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CATEGORY - III

PART - 3

Physical Science

Question Numbers 71 to 150

71. Which one of the following product is formed at cathode during electrolysis of aqueous sodium chloride solution ?

(A) Sodium

(B) Chlorine

(C) Hydrogen

(D) Oxygen

72. A solution which contains the maximum possible amount of solute at any given temperature is known as _____.

(A) Unsaturated solution

(B) Super saturated solution

(C) Saturated solution

(D) None of the above solutions

73. A body fell down from rest and is falling down with an acceleration 10 m/s^2. When it was hitting the ground, its displacement was 20 m. The velocity with which it hits the ground is :

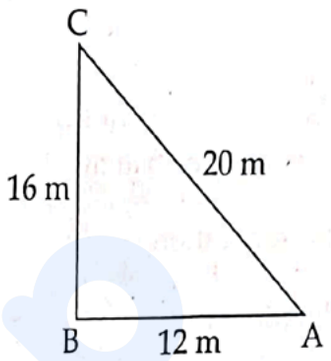
(A) 5 m/s

(B) 10 m/s

(C) 15 m/s

(D) 20 m/s

74. The figure shows a person travelling from A to B and then to C. If so the displacement is :



(A) Zero

(B) 12 m

(C) 16 m

(D) 20 m

75. Which among the following is not a property of ionic compound ?

(A) Exists in solid, liquid and gaseous state

(B) Generally soluble in water

(C) Conduct electricity in aqueous and molten states

(D) High melting and boiling point

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76. A person walks 50 m on a level road with a load of mass 20 kg on his head. If so the work done by the force on the load is :

(A) Zero

(B) 1000 J

(C) 9800 J

(D) 980 J

77. Which among the following is the concentration method of bauxite ?

(A) Magnetic separation

(B) Froth flotation

(C) Leaching

(D) Hydraulic washing

78. The main constituent of LPG is :

(A) methane

(B) ethane

(C) propane

(D) butane

79. There are 3 shells in the atom of element X. 6 electrons are present in its outermost shell. In which group is the element included ?

(A) 6

(B) 5

(C) 16

(D) 10

80. Which among the following is used as fungicide ?

(A) Sodium bicarbonate

(B) Copper sulphate

(C) Sodium carbonate

(D) Calcium sulphate

81. A body of mass 10 kg is freely falling from a tower on the earth. Its weight during the free fall is :

(A) $(10+9.8)$ N

(B) (10×9.8) N

(C) $(10/9.8)$ N

(D) Zero

82. Which of the following is the basis of working of an inductor ?

(A) self induction

(B) mutual induction

(C) magnetic induction

(D) electrostatic induction

83. Which of the following method is to be used to separate oxygen from air ?

(A) Crystallization

(B) Fractional distillation

(C) Magnetic separation

(D) Distillation

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84. Which among the following is an alkyne ?

(A) C_2H_6

(B) C_6H_6

(C) C_4H_6

(D) C_2H_4

85. Which compound is used to decrease the rate of decomposition of hydrogen peroxide ?

(A) H_2SO_4

(B) H_3PO_4

(C) HCl

(D) H_2CO_3

86. The temporary hardness of water due to calcium carbonate can be removed by adding _____.

(A) $CaCO_3$

(B) $CaCl_2$

(C) HCl

(D) $Ca(OH)_2$

87. How many grams of sodium hydroxide present in 250 mL of 0.5 M NaOH solution ?

(A) 7.32 g

(B) 0.005 g

(C) 5 g

(D) 0.5 g

88. In which of the given chemical reactions, does the displacement reaction occur ?

(A) $Cu + MgSO_4$

(B) $Ag + CaSO_4$

(C) $Zn + MgSO_4$

(D) $Mg + ZnSO_4$

89. Which of the following will never give a real image ?

(A) convex lens

(B) concave lens

(C) concave mirror

(D) all of these

90. The heat developed in a current carrying conductor is directly proportional to the square of :

(A) resistance

(B) current

(C) time

(D) voltage

91. The energy possessed by a stretched bow is :

(A) kinetic energy

(B) potential energy due to position

(C) potential energy due to strain

(D) mechanical energy

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92. Fog is an example for colloidal system of _____.

(A) Liquid in gas

(B) Gas in liquid

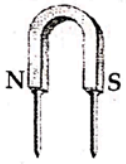
(C) Solid in gas

(D) Gas in solid

93. Which of the following is the correct figure regarding the hanging of two iron nails from the pole of a magnet ?

(A) 

(B) 

(C) 

(D) 

94. In an electric circuit the current is 0.5 A when a potential difference of 6 V is applied. When a potential difference of 12 V is applied across the same circuit, the current will be :

(A) 0.25 A

(B) 0.5 A

(C) 1 A

(D) 2 A

95. An object of height 2 cm is kept in front of a convex lens. The height of the image formed on a screen is 6 cm. If so the magnification is :

(A) -3

(B) -3 cm

(C) $-1/3$

(D) $-1/3$ cm

96. What should be the position of an object in front of a concave mirror to get a real image having the same size as that of the object ?

(A) at F

(B) between F and C

(C) between F and P

(D) at C

97. Which of the following component is most suitable for rectification ?

(A) transistor

(B) triode

(C) transformer

(D) diode

98. pH value of some solutions are given, which is the strongest acid among them ?

(A) 8

(B) 1

(C) 7

(D) 4

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99. In which among the given samples, does 6.022×10^{23} molecules contain ?

(A) 80 g NaOH

(B) 180 g H_2O

(C) 32 g oxygen

(D) 56 g nitrogen

100. Which of the following is the correct way regarding the expressing of temperature ?

(A) 50 k

(B) 50 K

(C) 50 Kelvin

(D) 50 KELVIN

101. On rubbing a glass rod with silk, the glass acquires positive charge. This is because :

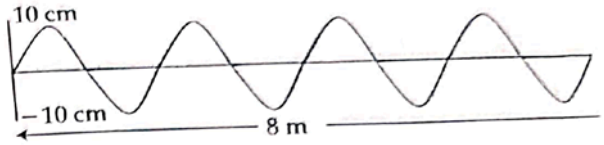
(A) electrons are transferred from silk to glass

(B) electrons are transferred from glass to silk

(C) protons are transferred from silk to glass

(D) protons are transferred from glass to silk

102. The figure shows a wave generated in 0.2 s. Its speed is :



(A) 400 m/s

(B) 40 m/s

(C) 4 m/s

(D) 0.4 m/s

103. Which one of the following options is not related to Boyle's law ?

(A) $P \times V = Q$ constant

(B) $P \propto \frac{1}{V}$

(C) $V \propto T$

(D) $V \propto \frac{1}{P}$

104. Two capillary tubes A and B of diameter 1 mm and 2 mm respectively are dipped vertically in a liquid. If the capillary rise in A is 6 cm, the capillary rise in B is _____.

(A) 4 cm

(B) 3 cm

(C) 6 cm

(D) 2 cm

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105. The most suitable substance that can be used as core of an electromagnet is :

(A) steel

(B) alnico

(C) soft iron

(D) copper

106. A body has a weight 240 N in air. On immersing in a fluid, its weight was found to be 190 N. If so the buoyant force is :

(A) 50 N

(B) 240 N

(C) 100 N

(D) 190 N

107. Find out the most suitable one regarding the pressure exerted by a liquid.

(A) height of the liquid column

(B) density of the liquid

(C) the value of acceleration due to gravity at the place

(D) all of these

108. In which of the following situation is friction an advantage ?

(A) wear and tear of machines

(B) wear and tear of foot wares

(C) helps us to hold objects

(D) wear and tear of a tyre

109. Which isotope is used to determine the age of fossils ?

(A) Carbon - 12

(B) Carbon - 13

(C) Carbon - 14

(D) Oxygen - 17

110. A strong electrolyte is one which _____.

(A) is completely ionised in the solution

(B) dissociates partially in the solution

(C) is having low electrical conductivity

(D) ionises partially

111. A body is moving with a velocity 50 m/s. On applying a force on it, it comes to rest in 5 s. If so the retardation is :

(A) 10 m/s^2

(B) 5 m/s^2

(C) 50 m/s^2

(D) 50 m/s

112. Molar volume of 17 g ammonia is _____.

(A) 22.4 L

(B) 224 L

(C) 2.24 L

(D) .224 L

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113. The mass number of an atom is 31. The M shell of this atom contains 5 electrons. How many neutrons does this atom have ?

(A) 31

(B) 16

(C) 15

(D) 5

114. The eye ball of a person is small in size. The power of the eye lens is normal he is having the problem of :

(A) myopia

(B) presbyopia

(C) hypermetropia

(D) astigmatism

115. From the list of given metals, which is the most ductile metal ?

(A) Ag

(B) Zn

(C) Cu

(D) Pt

116. Which among the following is the sub shell electron configuration of chromium ?

(A) [Ar] $3d^1\ 4s^2$

(B) [Ar] $3d^5\ 4s^1$

(C) [Ar] $3d^4\ 4s^2$

(D) [Ar] $3d^3\ 4s^2$

117. Which among the following metal is refined by distillation ?

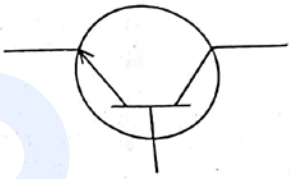
(A) Lead

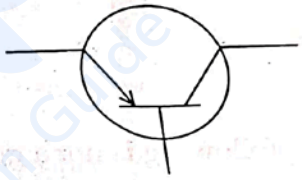
(B) Zinc

(C) Copper

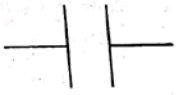
(D) Tin

118. Which of the following is the symbol of a PNP transistor ?

(A) 

(B) 

(C) 

(D) 

119. The number of electron pairs shared in th formation of nitrogen molecule i _____.

(A) 1

(B) 3

(C) 2

(D) 4

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120. Which of the following deals with inertia of a body ?

(A) Newton's first law of motion

(B) Newton's second law of motion

(C) Newton's third law of motion

(D) all of these

121. While developing the concept of simple machines a set of labelled examples were given by the teacher. Identify the negative example.

(A) Lever

(B) Wedge

(C) Wheel

(D) Crane

122. Which of the following is not a graphic aid ?

(A) Chart

(B) Graph

(C) Diagram

(D) Specimen

123. Which among the following is the contribution of Bruner ?

(A) Discovery Learning

(B) Reception Learning

(C) Meaningful Reception Learning

(D) Signal Learning

124. According to Piaget, the process of taking new information to existing schema is known as :

(A) Assimilation

(B) Adaptation

(C) Accommodation

(D) Association

125. In Blooms Taxonomy of Educational objectives, the objective application comes under :

(A) Cognitive

(B) Affective

(C) Psychomotor

(D) Conative Domain

126. Suppose a student is able to justify the use of nuclear power plants in his/her own words, the highest objective the student realized according to revised Blooms Taxonomy is :

(A) Remembering

(B) Synthesising

(C) Analysing

(D) Evaluate

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127. If the teacher decides to give opportunities for students to practice what they have learnt in classroom on the topic Friction, he/she will provide :

(A) Hand book

(B) Text book

(C) Work book

(D) Log book

128. The Indian astrophysicist used to describe chemical and physical conditions in stars :

(A) Dr. G. Madhavan Nair

(B) Dr. C.V. Raman

(C) Dr. A.P.J Abdul Kalam

(D) Meghnad Shah

129. The tentative solution of a problem is called :

(A) Conclusion

(B) Decision

(C) Hypothesis

(D) Definition

130. SAPA emphasizes more on :

(A) Blended approach

(B) Historical approach

(C) Product approach

(D) Process approach

131. Split half method is used for determining the :

(A) Reliability

(B) Validity

(C) Objectivity

(D) Usability

132. Which of the following schemes provide grants exclusively to set up Science labs in Schools of Kerala ?

(A) Science Olympiad

(B) Sasthraposhini

(C) Commonwealth

(D) INSPIRE

133. Scoring key and value points are prepared for :

(A) Essay type and Objective type tests respectively

(B) Short answer and Objective type tests respectively

(C) Essay type and Short answer type tests respectively

(D) Objective type and Short answer type tests respectively

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134. The questions asked by a teacher in the unit test on the topic Ammonia is given below. Identify the Lower Order Question from the following.

(A) Explain the preparation of Ammonia in the laboratory.

(B) How can you prove that ammonia is basic in nature ?

(C) Suggest a general method for the preparation of Ammonia.

(D) List any two uses of ammonia.

135. The most appropriate chart for comparing the properties of exothermic and endothermic reactions :

(A) Tree chart

(B) Flow chart

(C) Tabular chart

(D) Bar chart

136. After demonstrating the experiment if a teacher introspects on his/her performance, then it is :

(A) Reconciliation

(B) Reflection

(C) Recapitulation

(D) Reorganization

137. Which of the following least support teacher professionalism ?

(A) Participating in pre-service formal teacher education programmes

(B) Carrying out individual or group Research Projects

(C) Frequently attending Union Activities

(D) Expanding induction and mentoring programmes

138. Pedagogue means :

(A) Learning

(B) Teaching

(C) Learner

(D) Teacher

139. The test that can be used for predicting expected performance in future programme is :

(A) Diagnostic test

(B) Aptitude test

(C) Prognostic test

(D) Unit test

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140. While constructing the curriculum, a general treatment of almost all topics are attempted at the beginning and it is developed in successive years in :

(A) Integrated approach

(B) Concentric approach

(C) Structural approach

(D) Interdisciplinary approach

141. Certain statements regarding improvisation of learning aids are given below :

(i) Improvised aids provides a good alternative to the not easily available aids

(ii) It can be helpful in making teaching a child-centered activity.

(iii) Improvised aids are simple and easy to handle

(iv) Improvised aids are expensive but repairable

The correct answer is :

(A) (i), (ii) and (iii)

(B) (i), (ii) and (iv)

(C) (ii), (iii) and (iv)

(D) (i), (iii) and (iv)

142. While preparing a Lesson plan teacher thinks - what to teach ? The most suitable answer to this question is :

(A) Objective

(B) Content

(C) Learning experience

(D) Evaluation

143. Which of the following is the least applicable to a Unit plan ?

(A) It is developed by the teacher

(B) A document to organize a series of lessons

(C) A document to organize a series of activities for a year

(D) A plan for learning a major section or topic

144. Beakers, test tubes and burettes purchased for the science laboratory are entered in :

(A) Order Register

(B) Breakable stock register

(C) Consumable stock register

(D) Demand register