

SEAT No. _____

No. of Printed Pages : 2

Sardar Patel University

F. B. Sc. (Semester – II) Examination

Industrial Chemistry Vocational

26-03-2018, MONDAY TIME: 02:00 TO 04:00PM

COURSE NO: US02CICV01 (Metallurgy & Material Science)

Notes: Figures to the right indicate full marks.

Total marks: 70

Q.1 Answer the following Multiple Choice Questions. (All are compulsory) (10)

1. Roasting is essentially on which process?
 - A. Reduction
 - B. Volatization
 - C. Oxidation
 - D. All of these
2. Which of the following is used in smelting to remove impurity in metals?
 - A. Refining
 - B. Leaching
 - C. Volatization
 - D. Both (a) & (c)
3. Metals occur in nature in _____ state.
 - A. Free
 - B. Chemical combined
 - C. Both (a) & (b)
 - D. None of these
4. Refining of crude gold is done by:
 - A. Parting with Zn dust
 - B. Parting with H_2SO_4 dust
 - C. Both (a) & (b)
 - D. None of these
5. Bronzes are mainly alloy of:
 - A. Copper and Zinc
 - B. Copper and Iron
 - C. Copper and Tin
 - D. Copper and Nickel
6. Amalgamation process of silver extraction is known as
 - A. Texas process
 - B. Chinese process
 - C. Maxican process
 - D. All of these
7. Which of following is not organic material?
 - A. Rubber
 - B. Plastic
 - C. Brick
 - D. Wood
8. Which of following is ceramic material?
 - A. Paint
 - B. Plastic
 - C. Insulator
 - D. Wood
9. Which of the following is neutral refractory:
 - A. Graphite
 - B. Dolomite
 - C. Silica
 - D. Magnesite
10. The main constituent of glass is:
 - A. SiO_2
 - B. CaO
 - C. Na
 - D. Al_2O_3

(1)

(P.T.O.)

Q.2 Answer the following in short: (Any TEN) (20)

1. Define term flux and refining.
2. Define smelting and give its characteristics.
3. Enlist the qualifications of slag.
4. State important mineral ores nickel.
5. Write commercial uses of silver.
6. Explain steps of purification of Bauxite ore by serpeck's process.
7. Enlist the various forms in which cast iron are marketed.
8. Distinguish between pig iron and cast iron.
9. Write properties and uses of aluminium.
10. Enlist the raw material required for ceramics.
11. Give classification of Refractories.
12. State raw materials of Glass.

Q.3 Write a notes on following: (10)

- A. Characteristics of metals.
- B. Ore sampling and ore dressing.

OR

Q.3 Discuss the following: (10)

- A. Drying and Calcining in detail.
- B. Purposes of making of alloys.

Q.4 Discuss the following: (10)

- A. Extraction of Ag from its sulfide ore.
- B. Baeyer's process for manufacture of Aluminum.

OR

Q.4 Explain following: (10)

- A. Steps involved in extraction of Nickel metal.
- B. Purification of Bauxite ore.

Q.5 (05)

- A. What are alloy steel? Explain the need for making alloy steels. (05)
- B. Write a note on Duralumin. (05)

OR

Q.5 Discuss the classification of engineering materials. (10)

Q.6 Enlist the various raw materials of white wares and discuss its manufacture, also outline the purposes to applied glazing. (10)

OR

Q.6 Give properties of glass and discuss its types and application. (10)

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