

SUMMATIVE ASSESSMENT - II (2015-16)

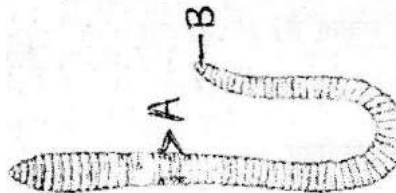
SCIENCE Class - IX BKMHGM5

SDVSPS
Time allowed: 3 hours

Maximum Marks: 90

भाग-अ / SECTION-A

- 1 Write the symbols of : (i) Lead (ii) Boron 1
- 2 An atom of element 'X' has three orbits around its nucleus. What is its maximum electron holding capacity? 1
- 3 Why is it difficult to classify bacteria? Give two reasons. 1
- 4 When a sound is reflected from a distant object, an echo is produced and heard on a winter night. Will you hear the echo of the same sound on a summer day if the distance between reflecting surface and the source of sound remains the same. Justify your answer. 2
- 5 Compare the kinetic energies of two objects of masses 10 kg and 50 kg respectively but having same momentum. 2
- 6 Calculate the molecular mass of the following : 3
(a) Chlorine gas (b) Ammonia gas (c) Sulphur trioxide gas
(Given atomic mass of Cl = 35.5 u, N = 14 u, H = 1u, S = 32 u, O = 16 u)
- 7 (a) What is the relationship between two elements X and Y whose atomic numbers are 18 and 20 respectively but their mass numbers remain same as 40? 3
(b) Are their chemical properties same or different? Explain and support your answer.
(c) Which has more number of electrons Na or Na⁺? Why?
- 8 (i) Write the full form of IUPAC. 3
(ii) Hydrogen and oxygen combine in the ratio of 1:8 by mass to form water. What mass of oxygen gas would be required to react completely with 3g of hydrogen gas?
- 9 One day Disha who is studying in class IX went to mother dairy's vegetable shop where she found some umbrella like structures being sold. She could immediately identify them. 3
(a) What is that structure?
(b) To which kingdom does that belong?
(c) Write two characteristic features of organisms belonging to this kingdom.
- 10 Differentiate between communicable and non-communicable diseases in two points. Give one example of each. 3
- 11 "In an organism, different organs of different systems show interaction and interdependence." Justify this statement giving an example. 3
- 12 (a) Loaded test-tube placed in pure milk sinks to a certain mark (M). Now some water is mixed with the milk. Will the test-tube sink more or less? Explain. 3
(b) What is lactometer?
- 13 (a) Which wave property describes : (i) Pitch (ii) Loudness 3
(b) Give their SI units. (c) Define quality or timber.
- 14 A truck of mass 1800 kg is moving with a speed of 54 km/h when brakes are applied it stops with uniform negative acceleration at a distance of 200 m. Calculate the force applied by the brakes of the truck and the work done before stopping. 3

- 15 Define buoyancy and buoyant force. State the conditions under which a body will float or sink in a fluid/liquid. 3
- 16 Seema and her younger brother Nikhil were playing in a park. Suddenly dark clouds appeared in the sky and there was Thunder and lightning soon it started raining heavily. Nikhil started crying. Seema who is a student of class IX, consoled her brother, by saying that thunder and lightning are natural phenomena not to cry. Seema told her brother that lightning is a season. 3
- (a) We can see light coming from a distant star but cannot hear sound of explosion taking place there. Give reason.
- (b) What values/qualities are shown by Seema. (c) State the cause of thunder.
- 98
- 17 (a) Explain with examples : 5
- (i) atomic number (ii) mass number
- (iii) isotopes (iv) isobars
- (b) Give any one use of isotopes.
- 18 Study the figure and answer the following questions : 5
- (a) Identify the organism and name the phylum to which it belongs.
- (b) Label A and B.
- (c) Name the type of symmetry.
- (d) Name two other organisms belonging to the above phylum.
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- 19 State in tabular form the causative organism and the method of transmission of each of the following diseases. 5
- (a) Cholera (b) AIDS (c) Malari (d) Pneumonia (e) Rabies
- 20 Calculate the electricity bill amount for a month of 30 days, if the following devices are used as specified : 5
- (a) 3 bulbs of 40 W for 6 hours. (b) 4 tubelights of 50 W for 6 hours.
- (c) A refrigerator of 320 W for 24 hours. Given the rate of electricity is ₹ 2.50 per unit.
- 21 Define density and relative density. Give their mathematical formulae and SI units. 5
- Relative density of gold is 19.5. The density of water is 1000 kg/m^3 . What is the density of gold in SI unit and in g/cc.

भाग-ब (मुक्त पाठ)/SECTION - B (OTBA)

(* Please ensure that open text of the given theme is supplied with this question paper.)

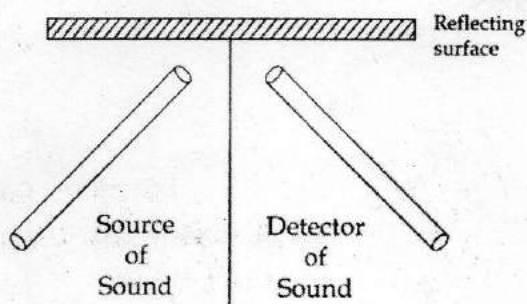
हमारे देश में अनावृष्टि (सूखा) प्रबंधन/ Handling Drought in our Country

- 22 How droughts can be monitored at national and state level? 2
- 23 Answer the following questions based on the bar graph given in the text: 3
- a. Which region in India has recorded the minimum rain deficit and which region has recorded the maximum rain deficit during the current monsoon?
- b. What can be the consequence if this situation persists or worsens in future?
- c. How can this situation affect the people of India?
- 24 A drought affects all aspects of our society. Explain in relation with- a) Economy b) Environment 5



Section - C

- 25 For verifying the laws of reflection of sound, a student set up his apparatus. To get the experiment performed successfully the reflecting surface should be : 1



- (a) rigid board.
 (b) wooden board with many holes in it.
 (c) foam padded board.
 (d) sheet of cloth.

- 26 Simran and Disha are friends, they go for a beach walk, Disha is comfortable to walk in shoes but Simran is not as she is wearing high heels this is because : 1

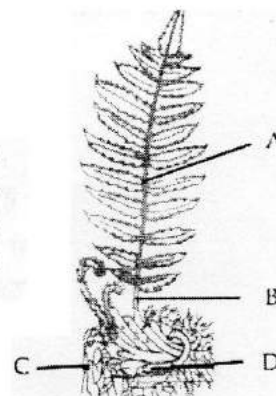
- (a) pressure exerted by heels is more as area of heels is less.
 (b) pressure exerted by heels is less as area of heels is more.
 (c) pressure exerted by heels and area of heels both are equal.
 (d) pressure exerted by heels is zero.

- 27 The reason to find average velocity of pulse instead of individual velocity is : 1

- (a) It is a rule to be followed in every experiment.
 (b) Average helps us to know incorrect value.
 (c) It eliminates the effect of any deviation in the reading due to human error.
 (d) Velocity is a vector quantity hence its value is used in average.

- 28 The correct labelling of different parts A, B, C and D of fern plant shown in the figure is : 1

- (a) A - Leaf, B - Petiole, C - Adventitious roots, D - Rhizome
 (b) A - Petiole, B - Leaf, C - Rhizome, D - Adventitious roots
 (c) A - Rhizome, B - Leaf, C - Petiole, D - Adventitious roots
 (d) A - Adventitious roots, B - Leaf, C - Petiole, D - Rhizome



- 29 When a chemical reaction is carried out between aqueous copper sulphate and sodium carbonate solution, the precipitates formed is of : 1

- (a) copper carbonate (c) sodium chloride
 (b) sodium sulphate (d) none of the above

- 30 On complete combustion of a hydrocarbon in sufficient oxygen, carbon dioxide and water are produced. Then according to the law of conservation of mass : 1

- (a) Mass of hydrocarbon = Mass of Carbon dioxide + mass of water
 (b) Mass of hydrocarbon + mass of oxygen = Mass of Carbon dioxide + mass of water
 (c) Mass of hydrocarbon + Mass of oxygen = Mass of carbon dioxide + mass of water
 (d) Mass of oxygen + mass of carbon dioxide = Mass of hydro carbon + mass of water

- 31 The group to which grasses belongs is : 1
 (a) Monocotyledonous (b) Dicotyledonous
 (c) Gymnosperms (d) Pteridophytes
- 32 From the plants given below the plant which is monocotyledonous is : 1
 (a) rose (b) potato
 (c) pea (d) maize
- 33 Which stage in the life cycle of a mosquito is depicted in the figure given below ? 1
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- (a) larva stage (b) egg stage
 (c) pupa stage (d) adult stage
- 34 A spring balance calibrated in Newton reads 19.6 N. Calculate its mass in grams. 2
- 35 A student immersed a solid body completely in different fluids filled in four test tubes with salt water, tap water, alcohol and milk respectively. In which fluid there will be maximum loss in weight ? Explain with suitable reason. 2
- 36 Mention two features adopted by birds which help them to fly.