

V. P. & R. P. T. P. SCIENCE COLLEGE, V. V. NAGAR.

INTERNAL TEST: MARCH-2017

T. Y. B. Sc. Semester-VI

Sub.:- Inorganic Chemistry (US06CCHE04)

Date: 09/03/2017

Total Marks:25

Day: Thursday

Time: 11.00 A.M. To 12.30 P.M.

Note: (i) All questions are to be attempted.

(ii) Figures to the right of each question indicate full marks.

**Q : 1 Give the most correct choice to the following multiple choice questions.** [3]

(i) According to protective layer theory the rate of film growth is.....

- (a) inversely proportional to thickness of the film.
- (b) directly proportional to thickness of the film.
- (c) directly proportional to thickness of the metal.
- (d) inversely proportional to thickness of the metal.

(ii) \_\_\_\_\_ both with face-centered cubic lattice form a single homogeneous solid solution over all ranges of composition.

- (a) Ag & Cu
- (b) Ag & Pb
- (c) Cu & Zn
- (d) Pb & Sn

(iii) Nitric acid oxidizes the non metal to their .....

- (a) acids
- (b) base
- (c) highest oxy acids
- (d) lowest oxy acids



**Q : 2 Answers the following short questions(any two).** [4]

(i) Define:- (ii) Electro-chemical passivity (ii) Mechanical passivity

(ii) List any two low melting alloys and give their uses.

(iii) Explain sulphuric acid neutralizes alkalis to give two series of salts.

**Q : 3[A]Corrosion starts from metal joints. Explain.** [3]

[B]Explain the following terms:

- (i) Hot dipping
  - (ii) Corrosion inhibitors
- [3]

OR

**Q : 3[A]What is meant by concentration cell corrosion? Explain briefly.** [3]

[B]Describe the factors determining rate of corrosion for metal

sheltered from the rain. [3]

**Q : 4[A]Discuss the general relationship (rules) established by careful**

study of inter-metallic compounds. [3]

[B] Describe the effect of alloying. [3]

OR

Q : 4 [A] Hardness of alloys affected by grain size. Explain fully. [3]

[B] Discuss different types of steel alloys with respect to their industrial applications. [3]

Q : 5 [A] Describe the manufacture of caustic-soda by using Castner-Kellner cell. [3]

[B] Explain, how the chamber acid is concentrated? [3]

OR

Q : 5 [A] List different methods used for manufacture of nitric acid and discuss Oswald's process in detail. [3]

[B] Discuss the chemical properties of sulphuric acid under headings:-

(i) Affinity for the water

(ii) Action on metals

(iii) Oxidizing actions

[3]

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