

- Q.26 Define MOSFET.
- Q.27 Define the term “ Mechanical properties of materials’. Name the important properties.
- Q.28 Differentiate dry and wet corrosion.
- Q.29 What is yield length ? Explain its significance.
- Q.30 Differentiate between ductility and malleability. Give related examples.
- Q.31 Discuss the applications of ceramic materials.
- Q.32 List the various types of stainless steel and mention any two practical uses of each type.
- Q.33 Explain the importance of strength testing techniques. Explain any one of these in detail.
- Q.34 Write a note on electrical properties of engineering materials.
- Q.35 Explain dielectric strength.

#### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Discuss the difference between cast iron, wrought iron and steel. Mention their practical applications.
- Q.37 Explain the classification of non-metallic materials & describe the major applications of nylon-6 & polypropylene.
- Q.38 What is creep? Is it desirable? How is it determined?

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#### 3rd Sem / Chemical Engg.

#### Subject:- Introduction to Engg. Material / Engg. materials

Time : 3Hrs.

M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The ability of materials to develop a characteristic behavior under repeated loading is known as \_\_\_\_\_.  
a) Toughness                      b) Hardness  
c) Resistance                      d) Fatigue
- Q.2 Specific heat of materials is expressed in term of \_\_\_\_\_.  
a) W/mk                              b) J/K  
c) J/KGK                              d) M<sup>3</sup>kg
- Q.3 How the conductivity of material is defined?  
a) R.A/I                              b) E/J  
c) I/R.A                              d) B/H
- Q.4 The melting point of iron (Fe) is \_\_\_\_\_.  
a) 1538 °C                              b) 419 °C  
c) 1084 °C                              d) 660 °C

Q.5 \_\_\_\_\_ is the nature of coefficient of resistance of an insulator .

- a) Positive                      b) Infinite
- c) Negative                    d) Zero

Q.6 What is the dielectric strength of mica?

- a) 200 MV / m                  b) 118 MV / m
- c) 1012 MV / m                d) 3 MV / m

Q.7 The ability of a material to be formed by hammering or rolling is known as \_\_\_\_\_.

- a) Malleability                b) Ductility
- c) Harness                    d) Brittleness

Q.8 Which of these primary elements is used for making stainless steel alloy?

- a) Indium                      b) Vanadium
- c) Chromium                  d) Zirconium

Q.9 What is color of zinc?

- a) Yellow                      b) Red
- c) Green                      d) Bluish grey

Q.10 Choose the melting point of copper .

- a) 419° C                      b) 600° C
- c) 1085° C                    d) 2562° C

## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

Q.11 What is non - ferrous metal?

Q.12 Define stress.

Q.13 Write any one role rubber.

Q.14 Name any one brittle object.

Q.15 Name any one ceramic material.

Q.16 Define glass.

Q.17 Mention any one purpose of quenching.

Q.18 What is wrought iron?

Q.19 Is it true that mild steel is more strong in tension than is compression ? Yes or No?

Q.20 Why are acids generally stored in glass containers?

## SECTION-C

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

Q.21 Write a note on 'LISE of rubber'.

Q.22 Mention any five applications of steel in industry with example.

Q.23 Explain the mechanism of corrosion of iron sheet in the presence of air and moisture.

Q.24 What is the significance of study of engineering material in the field of ceramic engineering?

Q.25 Differentiate between tensile and compressive strain.