General Science Model Test Questions 29 With Answers [Chemistry - 7]

1. According to Arrhenius concept, base is a substance which
   (A) Gives a pair of protons
   (B) Donates protons
   (C) Accepts a lone pair of electrons
   (D) Donates hydroxyl ions

2. Consider the following statements:
   Assertion (A): Electric cookers are coated with magnesium oxide.
   Reason (R): It protects them against fire.
   Now select your answer according to the coding scheme given below:
   (A) Both (A) and (R) are true, and (R) is the correct explanation of (A)
   (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
   (C) (A) is true, but (R) is false
   (D) (A) is false, but (R) is true

3. The element(s) which exist in liquid state at room temperature is (are)
   I. Sodium
   II. Bromine
   III. Mercury
   IV. Magnesium
   Of these:
   (A) I alone is correct
   (B) I and II are correct
   (C) II and III are correct
   (D) All are correct

4. Which of the following is the correct order of calorific values of fuel?
   (A) Hydrogen > Petrol > Wood
   (B) Wood > Hydrogen > Petrol
   (C) Petrol > Wood > Hydrogen
   (D) Wood > Petrol > Hydrogen

5. Chlorapatite is the ore of
   (A) Chlorine
   (B) Phosphorous
   (C) Calcium
   (D) Potassium

6. White phosphorous is always kept under
   (A) Water
   (B) Alcohol
   (C) Kerosene
   (D) Benzene

7. ³D² & ³T³ are the isotopes of which of the following?
   (A) Hydrogen
   (B) Titanium
   (C) Diamond
   (D) Tungsten
8. Bone ash is the chief source of
   (A) Boron  (B) Phosphorous  (C) Carbon  (D) Silicon

9. Isotopes can be detected by
   (A) Mass Spectrometer  (B) U.V. Spectrometer
   (C) I.R. Spectrometer  (D) N.M.R. Spectrometer

10. Compounds having low melting points, low boiling points and behaving as not electrolytes are
    (A) Electrovalent compounds  (B) Covalent compounds
    (C) Co-ordinate compounds  (D) Complex compounds

11. The peak of atomic volume curve is occupied by
    (A) Alkali metals  (B) Halogens
    (C) Inert gases  (D) Alkaline earth metals

12. The maximum numbers of electrons in subshells s, p, d, f are
    (A) 2, 6, 10, 14  (B) 2, 8, 18, 32  (C) 2, 6, 18, 32  (D) 2, 8, 14, 32

13. The age of rocks can be determined using
    (A) Radio – Cobalt  (B) Radio – Carbon
    (C) Radio – Iodine  (D) Radio – Phosphorous

14. Spiegeleisen is an alloy of
    (A) Sulphur, iron & carbon  (B) Iron, Magnesium and carbon
    (C) Iron, manganese and carbon  (D) Selenium, iron and carbon

15. Tritium ($^{3}$T) is
    (A) An isotope of titanium  (B) An isotope of tungsten
    (C) A radio – isotope of hydrogen  (D) An isotope of hydrogen

16. Which one of the following is radio active?
    (A) Phosphorous  (B) Arsenic  (C) Astatine  (D) Carbon

17. Slaked lime is
    (A) CaO  (B) CaCO₃  (C) Ca(OH)₂  (D) CaCl₂
18. Aqua regia is a mixture of

(A) Conc. HCl 3 parts + conc. HNO₃ 1 part  
(B) Conc. HCl 3 parts + conc. H₂SO₄ 1 part

(C) Conc. H₂SO₄ 1 part + conc. HNO₃ 3 parts  
(D) Conc. HCl 1 parts + conc. HNO₃ 3 parts

19. White phosphorous reacting with sodium hydroxide gives

(A) Phosphoric acid  
(B) Phosphine

(C) Red phosphorous  
(D) Phosphorous pentoxide

20. Man – made element is

(A) Plutonium  
(B) Uranium-235

(C) Thorium  
(D) Radium

21. The insulator among the following is

(A) Silicon  
(B) Aluminium

(C) Graphite  
(D) Diamond

22. Consider the following statements:

Assertion (A): In gas balloon helium replaces hydrogen.

Reason (R): Helium is incombustible

Now select your answer according to the coding scheme given below:

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

23. Identify the correct order of rusting

(A) Iron < Silver < Platinum  
(B) Platinum < Silver < Iron

(C) Iron < Platinum < Silver  
(D) Silver < Iron < Platinum

24. The chemical that could be used in refrigeration is

(A) Carbon dioxide  
(B) Ammonium hydroxide

(C) Ammonium Chloride  
(D) Ammonia

25. Which of the following is a laughing gas?

(A) Carbon monoxide  
(B) Carbon dioxide

(C) Nitrous oxide  
(D) Sulphur dioxide
26. Coating of zinc over iron article is known as
   
   (A) Galvanisation   (B) Electroplating   (C) Electro refining   (D) Etching

27. Tincture of iodine is
   
   (A) Iodine   (B) Iodine and iodoform
   (C) Iodine and potassium iodide   (D) Iodoform

28. Which one of the following is correctly matched?
   
   (A) Liquid gold - Lead   (B) Liquid silver - Mercury
   (C) Aqua regia - Silver   (D) Green Silver - Copper

29. Which one of the following is correctly matched?
   
   (A) Charcoal - Inactive carbon   (B) Diamond - Conductor
   (C) Graphite – Insulator   (D) Fullerence – Soluble form of carbon

30. Match List I with list II correctly and select your answer using the codes given below:

   List I
   (a) Lead tetraethyl
   (b) Liquid hydrogen
   (c) Hydrogen peroxide
   (d) Carbon dioxide

   List II
   1. Global warming
   2. Antiknocking agent
   3. Rocket fuel
   4. Bleaching agent

   Codes: a b c d
   (A) 2 1 3 4
   (B) 1 3 2 4
   (C) 2 4 3 1
   (D) 2 3 4 1

31. Consider the following statements:

   Assertion (A) : Silver article on exposure to air become black
   
   Reason (R) : Silver is oxidized to silver oxide
   
   Now select your answer according to the coding scheme given below:
(A) Both (A) and (R) are true and (R) is the correct explanation of (A)
(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
(C) (A) is true, but (R) is false
(D) (A) is false, but (R) is true

32. The most acidic compound of the following is
   (A) Methane
   (B) Methyl alcohol
   (C) Ethyl alcohol
   (D) Phenol

33. Consider the following statements:
   Assertion (A) : Bakelite is a thermosetting plastic
   Reason (R) : Thermosetting plastics are those which change irreversibly into hard and rigid materials on heating
   Of these statements:
   (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)
   (B) Both (A) and (R) are correct, but (R) is not correct explanation of (A)
   (C) (A) is true, but (R) is false
   (D) (A) is false, but (R) is true

34. Diamond and graphite are
   (A) Isomers
   (B) Isotopes
   (C) Allotropes
   (D) Polymers

35. Activated charcoal is used to remove colouring matter from impure substances. It works by
   (A) Oxidation
   (B) Reduction
   (C) Adsorption
   (D) Bleaching

36. Bordeaux mixture is a mixture of
   (A) Copper sulphate and lime
   (B) Bleaching powder and DDT
   (C) DDT and BHC
   (D) DDT and Parathion

37. Aluminium ore is known as
   (A) Lignite
   (B) Bauxite
   (C) Anthracite
   (D) Pyrite

38. Consider the following statements:
   I. Graphite is an allotrope of carbon
   II. Diamond is a metal
   III. Graphite is a non-conductor of electricity
   IV. Diamond is the hardest naturally occurring substance
Of the Statements:

(A) I and IV are correct
(B) I alone is correct
(C) I, II and III are correct
(D) All the correct

39. Which one of the following is correctly matched?

(A) Iron – Bones
(B) Cobalt – Vitamin B₁₂
(C) Calcium – Semiconductor
(D) Silicon – Haemoglobin

40. Match List I with List II correctly and select your answer using the codes given below:

<table>
<thead>
<tr>
<th>List I</th>
<th>List II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood clotting</td>
<td>1. Insulin</td>
</tr>
<tr>
<td>Blood sugar level</td>
<td>2. Vitamin K</td>
</tr>
<tr>
<td>Source of energy</td>
<td>3. Carbohydrates</td>
</tr>
<tr>
<td>Vinegar</td>
<td>4. Acetic acid</td>
</tr>
</tbody>
</table>

Codes:

a  b  c  d

(A) 2 1 3 4
(B) 1 2 3 4
(C) 4 1 3 2
(D) 3 4 2 1

41. The substance that is not colloidal in nature is

(A) Blood  (B) Milk  (C) Smoke  (D) Sea water

42. The percentage of gold in 18 carat is

(A) 50  (B) 60  (C) 75  (D) 80

43. The pH of blood is

(A) 2.4-3.4  (B) 4.0-4.4  (C) 4.55-5.5  (D) 7.3-7.5

44. Global warming is caused by

(A) Lead  (B) Carbon monoxide  (C) Particulate matter  (D) Nitrogen Oxides
45. The chemical behavior of an element is due to
   (A) Protons    (B) Neutrons    (C) Electrons    (D) Outermost electrons

46. The metal that exhibits allotropy is
   (A) Gold    (B) Silver    (C) Copper    (D) Tin

47. Which one of the following is a metalloid?
   (A) Antimony    (B) Mercury    (C) Magnesium    (D) Argon

48. The filament of gas-filled electric bulb is made of
   (A) Platinum    (B) Tungsten    (C) Copper    (D) Silver

49. The dry ice is
   (A) Ice blocks free from liquid water    (B) Ice mixed with sodium chloride
    (C) Solid carbon dioxide    (D) Solidified heavy water

50. \(2n^2\) formula was given by
   (A) Rutherford    (B) Goldstein    (C) Bohr-Bury    (D) Chadwick

51. The value of ionic product of water at 298K is
   (A) \(1 \times 10^{-7}\) mol\(^2\).L\(^{-2}\)    (B) \(1 \times 10^{-14}\) mol\(^2\).L\(^{-2}\)
    (C) \(1 \times 10^{-14}\) mol\(^2\).L\(^{-2}\)    (D) \(1 \times 10^7\) mol\(^2\).L\(^{-2}\)

52. The enzyme which converts glucose into ethyl alcohol is
   (A) Diastase    (B) Invertase    (C) Zymase    (D) Maltase

53. Sodium salts of fatty acids are
   (A) Hard soaps    (B) Soft soaps
    (C) Toilet soaps    (D) Shaving creams

54. Which of the following concentrated acid mixtures is used to prepare aqua regia?
   (A) HCl+H\(_2\)SO\(_4\)    (B) HCl+HNO\(_3\)    (C) HNO\(_3\)+ H\(_2\)SO\(_4\)    (D) HCl+H\(_3\)PO\(_4\)

55. Which of the following is used as a fungicide?
   (A) Carbon    (B) Carbon tetrachloride    (C) Sulphur    (D) Copper

56. The source of tartaric acid is

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57. Which of the following is not an ore?
   (A) Bauxite
   (B) Malachite
   (C) Zinc Blende
   (D) Wrough Iron

58. The metal that is extracted from sea water is
   (A) Sodium
   (B) Calcium
   (C) Magnesium
   (D) Tin

59. The amount of chromium in stainless steel is
   (A) 50%
   (B) 25%
   (C) 14%
   (D) 2%

60. Which of the following elements occurs in the free state in nature?
   (A) Iron
   (B) Cobalt
   (C) Platinum
   (D) Nickel

61. Which of the following gases comes under ‘Noble gases’?
   (A) Nitrogen
   (B) Oxygen
   (C) Neon
   (D) Hydrogen

62. Which is used as a fire extinguisher?
   (A) Oxygen
   (B) Carbon dioxide
   (C) Carbon monoxide
   (D) Water gas

63. The ozone layer of the earth is useful for living being because
   (A) It serves as the source of oxygen
   (B) It maintains nitrogen cycle
   (C) It maintains temperature
   (D) It prevents excessive ultraviolet rays

64. The speed of ultra centrifuges to concentrate viruses in solution is
   (A) $5 \times 10^5$ rpm
   (B) $5 \times 10^6$ rpm
   (C) $5 \times 10^5$ rpm
   (D) $5 \times 10^6$ rpm

65. Rectified spirit is
   (A) 90 % ethanol and 10% water
   (B) 80 % ethanol and 20 % water
   (C) 95.6 % ethanol and 4.4 % water
   (D) 96.5 Ethanol and 3.5 % water

66. Stainless steel contains
   (A) Copper, nickel, chromium
   (B) Copper, tungsten, chromium
   (C) Iron, nickel, chromium
   (D) Iron, tungsten, chromium

67. Oxides of metals are generally
   (A) Acidic
   (B) Netural
   (C) Basic
   (D) Amphoteric
68. Plaster of paris has the molecular formula
   (A) CaSO\textsubscript{4}.HO    (B) CaSO\textsubscript{4}.2H\textsubscript{2}O    (C) CaSO\textsubscript{4}. ½ H\textsubscript{2}O    (D) CaSO\textsubscript{4}. 1½ H\textsubscript{2}O

69. Ozone depletion in the atmosphere is mainly caused by
   (A) SO\textsubscript{2}    (B) NO\textsubscript{2}    (C) NO    (D) CFC

70. Consider the following Statements:
    MnO\textsubscript{2}+4HCl MnCl\textsubscript{2}+Cl\textsubscript{2}+2H\textsubscript{2}O

    In the above reaction,

    Assertion (A): MnO\textsubscript{2} is an oxidising agent.

    Reason (R): The Oxidation number of Mn is decreased from +4 to +2

Now select your answer according to the coding scheme given below:

(A) Both (A) and (R) are true and (R) is the correct explanation of (A)
(B) Both (A) and (R) are true, but (R) is not correct explanation of (A)
(C) (A) is true, but (R) is false
(D) (A) is false, but (R) is true

71. The method(s) used to determine the equivalent masses of elements is/are

   I. Chloride method       II. Oxide method
   III. Metal displacement method       IV. hydrogen displacement method

   Of these:
   
   (A) I alone is correct
   (B) I and III are correct
   (C) I, II and III are correct
   (D) All are correct

72. Match List I with List II correctly and select your answer using codes below:

    List I                   List II
    (a) Sulphide ore 1. Gravity separation method
    (b) Oxide ore 2. Electromagnetic separation method
    (c) Bauxite ore 3. Forth flotation process
    (d) Thinstone ore 4. Chemical method

    Codes: a    b    c    d
73. Find the wrong pair:

(A) CH₃-CH₂-O-CH₂-CH₃ - Ether
(B) CH₃-CH₂-CH₂-CH₃ - Alkane
(C) CH₃-C-CH₃ - Ketone
(D) CH₃-CH₂-OH - Aldehyde

74. The soluble fibrinogen is converted into soluble fibrin by the action of

(A) Thrombin  (B) Prothrombinase  (C) Thrombase  (D) Thrombokinase

75. The carbon dioxide dissolved in water

(A) Enhances corrosion  (B) Suppresses corrosion
(C) Prevents corrosion  (D) Has no influence on corrosion

76. Nylon is a

(A) Polyester  (B) Polyethylene  (C) Polyamide  (D) Polysaccharide

77. One carat of diamond is

(A) 100 mg  (B) 200 mg  (C) 300 mg  (D) 400 mg

78. Sugar in blood and urine is tested with

(A) Benedict’s solution  (B) Brine solution
(C) Hypo solution  (D) Iodine solution

79. Dry ice is

(A) Liquid nitrogen  (B) Purified ice
(C) Solid carbon dioxide  (D) Supercooled ice
80. The calorific value of the fuel is of the order

(A) Coal>peat>lignite>dried wood  (B) Peat>lignite>coal>dried wood
(C) Lignite>peat>coal>dried wood  (D) Coal>lignite>peat>dried wood

81. Which one of the following is incorrectly matched?

(A) Baking soda – sodium bicarbonate  (B) Caustic soda – Calcium carbonate
(C) Sodalime – Sodium carbonate  (D) Washing soda – Calcium hydroxide

82. Which one of the following is correctly matched?

(A) Ascorbic acid – Vitamin  (B) Insulin – Antiseptic
(C) penicillin – Antipyretic  (D) Proteins – Polysaccharide

83. From which of the following biodiesel is obtained?

(A) Ethyl Alcohol  (B) Cellulose  (C) Bagasse  (D) Jatropha

84. The volatile substance used in most refrigerators is

(A) Acetone  (B) Water  (C) Helium  (D) Freon

85. Vulcanisation of rubber is done by

(A) NH₃  (B) SO₂  (C) S  (D) H₂S

86. The gas used in fountain experiment is

(A) Oxygen  (B) Nitrogen  (C) Hydrogen  (D) Ammonia

87. Rocket fuel is

(A) Liquid hydrogen  (B) Liquid nitrogen  (C) Liquid Oxygen  (D) Liquid petrol

88. Which is used in softening of hard water?

(A) Bleaching powder  (B) Washing soda  (C) Baking soda  (D) Soda Ash

89. The chemical name of ‘aspirin’ is

(A) Paracetamol  (B) Acetyl salicylic acid  (C) Acetaminophen  (D) Ibuprofen

90. The lightest element known is

(A) Helium  (B) Hydrogen  (C) Argon  (D) Lithium

91. The taste of bases is
92. In Haber’s process
(A) SO₂ is manufactured  (B) H₂SO₄ is manufactured
(C) HNO₃ is manufactured  (D) NH₃ is manufactured

93. The oxide that is present in maximum portion in cement is
(A) SiO₂  (B) Fe₂O₃  (C) Al₂O₃  (D) CaO

94. Solid, liquid, gas, ----------
The forth state is
(A) Saturated vapour  (B) Colloid  (C) Crystalline  (D) Plasma

95. Which of the following energies is a non-renewable energy?
(A) Solar energy  (B) Wind energy  (C) Tidal energy  (D) Petroleum

96. A non-metal which exists as a liquid at room temperature is
(A) Hg  (B) Na  (C) Cl₂  (D) Br₂

97. The acid which has a peroxy linkage is
(A) Sulphurous acid  (B) Pyrosulphuric acid  (C) Dithionic acid  (D) Caro’s acid

98. Breathalyzers determine alcohol content through the redox reaction
\[ \text{Cr}_2\text{O}^{2-7} + \text{C}_2\text{H}_5\text{OH} \rightarrow \text{Cr}^{3+} + \text{C}_2\text{H}_4\text{O}_2 \]
Which substance is being reduced?
(A) Cr³⁺  (B) Cr₂O²⁻₇  (C) C₂H₅OH  (D) Cr³⁺ and Cr₂O²⁻₇

99. Which oxide of nitrogen is formed when ammonium nitrate is heated?
(A) N₂O  (B) NO  (C) NO₂  (D) N₂O₅

100. Why aspirin has a sour taste?
(A) The acidic nature of aspirin
(B) The sour flavour is added to help prevent overdosing
(C) Aspirin is made sour as mandated child safety feature
(D) It is the basic nature of aspirin