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Previous Year Paper

Chemistry - 2012



Multiple Choice Questions

1. A radioactive substance disintegrate its 90% in 100 days. How much time it will take to disintegrate its 99.9% ?
- A. 100 days
 - B. 200 days
 - C. 300 days
 - D. 400 days

Answer

2. Which of the following has magnesium?
- A. Haemoglobin
 - B. Chlorophyll
 - C. Vitamin B₁₂
 - D. Haemocyanin

Answer

3. Pure nitrogen gas is obtained from
- A. $\text{NH}_3 + \text{NaNO}_2$
 - B. $\text{NH}_4\text{Cl} + \text{NaNO}_2$
 - C. $\text{N}_2\text{O} + \text{Cu}$
 - D. $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$

Answer

4. The Modern Periodic Table is based on the properties of elements as a function of
- A. atomic number
 - B. atomic mass
 - C. electronegativity
 - D. electron affinity

Answer

5. The pH of 0.05 M solution of a strong dibasic acid is
- A. 0.0
 - B. 1.0
 - C. 0.2
 - D. 0.5

Answer

6. Which of the following represents the first law of thermodynamics?

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B. $\Delta U = p \cdot \Delta V$

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C. $\Delta U = \Delta H + P \cdot \Delta V$

D. $\Delta H = q + W$

Answer

7. What number of subshells are possible in $n = 3$ energy level?

A. 7

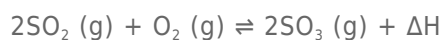
B. 8

C. 9

D. 6

Answer

8. For the equilibrium reaction,



the increase in temperature

A. favours the formation of SO_3 B. favours the decomposition of SO_3

C. does not affect the equilibrium

D. stops the reaction

Answer

9. What is the electronic configuration of O^{2-} ion?A. $1s^2, 2s^2, 2p^5, 3s^1$ B. $1s^2, 2s^2, 2p^4, 3s^2$ C. $1s^2, 2s^2, 2p^6$ D. $1s^2, 2s^2, 2p^4$

Answer

10. An organic compound containing C, H and N gives the following on analysis : C = 40%, H = 13.33% and N = 46.67%. What would be its empirical formula?

A. $\text{C}_2\text{H}_7\text{N}$ B. $\text{C}_2\text{H}_7\text{N}_2$ C. CH_4N D. CH_3N

Answer

11. The normality of 0.2M H_3PO_2 is

A. 0.2 N

B. 0.4 N

C. 0.6 N

D. 0.06 N

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12. Heat of neutralization of HCl and NaOH is

A. -13.7 kcal

B. -13.7 J

C. -13.7 kJ

D. None of these

Answer

13. NO_3^- is detected by ring test. Ring formed has formula

A. $\text{FeSO}_4 \cdot \text{HNO}_2$

B. $\text{FeSO}_4 \cdot \text{NO}_2$

C. $[\text{Fe}(\text{H}_2\text{O})_5 \cdot \text{NO}]^{2+}$

D. $\text{Fe}(\text{OH})_2 \cdot \text{NO}$

Answer

14. The process of oxidation involve

A. loss of electron

B. gain of electron

C. loss of proton

D. loss of neutron

Answer

15. The molarity of pure water is

A. 18

B. 5.56

C. 55.6

D. 100

Answer

16. The attacking agent in the electrophilic sulphonation of benzene is

A. SO_4^{2-}

B. SO_3^{2-}

C. SO_2

D. SO_3

Answer

17. The IUPAC name of the following compound

$\text{CH}_3 - \text{CH} = \text{CH} - \text{C} \equiv \text{CH}$ is

A. pent-2-en-4-yne

B. pent-1-en-4-yne

C. pent-3-en-1-yne

D. pent-2-en-5-yne

Answer

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18. The number of electrons transferred when KMnO_4 acts as an oxidising agent to give MnO_2 and

Mn^{2+} respectively are

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A. 2, 3

B. 1, 5

C. 3, 5

D. 1, 3

[Answer](#)

19. Benzene has the following hybridisation

A. sp

B. sp^2

C. sp^3

D. dsp^2

[Answer](#)

20. Propyne and propene can be distinguished by

A. conc. H_2SO_4

B. Br_2 in CCl_4

C. dil. H_2SO_4

D. AgNO_3 in ammonia

[Answer](#)

21. The colour of the flame of sodium is

A. deep red

B. blue

C. green

D. golden yellow

[Answer](#)

22. Which of the following is the strongest reducing agent?

A. HF

B. HCl

C. HI

D. HBr

[Answer](#)

23. Formula of hexaaqua manganese (II) phosphate is

A. $[\text{Mn}(\text{H}_2\text{O})_6]\text{PO}_4$

B. $[\text{Mn}(\text{H}_2\text{O})_6]_3\text{PO}_4$

C. $[\text{Mn}(\text{H}_2\text{O})_6]_3(\text{PO}_4)_2$

D. $[\text{Mn}(\text{H}_2\text{O})_6](\text{PO}_4)_3$

[Answer](#)

24. Which transition element of the following outermost electronic configuration shows the highest

A. $3d^3, 4s^2$

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B. $3d^5, 4s^1$ C. $3d^5, 4s^2$ D. $3d^6, 4s^2$

Answer

25. Which of the following is not a method of preparation of colloidal solution?

A. Electrical dispersion

B. Peptization

C. Coagulation

D. Mechanical dispersion

Answer

26. The formula of chromyl chloride is

A. CrO_2Cl_2 B. CrOCl_2 C. CrCl_3 D. Cr_2OCl_2

Answer

27. What is the magnetic moment value of Fe^{2+} ion in $[\text{Fe}(\text{CN})_6]^{4-}$?

A. 0

B. 3

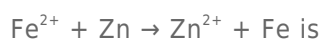
C. 24

D. 8

Answer

28. The standard reduction potential E° for half-reactions are

The EMF of the cell reaction



A. +1.28 V

B. -1.28 V

C. +0.35 V

D. -0.35 V

Answer

29. Aqueous solution of Na_2SO_3 on reaction with Cl_2 givesA. $\text{Na}_2\text{S}_4\text{O}_6$ Like. Share. Bookmark. Download. Make Notes. Print - Your Favourite Questions. Join www.zigya.com

C. NaHSO_4

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D. NaCl

Answer

30. The lanthanoid contraction is responsible for the fact that

- A. Zn and Y have about same radius
- B. Zr and Nb have similar oxidation states
- C. Zr and Hf have about the same radius
- D. Zr and Zn have the same oxidation state

Answer

31. The property of crystalline solid is not

- A. anisotropic
- B. isotropic
- C. hardness
- D. denseness

Answer

32. Froth floatation process is used for the concentration of which one?

- A. Horn silver
- B. Haematite
- C. Bauxite
- D. Cinnabar

Answer

33. A common metal used for the extraction of metals from their oxides by reduction is

- A. Al
- B. Fe
- C. Cr
- D. Co

Answer

34. Due to Frenkel defect, the density of the ionic solids

- A. does not change
- B. decreases
- C. increases
- D. may increase or decrease

Answer

35. A first order reaction completed its 20% in 200 minute. How much time it will take to complete its 80%?

- A. 400 min
- B. 800 min
- C. 1400 min

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[Answer](#)

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36. Which of the following metal is leached by cyanide process?

- A. Na
- B. Cu
- C. Ag
- D. Fe

[Answer](#)37. The half-life period ($t_{1/2}$) for ^{241}Am in years, (given that it emits 1.2×10^{11} α -particles per gram per second) is

- A. 375 yr
- B. 112 yr
- C. 615 yr
- D. 458 yr

[Answer](#)

38. If the initial concentration of the reactant is doubled, the time for half reaction is also doubled. The order of the reaction is

- A. zero
- B. one
- C. two
- D. three

[Answer](#)

39. Nylon-6 is made from

- A. 1, 3-butadiene
- B. chloroprene
- C. adipic acid
- D. caprolactum

[Answer](#)

40. Bakelite is the condensation polymer of

- A. $\text{C}_6\text{H}_5\text{OH}$ and caprolactum
- B. HCHO and phthalic acid
- C. $\text{C}_6\text{H}_5\text{OH}$ and HCHO
- D. HCHO and ethylene glycol

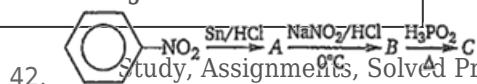
[Answer](#)

41. Fibrous protein are not present in

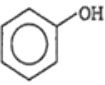
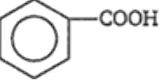
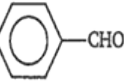
- A. myosin
- B. albumins
- C. collagen

D. fibroin

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Product C is

- A. 
- B. 
- C. 
- D. 

Answer

43. In the reaction,



The end product D is

- A. crotonic acid
- B. lactic acid
- C. malonic acid
- D. tartaric acid

Answer

44. Inorganic preservative is

- A. benzoic acid
- B. sucrose
- C. vinegar
- D. potassium bisulphite

Answer

45. 2-acetoxy benzoic acid is

- A. antiseptic
- B. analgesic
- C. antibiotic
- D. hypnotic

Answer

46. Which of the following is not present in DNA?

- A. Adenine
- B. Guanine
- C. Uracil
- D. Thymine

47. $C_2H_2 \xrightarrow{H_2SO_4, H_2O} Hg^{2+} + A \rightarrow [O] B$

The compound B is

- A. an acid
- B. an aldehyde
- C. ketone
- D. ethanol

Answer

48. Hinsberg's reagent is

- A. benzene sulphonyl chloride
- B. benzene sulphonic acid
- C. phenyl isocyanide
- D. benzene sulphonamide

Answer

49. Which of the following does not give silver mirror test?

- A. $HCOOH$
- B. CH_3CH_2CHO
- C. CH_3CHO
- D. CH_3COCH_3

Answer

50. Cetyltrimethyl ammonium bromide (TAB) is popular is

- A. antioxidant
- B. antibiotic
- C. surfactant
- D. tranquillizer

Answer