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

INTERNAL TEST: MARCH-2018

T. Y. B. Sc. Semester-VI

Sub.:- Inorganic Chemistry, Course Code :-US06CCHE04

Date: 15/03/2018 **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 : 1Give the most correct choice to the following multiple choice questions. [3]

(i) Although, _____ is placed near top of the electro-motive force series, yet it resists atmospheric corrosion effectively.

(a) zinc (b) aluminium (c) sodium (d) copper

(ii) _____ is not effect of alloying.

(a) Decreasing melting point (b) Increasing hardness of metal

(c) Decreasing castability (d) Modifying colour

(iii)Mark the compound which gives carbon with concentrated H_2SO_4.

(a) Starch (b) Oxalic acid (c) Ethanol (d) Formic acid

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

(i) Explain immersed corrosion by "acid-theory."

(ii) List different types of steel and explain any one of them.

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

Q : 3[A]Explain the term 'passivity' and discuss the protective layer theory. [3]

[B]Discuss the prevention of corrosion by producing insoluble oxide coating and by hot dipping. [3]

OR

Q : 3[A]Describe the factors determining rate of corrosion reaction for metal sheltered from rain in gaseous environments. [3]

[B]Corrosion starts from metal joints. Explain. [3]

Q : 4[A]Give the classification of alloys. Discuss non-ferrous alloys with suitable examples. [3]

[B]Write note on: Inter-metallic compounds. [3]

OR

Q : 4[A]Discuss in detail the fusion method for thepreparation alloys. [3]

[B]Explain substitutional alloys and discuss the phase diagram of brass alloy. [3]

Q : 5[A]Explain nitric acid as an important oxidizing reagent. [3]

[B]Describe the manufacture of caustic-soda by using Nelson cell. [3]

OR

Q : 5[A]Describe the contact process for the manufacture of sulphuric acid. [3]

[B]Discuss the manufacture of nitric acid by Ostwald's process in detail. [3]

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