

I. Choose the correct answer:

1. Highly pure metal can be obtained by _____ process.
a) reduction b) distillation c) zone refining
d) liquation
2. The alloy of iron which is resistant to corrosion is _____.
a) nickel steel b) chrome steel c) Stainless steel
d) cast iron
3. The less electropositive impurities in the anode can be collected as _____ in electrolysis.
a) slag b) gangue c) anode mud d) cathode mud
4. Match list-I with list-II and choose the correct answer code.

List-I	List-II	A	B	C	D
A. Bauxite	1. CuFeS_2	a) 3	4	1	2
B. Haematite	2. PbS	b) 4	3	2	1
C. Copper Pyrite	3. $\text{Al}_2\text{O}_3 \cdot n\text{H}_2\text{O}$	c) 3	1	2	4
D. Galena	4. Fe_2O_3	d) 2	4	1	3

5. Gold can be recovered by Zinc from the leached solution is called _____.
a) concentration b) leaching c) cementation d) separation
6. Choose the incorrect statement among the following.
i) Metals having least chemical reactivity occur as native elements.
ii) Metals having high reactivity occurs in combined state.
iii) All the minerals are ores.
iv) Mineral which contains low percentage of metal is called ore.
a) (i) and (ii) b) (ii) and (iii) c) (iii) and (iv) d) (i) and (iii)

7. Choose the correct statement(s) among the following.

- i) During electrolysis, the metal in the anode loses electrons.
ii) Zone refining is based on the principle of fractional crystallisation.
iii) Reduction with carbon can be applied to the metals which do not form carbides with carbon at the reduction temperature.
a) (i) and (ii) b) (ii) and (iii) c) (i) and (iii) d) all
8. In acid leaching insoluble sulphide is converted into soluble _____ and _____.
a) Sulphide and Sulphate b) Sulphate and sulphur
c) Sulphur and oxide d) Sulphate and oxide
9. Name the method used for refining of copper metal.
a) Electrolytic refining b) Leaching c) Smelting
d) Gravity separation
10. Metals of high purity can be obtained by _____ method.
a) Smelting b) Reduction c) Zone refining d) Roasting
11. The ignition mixture used in aluminothermic process is _____.
a) magnesium + barium b) bariumperoxide + alumina
c) magnesium + Barium peroxide d) alumina + magnesium
12. The composition of copper matte is _____.
a) $\text{PbS} + \text{FeS}$ b) $\text{FeS} + \text{ZnS}$ c) $\text{Cu}_2\text{S} + \text{FeS}$ d) Cu_2S and PbS
13. Gibbs free energy change for the electrolysis process is given by the expression
a) $\Delta G^0 = nFE^0$ b) $\Delta G^0 = \Delta H^0 - T\Delta S^0$ c) $-\Delta G = -nFE^0$ d) $\Delta G^0 = -nFE^0$
14. Consider the following statements and choose the correct statement(s).
i) Ellingham diagram helps us to select a suitable reducing agent.

ii) If the metal oxide is more stable, then oxygen combines with the reducing agent.

iii) We cannot infer the relative stability of different metal oxides at a given temperature.

a) (i) only b) (i) and (iii) c) (i) and (ii) d) all

15. The purity of blister copper is _____.

a) 90% b) 98% c) 97% d) 89%

16. _____ is used as the depressing agent in froth floatation process.

a) Potassium cyanide b) Sodium ethyl xanthate
c) Sodium cyanide d) Pine oil

17. Ores having high specific gravity is separated from the gangue by _____ process.

a) froth floatation b) Gravity separation c) Smelting
d) Cyanide leaching

18. Choose the incorrect statement(s) among the following:

i) Van Arkel method is based on the thermal decomposition of metal compounds.

ii) Metals like Zirconium and titanium cannot be purified by Van Arkel method.

iii) Aluminium is the most abundant metal.

a) (i) and (ii) b) (ii) only c) (i) and (iii) d) all

19. Match list-I with list-II and choose the correct answer code.

List-I

List-II

A B C D

A. Aluminium	1. increasing the efficiency of solar cells	a) 4 3 2 1
B. Zinc	2. for making wires	b) 3 4 2 1
C. Copper	3. design of chemical reactors	c) 2 3 4 1
D. Gold	4. die-casting	d) 3 2 1 4

20. The compound which is used in making luminous paints.

a) Zinc Sulphate b) Zinc oxide c) Zinc carbonate
d) Zinc Sulphide

II. Answer any 15 in one or two sentences:

15x2=30

1. What is slag?

2. How is Ellingham diagram helpful in the metallurgy process?

3. Describe the principle involved in Mond's process of refining of nickel.

4. The reduction of metal oxide is easier if the metal formed is in liquid state. Explain.

5. Graphite is used as anode and not diamond. Assign reason.

6. Write the reactions involved in the refining of Zirconium by Van Arkel method.

7. Write the composition of copper matte.

8. What are the limitations of Ellingham diagram?

9. What is the principle behind zone refining?

10. What is Ellingham diagram?

11. Name the method by which Ti, Zr are purified.

12. What are the elements present in anode mud in the electrorefining of metals?

13. What is collectors used in froth floatation process? Name any one collector.

14. What is the role of silica in the extraction of copper?

15. Give one use of each of the following (i) nickel steel (ii) chrome Steel (iii) Stainless steel

16. What is the role of depressants in the froth floatation process?

17. What is the role of limestone in the metallurgy of iron?

11.06.19 Holiday Material - Commerce Marks: 50
 STD: XII (F-J) Time:1.15 hrs

I. Choose the correct answer: 20x1=20

1. Consumer-oriented marketing concept is the reflection of a corporate code of
 - a) Conduct b) Ethics c) both a and b d) None of the above
2. _____ is part and parcel of our day to day life.
 - a) Management b) Organisation c) Association d) None of the above
3. Rule of Thumb means decisions taken by manager as per their personal _____.
 - a) Analysis b) Judgements c) Experience d) None of the above
4. _____ are satisfied through innovation.
 - a) Producers b) Middlemen c) Consumers d) Retailers
5. MBO harmonises the goal of an individual with the _____ goal.
 - a) Global b) Organisational c) Social d) Regional
6. Management is a _____ concept.
 - a) Global b) Universal c) both a and b d) none of the above
7. Management _____ is growing in all countries.
 - a) Theory b) Philosophy c) Literature d) None of the above
8. A _____ is a dynamic and life giving element in every business.
 - a) Employer b) Worker c) Manager d) None of these
9. Scientific Management _____.
 - a) Fayol b) Taylor's c) Drucker d) Robert Owen
10. _____ implies the concentration of decision making authority at the top management.
 - a) Centralisation b) Decentralisation c) both a and b d) None of the above
11. _____ is the process of establishing harmonious relationship among the members of an organisation.
 - a) Directing b) Motivation c) Organising d) Controlling
12. MBO is popularised in the USA by _____.
 - a) Henry David b) Fayol Robert c) Reddin d) George Ordiorne

13. Management functions are called as _____.
 - a) Production process b) Organizational process c) Managerial process d) None of the above
14. Staffing function comprises the activities of _____ of competent personnel.
 - a) Actual Performance b) Selection and placement c) Increasing the speed of performance d) None of the above
15. _____ helps in the smooth functioning of an organisation.
 - a) Decision making b) Innovation c) Representation d) Communication
16. A manager has to act as _____ of a company.
 - a) an agent b) a controller c) representative d) a coordinator
17. _____ recognises the need for planning and appreciates the planning.
 - a) Manager b) Management c) Managing Director d) HRM
18. "Workers are informed about what should be done, where it is to be done, how it is to be done and when it is to be done" it is subsidiary function in _____.
 - a) Innovation b) Decision making c) Representation d) Communication
19. Organisational objectives are framed by the _____ employees of an organisation.
 - a) Top level b) bottom level c) Subordinate d) None of the above
20. KRA stands for _____.
 - a) Key Result Analysis b) Keen Result Area c) Key Result Areas d) None of the above

II. Answer the following: 2x5=10

21. Explain the term planning.
22. Write the disadvantages of MBO.

III. Answer any one of the following: 1x10=10

23. Draw the flowchart process of MBO and explain any 5 process in detail.
24. What are the advantages of MBO?