

- Q.27 Define Plastic coatings & various methods used for coating
- Q.28 Write a short note on heat insulating materials with examples
- Q.29 Define Ceramics ? Also list their properties and applications
- Q.30 Name few properties and uses of Glasswool
- Q.31 Write a short note on Nuclear materials
- Q.32 Explain in brief Refractory materials
- Q.33 Name few mechanical and thermal properties of various materials
- Q.34 Explain in brief types of crystal structures
- Q.35 Explain in brief properties and uses of Copper

SECTION-D

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

- Q.36 Explain Iron carbon diagram with neat sketch
- Q.37 Explain few methods of manufacturing of Steels with diagram
- Q.38 Write a short note on any two:
- Heat treatment furnances
 - Thermoplastic and thermosetting
 - Non ferrous metals

No. of Printed Pages : 4
Roll No.

MSIL-120342/030342

4th Sem / Mech. Engg. (MSIL) Subject:- Material and Metallurgy

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Corrosion is
- Decay of metal due to reaction with environment
 - both (a) and ©
 - accumulation of metal
 - None of above
- Q.2 Solder is an alloy of
- Tin and lead
 - aluminium and copper
 - Copper and Zinc
 - None of above
- Q.3 Aluminium, copper and gold have _____type of structure
- S.C
 - F.C.C
 - B.C.C
 - All of the above
- Q.4 Fatigue results in
- elongation
 - brittle fracture
 - ductile fracture
 - crack formation

- Q.5 Pig iron is produced from furnace known as
- Blast furnace
 - Puddling furnace
 - open hearth furnace
 - None of the above
- Q.6 The purest form of iron is
- cast iron
 - wrought iron
 - steel
 - None of the above
- Q.7 Bauxite is the ore of
- Copper
 - aluminium
 - Lead
 - none of these
- Q.8 Nitrogen is introduced in steel by passing ammonia gas through muffle furnace is the process known as
- Carburizing
 - Cyaniding
 - Nitriding
 - None of these
- Q.9 Trade name of polytetrafluoroethylene (PTFE) is
- Beetle
 - Bakelite
 - teflon
 - None of these
- Q.10 Concrete is an example of
- particle reinforced composite
 - Structured composite
 - fibre reinforced composite
 - All of the above

SECTION-B

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

- Q.11 Name few example of biomaterials.
- Q.12 Name any one cutting tool material.
- Q.13 Define FCC crystal structure
- Q.14 What is Creep
- Q.15 Name any two non ferrous metals
- Q.16 Name any one iron ore
- Q.17 Give an example of bearing metals
- Q.18 Name few allotropic forms of iron
- Q.19 Define thermosetting plastic
- Q.20 Name few types of steel

SECTION-C

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

- Q.21 Classify engineering materials in brief.
- Q.22 Define fracture and its types
- Q.23 Explain flow diagram for production of iron and steel
- Q.24 Explain types of Cast iron with its usage.
- Q.25 What is the purpose of Heat treatment.
- Q.26 Define Nitriding and cyaniding.