Roll No……..….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

B.Sc. (Hons.) Chemistry (Semester – 6th)
INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE
Subject Code: BCHMD1-613
Paper ID: [19131641]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a) Write composition of soda lime glass.
b) What is role of gypsum in cement?
c) Which chemicals are used as fire retardant?
d) Define anodization in coating
e) Write the reactions involved in lead acid battery
f) Differentiate between cast iron and steel
g) Write a short note on 'Fuel cells'.
h) Which material is used as rocket propellent and why?
i) Why are fuel cells important?
j) What are azo dyes?

Section – B **(5 marks each)**

Q2. Discuss superconducting oxides, carbon nanotubes and fullerences

Q3. Discuss classification of surface coatings with examples.

Q4. Differentiate primary and secondary batteries

Q5. Write a note on following

a) Phase transfer catalysts
b) Heterogeneous catalysis

Q6. Discuss manufacture of urea and superphosphate

Section – C **(10 marks each)**

Q7. Discuss manufacturing and setting of cement

Q8. A) Elaborate the classification of surface coatings
B) Write a note on solar cells

Q9. A) Explain the importance of alloy formation with different examples of alloys
B) Write composition and properties of borosilicate and safety glasses