

**This question paper contains 2 printed pages.**

**Your Roll No. ....**

**Sl. No. of Ques. Paper : 1912-A**

**GC-3**

**Unique Paper Code : 42174303**

**Name of Paper : Industrial Chemistry : Inorganic Materials (ICPT-303)**

**Name of Course : B.Sc. (Prog.) Applied Physical Sc. / Industrial Chemistry (CBCS)**

**Semester : III**

**Duration : : 3 hours**

**Maximum Marks : 75**

*(Write your Roll No. on the top immediately on receipt of this question paper.)*

*Attempt six questions in all. Question No. 1 is compulsory.*

- 1 (a) What is the purpose of making alloys? Explain the difference between Ferrous and Non ferrous alloys.  
(b) What are mixed fertilizers? Discuss their advantages and disadvantages.  
(c) What are Zeolites, explain with suitable examples. Why natural Zeolites cannot be used for commercial applications?  
(d) Why Fuel cells are more efficient as compared to conventional gasoline engines for obtaining power by fuel combustion?  
(e) China clay pots are stronger as compared to earthen pots , Why? (5 x 3)
- 2 (a) Explain wet process for the manufacture of cement.  
(b) Why is Glazing important for ceramic articles? Explain, how is it carried out? (2 x 6)
- 3 (a) How are Varnishes classified?  
(b) Differentiate between Portland and Puzzolana cement.  
(c) What are the requisites of a good paint? (3 x 4)
- 4 (a) Give detailed account of Linz-Donawitz method of steel manufacturing.  
(b) Discuss briefly Rocket and Cryogenic propellants .  
(c) Explain Ni-Cd accumulator. (3 x 4)
- 5 (a) Define Catalyst. Differentiate between Homogeneous and Non homogenous catalysts.  
(b) What are the characteristics of a good catalyst?  
(c) Explain the working of a fuel cell with appropriate reactions (3 x 4)
- 6 (a) What do you understand by sensitivity of an explosive? How can it be determined?

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- (b) What are the drawbacks of Ammonium nitrate fertilizers? What safety measures are to be followed during its packing?
- (c) Differentiate between an inhibitor and a poison. (3 x 4)
- 7 (a) ) How is Lead azide manufactured?
- (b) Define the term Alloys , how are they classified?
- (c) How are Foam glass and Fibre glass manufactured? (3 x 4)
- 8 Write short note on any three of the following.
- (a) RDX
- (b) Urea
- (c) Safety Glass
- (d) Solar Cells (3 x 4)