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

ENGINEERING MATERIALS
3rd Exam/Mech./3053/Dec'22
(For 2018 Batch Onwards)

Duration: 3Hrs. **M.Marks:75**

SECTION-A

Q1. Fill in the blanks. **15x1=15**

a. Metals are _____substances.
b. Alloys have _____strength than pure metals.
c. Slip represents _____deformation of the crystal.
d. Steel is an alloy of _____and _____
e. P.V.C. stands for_____
f. Mild steel has _____structure.
g. Lack of ductility is called_____
h. Larger the size of grains _____will be the harden ability.
i. High carbon steel have _____structure.
j. Brass is an alloy of _____ and _____
k. The plastics which get soft on the application of heat are called _____
l. Nickel plating is done by the process of _____
m. Galvanization is the process of coating iron with _____
n. Grains have different _____
o. Resistance to elastic deformation is called_____

SECTION-B

Q2. Attempt any six questions. **6x5=30**

i. Write at least five objectives of Heat Treatment?
ii. Discuss different types of cast iron and their usage?
iii. Explain how elastic deformation occurs?
iv. Explain in detail various types of crystal structures?
v. How are engineering materials classified?
vi. Differentiate Annealing and Normalizing?
vii. What are ceramics? How they are classified?

SECTION-C

Q3. Attempt any three questions. **3x10=30**

a. Discuss the construction and working of cupola furnace?
b. Define the space lattice? Describe how atoms are arranged in cubic structure?
c. Draw and explain Iron carbide Equilibrium diagram?
d. Explain the term corrosion and describe the mechanism of corrosion?
e. Discuss the Mechanical properties of Metals?