

Masco Olympiad 2018 - 19.

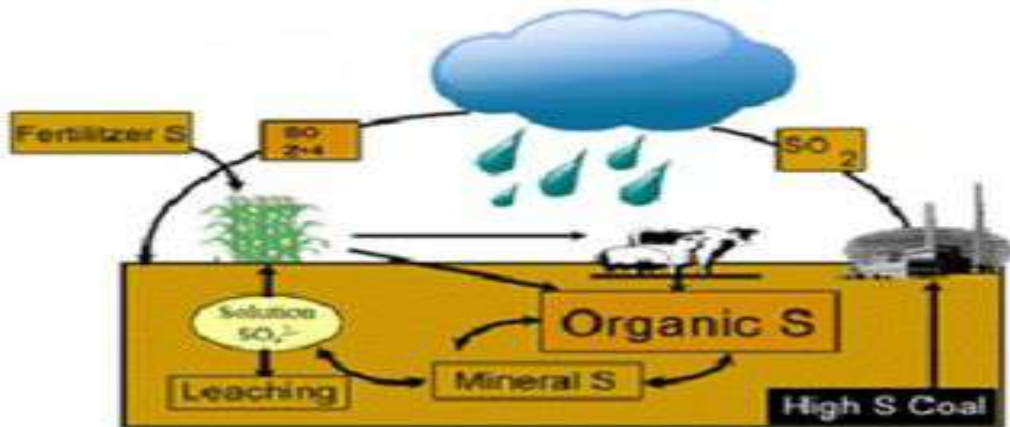
62. Filtration as a method of separation can be used for mixtures that are
- (A) Homogeneous and liquid-in-gas mixtures
 - (B) Heterogeneous and solid-in-liquid mixtures
 - (C) Homogeneous and solid-in-liquid mixtures
 - (D) Heterogeneous and liquid-in-liquid mixtures
63. What happens to the inertia of an object when its velocity is doubled ?
- (A) The object's inertia becomes 2 times lesser
 - (B) The object's inertia becomes 2 times greater
 - (C) The object's inertia becomes 4 times greater
 - (D) The object's inertia remains the same.
64. A metal sphere of mass 12 kg has the same diameter as another sphere of mass 4 kg. Both spheres are dropped simultaneously from a tower. When they are 8 m above the ground, they have the same _____. (Neglect air resistance.)
- (A) Acceleration
 - (B) Potential energy
 - (C) Momentum
 - (D) Kinetic energy
65. Which of the following is defined as the process that particles from the surface gain enough energy to overcome the forces of attraction present in the liquid and change into the vapour state?
- (A) Boiling
 - (B) Condensation
 - (C) Evaporation
 - (D) None of these
66. Elements having the same number of valence electrons in their atoms have
- (A) Similar atomic sizes
 - (B) Similar combining capacities
 - (C) Similar metallic character
 - (D) Similar chemical properties
67. A change in the physical state can be brought about:
- (A) only when energy is given to the system.
 - (B) only when energy is taken out from the system.
 - (C) when energy is either given to, or taken out from the system.
 - (D) without any energy change.
68. Matters are classified based on?
- (A) Physical characteristics
 - (B) Chemical characteristics
 - (C) Both (A) and (B)
 - (D) None of these
69. What type of farming does animal farming include?
- (A) Fish farming
 - (B) Cattle farming
 - (C) Poultry farming
 - (D) All of these
70. The inertia of an object tends to cause the object to what?
- (A) To resist any change in its state of motion
 - (B) To decelerate due to friction
 - (C) To increase its speed
 - (D) To decrease its speed

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71. Sprain is caused by excessive pulling of
(A) Muscles (B) Nerves (C) Ligaments (D) Tendons

72. Parenchyma, Collenchyma and sclerenchyma are
(A) Simple permanent tissue (B) Meristematic tissue
(C) Complex permanent tissue (D) All of these

73. What cycle does this image represent?



(A) Biogeochemical cycle (B) Nitrogen cycle
(C) Carbon cycle (D) Water cycle

74. Which type of WBC is most abundant in lymph?
(A) Lymphocyte (B) Eosinophil (C) Monocyte (D) Neutrophil

75. How many types of elements together make up the xylem tissue?
(A) 1 (B) 3 (C) 4 (D) 2

76. An apple falls from a tree because of gravitational attraction between the earth and apple. If F_1 is the magnitude of force exerted by the earth on the apple and F_2 is the magnitude of force exerted by apple on earth, then which of the following is true?
(A) F_1 is very much greater than F_2 (B) F_2 is very much greater than F_1
(C) F_1 is only a little greater than F_2 (D) F_1 and F_2 are equal

77. Humans are classified according to the following hierarchy:
Animalia → Chordata → Mammalia → Primates → Hominidae → Homo → Sapiens

Which category is represented by Primates in the above hierarchy?
(A) Order (B) Genus (C) Kingdom (D) Family

78. Units of 'g' are
(A) m/s^2 (B) N/Kg (C) Nm/s^2 (D) Nms^2

79. Speed of sound is maximum in

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(A) Liquids (B) Solids (C) Gases (D) Plasma

80. Classify the following materials into elements, compounds and mixtures: Methane, granite, blood, sodium, silver, iron, sugar

(A) Elements: Sodium and silver Compounds: Methane, Granite, sugar Mixtures: Iron, blood

(B) Elements: Sodium, silver, iron Compounds: Methane, sugar
Mixtures: Granite, blood

(C) Elements: Sodium, silver, iron Compounds: Methane, blood
Mixtures: Granite, sugar

(D) Elements: Methane, silver, iron Compounds: Sodium, sugar
Mixtures: Granite, blood

81. Calculate the number of molecules of chloroform (CHCl₃) weighing 0.0239g (H =1, C=12, Cl=35.5).

(A) 0.2046×10^{17}

(B) 1.2046×10^{20}

(C) 2.2046×10^{22}

(D) 3.1046×10^{21}

82. Choose the isobar from the following.

(A) ${}^6\text{C}_{12}$ and ${}^6\text{C}_{14}$

(B) ${}^{92}\text{U}_{235}$ and ${}^{92}\text{C}_{238}$

(C) ${}^1\text{H}_1$ and ${}^1\text{C}_2$

(D) ${}^{18}\text{Ar}_{40}$ and ${}^{20}\text{Ca}_{40}$

83. A solution contains 50 ml of ethyl alcohol mixed with 150 ml of water. Calculate the concentration of solution

(A) 25%

(B) 50%

(C) 75%

(D) 60%

84. Which of the following does not increase the rate of evaporation?

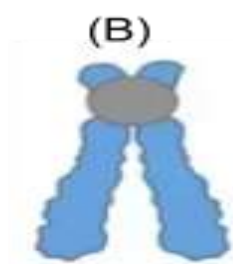
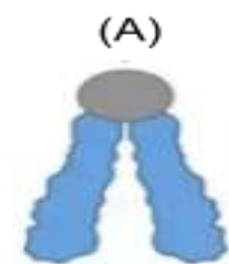
(A) Increase of temperature

(B) Increase in wind speed

(C) Increase in surface area

(D) Increase in humidity

85. Which one of the following is the acrocentric chromosome?



86. A person met with an accident in which two long bones of his hand were dislocated. Which among the following may be the possible reason for this?

(A) Tendon break

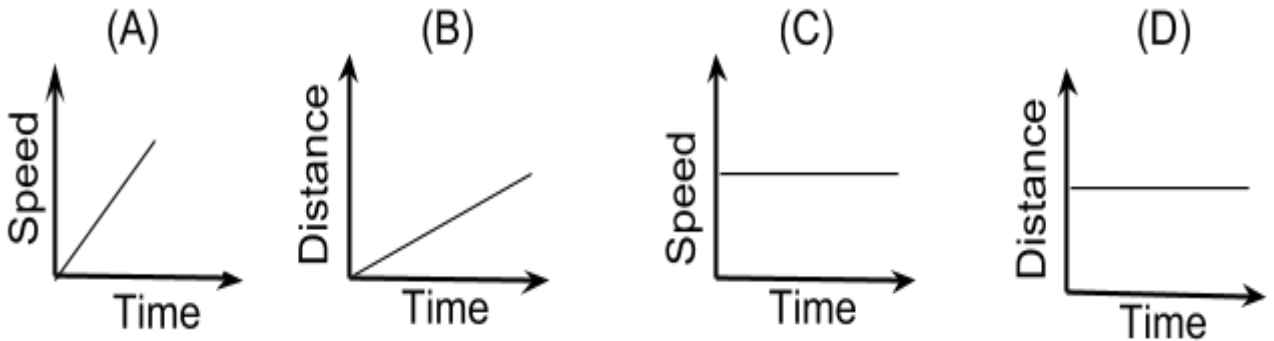
(B) Break of skeletal muscles tissue

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(C) Ligament break

(D) Areolar tissue break

87. Which one of the following graphs shows uniform acceleration?



88. A particle of mass 0.3 kg is subjected to a force $F = kx$ with $k = 15 \text{ N/m}$ and x being its distance from the origin. What will be its initial acceleration if it is released from a point 20 cm away from the origin? A. 5 m/s^2 B. 10 m/s^2 C. 3 m/s^2 D. 15 m/s^2

(A) 5 m/s^2

(B) 10 m/s^2

(C) 3 m/s^2

(D) 15 m/s^2

89. Which of the following statements is correct?

(A) speed and velocity are scalar, distance and velocity are vector

(B) speed distance are vector, velocity and displacement are vector

(C) speed distance are scalar, velocity and displacement are vector

(D) speed and velocity are vector, distance and displacement are scalar

90. A body immersed in a fluid experiences an upward thrust which depends on

(A) The weight of the fluid displaced by it

(B) The volume of the body

(C) The mass of the body

(D) All of these.

General Knowledge

91. Uttar Pradesh Cabinet approves Renaming Of Allahabad To

(A) Prayag

(B) Rudraprayag

(C) Teerthraj Prayag

(D) Prayagraj

92. Twelfth Asia Europe Meeting Summit Begins ----- ?

(A) Brussels

(B) Greece

(C) Spain

(D) Australia

93. N D Tiwari who passed away recently is a famous _____.

(A) Writer

(B) Politician

(C) Actor

(D) Reformer

94. Which won five more gold medals in Asian Para Games 2018?

(A) Indonesia

(B) Pakistan

(C) India

(D) SriLanka

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95. Oil & Natural Gas Corporation (ONGC) has recently discovered Oil and gas reserves in
(A) Harayana, Assam (B) Gujarat, Bihar
(C) Uttarakhand, Maharashtra (D) Madhya Pradesh, West Bengal
96. _____ is India's top region for 4G availability.
(A) New Delhi (B) Hyderabad (C) Kolkata (D) Mumbai
97. China is planning to establish bullet train between _____.
(A) Kolkata and Kunming (B) Aizawl and Lincang
(C) Gorakhpur and Yuxi (D) Guwahati and Lijiang
98. Who Inaugurated Parakram Parv Exhibition In Jodhpur ?
(A) Shri Narendra Modi (B) Shri Suresh Raina
(C) Shri Vignesh Sharma (D) Shri Arun Jaitley
99. Which is the nodal agency of Election commission?
(A) Judiciary (B) Ministry of election
(C) Law Ministry (D) None of the above
100. Where is Kalakkad Mundanthurai Tiger Reserve located?
(A) Kerala (B) Karnataka (C) Andhra Pradesh (D) Tamil Nadu



