

S. B. Roll. No.....

ENGINEERING MATERIALS
3rd Exam/Mech./5530/Nov'24
(For 2023 Batch)

Duration: 3Hrs.

M.Marks:50

SECTION-A

Q1. Fill in the blanks any nine of the following.

9x1=9

- a. The ability of a material to resist fracture due to high impact loads is called _____
- b. Blast furnace is used to produce _____
- c. 18/8 stainless steel consist of _____
- d. A Steel with Carbon _____ is known as hypoeutectoid steel.
- e. Brass is an alloy of _____
- f. Polyvinylchloride (PVC) is a _____
- g. In a unit cell of a body centered cubic lattice there are _____ atoms.
- h. The Aluminium alloy mainly used for anodized utensils manufacturing is _____
- i. Name one Refractory material _____
- j. Which kind of corrosion is difficult to monitor and is very dangerous for metals _____
- k. Corrosion is occur due to mixture of iron and _____
- l. Full form of HSS _____

SECTION-B

Q2. Attempt any five questions.

5x4=20

- i. Define a) Creep b) Fatigue
- ii. Draw the following crystal structures. a) FCC b) HCP
- iii. Write short note on Grey Cast Iron.
- iv. Write any two differences between Annealing & Normal zing.
- v. Define ceramics and write its two applications.
- vi. Explain metal coating and lists its types.
- vii. Write any four non-ferrous materials

SECTION-C

Q3. Attempt any three questions.

3x7=21

- a. Define any five Mechanical properties of materials
- b. Derive the exp. for Atomic Packing factor for FCC.
- c. Explain different types of Cast Iron in detail.
- d. Explain the difference between Thermoplastic & Thermo setting materials.
- e. Define Corrosion & explain various factors affecting corrosion.