. Why we used magnetic materials?**
- K. Define hysteresis loop?**
- L . What is eddy current?**
- M . State curie temperature or curie point ?**
- N .Define magneto striction ?**

2 Answer the following question . (5marks for each)

- A . Explain diamagnetic material/**
- B . Describe the ferro magnetic material?**

C. State and explain about paramagnetic material?

D . Describe the B.H curve with neat and clean diagram ?

3 Answer the following question . (10 marks for each)

A . Classification of magnetic material with its figure?

B. Explain about dia para, ferro magnetic material with its uses and diagram?

C . Describe the hysteresis loop and its proper diagram?

D . Explain the eddy current in magnetic material?

MATERIALS FOR SPECIAL PURPOSES

1 Answer the following question ? (2 marks for each)

A. Lead is a which type of material ?

B. Uses of steel tapes ?

C. Which place wires and trips are used ?

D. what is thermocouple materials ?

E. Define Bi – metals ?

F. What is the made of soldering material ?

G. How many types of of soldering ?

H. Use of Fuse ?

I. What is HRC fuse ?

J. What is Silica Gel ?

K. Why lead was used as fuse material ?

2 Answer the following question ? (5 marks for each)

- A. Explain about the thermocouple with proper diagram ?**
- B. Describe the soldering materials ?**
- C. State and explain about the Bi- metals ?**
- D. Explain fuse and fuse materials ?**
- E. Define Silica Gel ?**

3 Answer the following question ? (10 marks for each)

- A. Describe the working & application of Dehydrating material ?**
- B. Explain the fuse and which material it can be constructed with proper diagram ?**
- C. State & explain about HRC fuse with proper diagram ?**
- D. Define Bi- metals with its diagram?**
- E. State & explain the thermocouple & its diagram ?**