

- Q.30 Explain any one type of glass with their uses.
 - Q.31 Write a short note on important copper alloys.
 - Q.32 Write any five uses of Polyurethanes.
 - Q.33 Write a short note on ceramic materials, explain with examples.
 - Q.34 Write properties and uses of soda-lime Glass.
 - Q.35 Explain in brief properties and uses of nylon_{6,6}.

SECTION-D

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

- Q.36 Explain properties and uses of various alloys of aluminum in details.

Q.37 With neat and clean explain phase diagram of iron-carbon.

Q.38 Write the formula with their notation for glass and explain transition and crystalline melting temperature of glass.

No. of Printed Pages : 4
Roll No.

180532/ 120532/
030523/531

**3rd Sem / Chemical Engg.
Subject:- Introduction to Engineering materials./
Engg. materials**

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Carbon content in Cast iron varies:

 - a) Less than 2.1%
 - b) More than 6.67%
 - c) Between 2.1 to 6.67%
 - d) None of these

Q.2 Melting point of pure iron in degree centigrade is

 - a) 2000
 - b) 1900
 - c) 1539
 - d) 1469

Q.3 Which of material is best for making electrical wires in electrical industries.

 - a) Iron
 - b) Copper
 - c) Rubber
 - d) PVC

Q.4 Borosilicate glass is known for _____

 - a) Durability
 - b) Thermal shock resistance
 - c) Both A & B
 - d) Softness.

- Q.5 Which of following is not a polymeric materials
 a) Clay b) HDPE
 c) PVC d) Rubber
- Q.6 Which of the following is a metal
 a) Iron b) Lead
 c) Mercury d) All of these
- Q.7 Which of following material is used due to it's low weight
 a) Steel b) Pig iron
 c) Cast iron d) Aluminum
- Q.8 In stainless steel composition of chromium ranges:
 a) 1 to 10% b) 16 to 25%
 c) 0.03 to 0.25% d) 1 to 2%
- Q.9 Alloy means mixture of
 a) Metal and metal b) metal and Non metal
 c) Both A to B d) None of the above
- Q.10 Ductility is considered a _____ property.
 a) Tensile b) Compressive
 c) Electrical d) Thermal

SECTION-B

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

- Q.11 Define metalloids.
 Q.12 Define non-ferrous metals

(2)

180532/ 120532/
 030523/531

- Q.13 Name any one Engineering materials.
 Q.14 Write any one advantage of non-ferrous metals
 Q.15 Write any one use of lead.
 Q.16 Define tensile strength.
 Q.17 Write full form of PVC
 Q.18 Write one application of wrought iron.
 Q.19 Define dielectric strength.
 Q.20 Write one use of Polypropylene.

SECTION-C

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

- Q.21 Explain in brief Need of Engineering materials in chemical industry.
 Q.22 Differentiate between metals and non- metals.
 Q.23 Write short note on thermal conductivity in brief.
 Q.24 Write uses of various engineering materials used in chemical industries.
 Q.25 Write important properties of white cast iron
 Q.26 Write a short note on steel and its types.
 Q.27 Differentiate between ferrous and non-ferrous metals.
 Q.28 Explain any five properties of aluminum.
 Q.29 Write different uses of nickel as an Engineering materials.

(3)

180532/ 120532/
 030523/531