

Q.45 Define refining.

Ans. Refining process is the separation of crude oil mixture into various useful products (fractions). It is carried out by a process called fractional distillation

Q.46 Describe the difference between diesel oil and fuel oil.

Ans.

Diesel oil	Fuel oil
i. It contains number of carbon, 13 to 15.	i. It contains number of carbon, 15 to 18.
ii. It is used fuel for buses, trucks, railway engines, tubewell. Engines and other heavy vehicles.	ii. It is used in ships and industries to heat boilers and furnace.

Q.47 Write down the name, of our fractions obtained by the fractional distillation of residual oil.

Ans. The four fractions of residual oil are

- i. lubricants iii. wax
- ii. paraffin iv. asphalt

Q.48 What is the difference between crude oil and residual oil?

Ans.

Crude oil	Oil
It is dark brownish viscous liquid which is formed of dead plant, and animals, where converted into a dark brownish viscous liquid.	After the fractional distillation of petroleum, the oil is left behind called residual oil

Q.49 Which petroleum fraction is used in dry cleaning?

Ans. Gasoline or petrol is used in dry cleaning.

Multiple Choice Questions

1. Extraction of metals from its ores is called

- (a) Metallurgy (b) Mining
- (c) Grinding (d) All

2. At the time of partition, How many industries were present in Pakistan

- (a) 30 (b) 32
- (c) 34 (d) 40

3. Which one of the ore of copper?

- (a) Copper glance (b) Chalcopyrite
(c) Both a & b (d) None

4. Brown hair contains

- (a) Iron compound
(b) Copper compound
(c) titanium compound (d) both a & b

5. Blonde hair contains compounds of

- (a) Iron (b) copper
(c) titanium (d) Molybdenum

6. Red hair contains compounds of

- (a) Iron (b) copper
(c) titanium (d) molybdenum

7. Process of heating the concentrated ore to high temperature in excess of air is called

- (a) Roasting (b) Smelting
(c) Bessemerization (d) All

8. Which one is not metal?

- (a) Copper (b) Carbon
(c) Chromium (d) Iron

9. The elements that do not conduct heat and electricity are called

- (a) Metallurgy (b) Non metal
(c) Metalloid (d) alloy

10. Metallurgy involves which of the following steps?

- (a) Mining and enrichment
(b) Reduction
(c) Refining and casting
(d) All of these

11. Blast furnace usually used for the metallurgy of

- (a) Iron (b) copper
(c) Aluminum (d) both a & b

12. The process of roasting during metallurgy of copper is carried out in a special furnace called

- (a) Blast furnace (b) Fire furnace
(c) Bessemer converter
(d) Reverberatory Furnace

13. Froth flotation process is used to concentrate

- (a) Copper ore (b) Iron ore
(c) Chromium ore (d) aluminum ore

14. Compounds of metals exist under earth crust are called

- (a) Ore (b) Gangue
(c) Mineral (d) None

15. An ore consists of two portions pure metal and impurities called

- (a) ore (b) Silicates
(c) Slag (d) gangue

16. Which contains sufficient amount of metal?

- (a) Mineral (b) ores
(c) Rocks (d) Soil

17. A saturated solution of sodium chloride is called

- (a) Brine (b) Suspension
(c) colloidal (d) None

18. Raw materials used in Solvay's process.

- (a) Brine (b) Lime stone
(c) Ammonia gas (d) All

19. Formula of baking soda is

- (a) Na_2CO_3 (b) NaHCO_3
(c) Na_2SO_4 (d) Na_3PO_4

20. Formula of soda ash is

- (a) Na_2CO_3 (b) NaHCO_3
(c) Na_2SO_4 (d) Na_3PO_4

21. Imperial chemical industries (ICI) was established in

- (a) 1942 (b) 1944
(c) 1950 (d) 1996

22. Sindh alkalies limited was established near Karachi in

- (a) 1965 (b) 1966
(c) 1970 (d) 2000

23. How many % age of nitrogen in urea fertilizers?

- (a) 40.6 (b) 45.6
(c) 46.6 (d) 50

24. The raw materials for the manufacturing of urea are

- (a) Ammonia (b) Carbondioxide
(c) Limestone (d) a & b

25. Ammonia is prepared by the process

- (a) Ostwald (b) Haber
(c) Clark (d) all

26. How many % age of urea is used as fertilizers?

- (a) 80% (b) 90%
(c) 95% (d) 98%

27. How many % age of nitrogen present in air by volume?

- (a) 70% (b) 75%
(c) 78% (d) 80%

28. Formula of urea is

- (a) KCNO (b) $\text{H}_2\text{N}-\text{CO}-\text{NH}_2$
(c) $\text{HN}-\text{CO}_2-\text{NH}$ (d) $\text{H}_3\text{N}-\text{CO}-\text{NH}_3$

29. The number of carbon atoms present in petroleum gas

- (a) 1-2 (b) 1-3
(c) 1-4 (d) 1-5

30. The number of carbon atoms present in petroleum ether

- (a) 1-5 (b) 2-5

- (c) 3-7 (d) 5-7

31. The number of carbon atoms present in gasoline or petrol

- (a) 5-10 (b) 6-10
(c) 7-10 (d) 8-10

32. The number of carbon atoms present in kerosene oil

- (a) 8-12 (b) 9-12
(c) 10-12 (d) 11-12

33. The number of carbon atoms present in diesel oil

- (a) 10-15 (b) 11-15
(c) 12-15 (d) 13-15

34. The number of carbon atoms present in fuel oil

- (a) 14-18 (b) 15-18
(c) 16-18 (d) 17-18

35. Concentration is a separating technique in which mineral is separated from

- (a) Gangue (b) Silicates
(c) Aluminates (d) all

36. Sodium carbonate is manufactured by

- (a) Haber's process
(b) Ostwald's process
(c) Solvay's process (d) All

37. Ammonical brine is prepared by dissolving ammonia gas in

- (a) NaCl (b) CaCO_3
(c) CaCl_2 (d) Na_2SO_4

38. The residual oil is heated above 400°C to produce

- (a) lubricants (b) Paraffin wax
(c) Asphalt (d) All

39. Concentration is a

- (a) mixing technique

- (b) separating technique
 - (c) boiling technique
 - (d) cooling technique
- 40. Froth flotation process is used to concentrate the ore on:**
- (a) density basis
 - (b) concentration basis
 - (c) wetting basis
 - (d) magnetic basis
- 41. Matte is a mixture of:**
- (a) FeS and CuS (b) Cu₂O and FeO
 - (c) Cu₂S and FeS (d) CuS and FeO
- 42. In the bessemerization process:**
- (a) roasted ore is heated
 - (b) molten matte is removed
 - (c) molten matte is heated
 - (d) molten matte is added
- 43. Concentration of the copper ore is carried out by:**
- (a) calcinations (b) roasting
 - (c) froth flotation (d) distillation
- 44. When CO₂ is passed through the ammoniacal brine the only salt that precipitates is:**
- (a) NaHCO₃ (b) NH₄HCO₃
 - (c) Na₂CO₃ (d) (NH₄)₂CO₃
- 45. In Solvay's process slaked lime is used to:**
- (a) prepare CO₂
 - (b) prepare quick lime.
 - (c) recover ammonia
 - (d) Form Na₂CO₃
- 46. When NaHCO₃ is heated it forms:**
- (a) CO₂ (b) Ca(OH)₂
 - (c) CaCO₃ (d) CaO
- 47. Formula of urea is:**
- (a) NH₂COONH₄

- (b) NH₂COONH₂
 - (c) NH₂CONH₄
 - (d) NH₂CONH₂
- 48. Crude oil is heated in the fractionating furnace upto:**
- (a) 300°C (b) 350°C
 - (c) 400°C (d) 450°C
- 49. When crude oil is heated in the fractionating tower:**
- (a) vapours of higher boiling point fraction condense first in the lower part of the tower
 - (b) vapours of lower boiling point fraction condense first in the lower part of tower
 - (c) vapours of higher boiling point condense later in the upper part of tower
 - (d) vapours of higher boiling point never condense
- 50. Which one of the following is used as jet fuel:**
- (a) kerosene oil (b) lubricating oil
 - (c) fuel oil (d) diesel oil
- 51. Which one of the following is not a fraction of crude oil**
- (a) paraffin wax (b) asphalt
 - (c) fuel oil (d) petroleum coke
- 52. Which one of the following is not a fraction of petroleum?**
- (a) kerosene oil (b) diesel oil
 - (c) alcohol (d) petrol
- 53. The nitrogen present in urea is used by plants to synthesize**
- (a) sugar (b) proteins
 - (c) fats (d) DNA

54. Which one of the following organic compound is found in gasoline?

(a) C_2H_4

(b) C_3H_8

(c) C_7H_{10}

(d) $C_{12}H_{26}$

Answer key

1	a	2	c	3	c	4	b	5	c
6	d	7	a	8	b	9	b	10	d
11	d	12	d	13	a	14	c	15	d
16	b	17	a	18	d	19	b	20	a
21	b	22	b	23	c	24	d	25	b
26	b	27	c	28	b	29	c	30	d
31	c	32	c	33	d	34	b	35	a
36	d	37	a	38	d	39	b	40	c
41	c	42	c	43	c	44	a	45	c
46	a	47	d	48	c	49	a	50	d
51	c	52	c	53	b	54	c		