VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING SESSION 2016 - 17 (ODD SEMESTER)

Total Pages-4

B.Tech-5th

Principle of Extractive Metallurgy

Full Marks: 70

Time: 3 hours

Answer six questions including Q. No. 1 which is compulsory

The figures in the right-hand margin indicate marks

Symbols carry usual meaning

1. Answer all questions :

 2×10

(Turn Over)

(Set-T,)

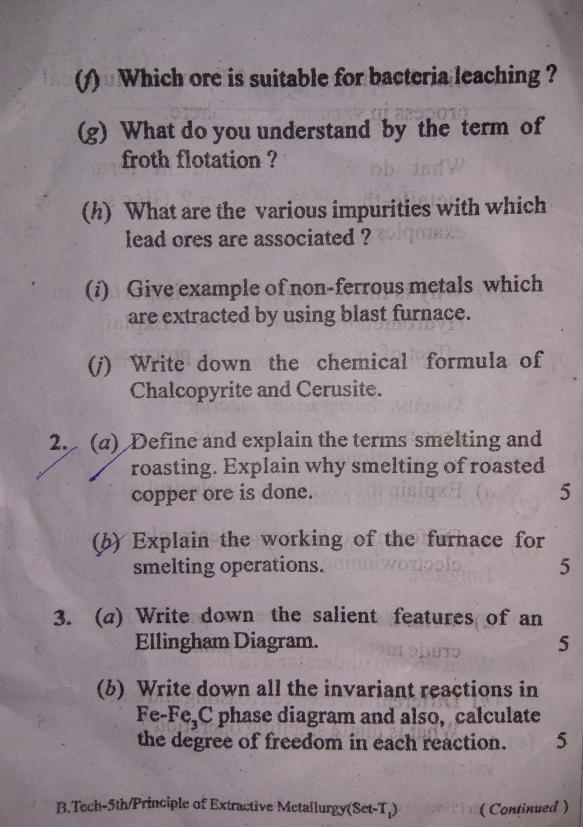
(a) Write down the chemical formula of Galena.

- (b) Write down the two important ores of Tungsten.
- (c) Differentiate between ore and mineral.
- (d) What do you understand in the term slag? Give suitable example.

»Fe.C phase diagram and a

(e) Differentiate between roasting and calcinations.

(2)



(a) List the advantages of Pyrometallurgical process in vacuum atmosphere.

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((3))

- (b) What do you understand in term of metallo-thermic reduction? Give suitable examples.
- 5. (a) Why is the leaching process important in Hydrometallurgical process? Explain the effect of oxygen in leaching process.
 - (b) Discuss the effect of bacteria in the leaching process with proper example.

6, (a) Explain the Faraday's law electrolysis.

- (b) Differentiate between electroplating and electrowinning.
- 7. (a) Write down the steps for purification of crude metal produced in bulk.
 - (b) Differentiate between roasting and smelting. What is matte smelting operation ?

B.Tech-Sth/Principle of Extractive Metallurgy(Set-T.) (Turn.Over)

В.

Write short notes on any two: 5×2
(i) Ion Exchange
(ii) Solvent Extraction
(iii) Predominance Area Diagram
(iv) Electrolysis of fused salt.

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