



SUMMATIVE ASSESSMENT - II (2015-16)

CPS Smastipur

SCIENCE

Class - IX

5XENL4H

Time allowed: 3 hours

Maximum Marks: 90

SECTION-A

- 1 Write the symbols of : (i) Lead (ii) Boron 1
- 2 According to Bohr and Bury scheme what is the maximum number of electrons present in M-shell of an atom? 1
- 3 Name one organ each affected by (i) malaria (ii) tuberculosis 1
- 4 An observer standing at a seacoast observes 60 waves reaching the coast per minute. If the wavelength of a wave is 10 m., find the velocity of the wave. 2
- 5 Why is depression less when a girl walks with flat shoes on the soft sand than with sharp heels? 2
- 6 (a) Calculate the number of molecules of SO_2 present in 44 g of it. 3
(b) If one mole of oxygen atoms weigh 16 grams find the mass of one atom of oxygen (in grams).
- 7 (a) What are canal rays? State the nature of the constituents of canal rays. 3
(b) Who discovered canal rays?
- 8 An element 'X' forms the following compounds with hydrogen, carbon and phosphorous : P_2X_3 , P_2X_5 , H_2X_2 , H_2X , CX_2 , CX . Find the valencies of 'X' and other element present in the compound. 3
- 9 Define classification of organisms. Why do we need to classify them? Mention any two major characteristics used for classifying organisms. 3
- 10 What is a disease? How many types of diseases have you studied? Give any two examples. 3
- 11 (a) What is the scientific name of humans? 3
(b) To which class of vertebrates does it belong?
(c) Mention any two characteristic features of this group.
- 12 A block of glass is kept on a wooden board. The mass of glass block is 2 kg and its dimensions are $8 \text{ cm} \times 5 \text{ cm} \times 1 \text{ cm}$. Find the pressure exerted by the glass block on wooden board if it is made to lie on the board with its dimensions
(a) $5 \text{ cm} \times 1 \text{ cm}$ (b) $8 \text{ cm} \times 5 \text{ cm}$ 3
- 13 A man has an audible range from 20 Hz to 20 kHz. What are the wavelengths of sound in air corresponding to these two frequencies. (Speed of sound in air is 344 m/s.) 3
- 14 Define work. State SI unit of work. Calculate the work done in pushing a cart through a distance of 4 m against the force of friction equal to 150 N. Also state the type of work done. 3
- 15 Define power. Two girls A and B each of weight 500 N climb up a rope through a height of 10 m. Girl A takes 20s where as B takes 50s to accomplish this task. Calculate the power expended by each girl. 3



16 Rahul and his younger brother Rohan went to see Dussehra fair. Rohan purchased a bow and arrow there and tried to aim but, the arrow fell on the ground just below. Then Rahul told him to stretch the string and then release. Rohan did the same and was able to release the arrow to a good distance. 3

- What type of energy is possessed by the stretched string ?
- How did the arrow gain Kinetic energy ?
- Mention the values shown by Rahul and Rohan.

17 Number of electrons, protons and neutrons in chemical species A,B,C and D is given below : 5

Element	Electrons	Protons	Neutrons
A	2	3	4
B	10	9	8
C	8	8	8
D	8	8	10

Now answer the following questions :

- What is the mass number of A and B ?
- What is the atomic number of B ?
- Which two elements represent a pair of isotopes and why ?
- What is the valency of element C ? Also justify your answers.

18 Differentiate between flatworm, round worm and segmented worms, giving an example of each. 5

- Antibiotics are successful in curing bacterial infections but do not cure viral infections. Why ? 5
- List two conditions essential for good health.
 - How does healthy balanced diet help in preventing diseases ?

20 (a) When a sound is reflected from a distant object, an echo is heard. Let the distance between the reflecting surface and the source of sound production remain the same, will you still hear an echo on a hotter day? Explain with reason. 5

(b) What is reverberation? How can it be reduced?

- State Archimedes' principle. 5
- Explain giving reason the following :
 - It is easier to swim in sea water than in river water.
 - A nail can be easily fixed on a wall by putting its pointed edge on it.
 - It is difficult to cut a fruit with a blunt knife.

भाग-ब (मुक्त पाठ)/SECTION - B (OTBA)

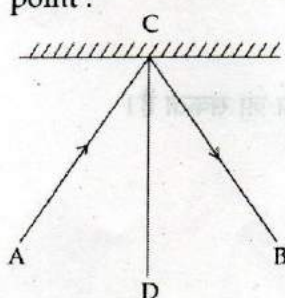
(* Please ensure that open text of the given theme is supplied with this question paper.)

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

- Expand ■ NRSC ■ RCPR 2
- State the measures taken by state government to minimise the effect of drought. 3
- What steps should be taken by the country to fight against drought. 5



- 25 The figure given below shows a line diagram for the verification of laws of reflection for a sound wave. The vibrating tuning fork should be held at point :



- (a) A (b) B (c) C (d) D

- 26 $1\text{N}/\text{m}^2$ is equal to :

- (a) 10 Pa (b) 100 Pa
 (c) 1 Pa (d) 1.01×10^5 Pa

- 27 Four students determined velocity of a pulse in a slinky. They found that the pulse took 7.5 seconds to complete three times the length of the slinky which is 15 m. The velocity of the pulse calculated by them is :

- (a) 6.5 m/s (b) 6.0 m/s
 (c) 7.5 m/s (d) 3.5 m/s

- 28 Organisms which obtain their food from non-living material in their environment are called :

- (a) Parasites (b) Saprophytes
 (c) Epiphytes (d) Sporophytes

- 29 When a chemical reaction between aqueous silver nitrate and aqueous sodium chloride is carried out, white precipitates of silver chloride is formed. The above reaction is an example of :

- (a) Displacement reaction. (c) Decomposition reaction.
 (b) Double displacement reaction. (d) Combination reaction.

- 30 If in a chemical reaction one of the products is a gas, then to verify the law of conservation of mass reaction, the reaction will be carried out in an / a :

- (a) open container (b) closed container
 (c) under water (d) empty room

- 31 In dicotyledonous plants roots arise from :

- (a) Plumule (b) Radicle
 (c) Cotyledons (d) Nodes

- 32 Four students Ali, David, Ravi and Jaya observed the external features of monocotyledonous and dicotyledonous plants and recorded their observations which are as follows :

	Features			
	Monocot		Dicot	
Student	Root	Venation	Root	Venation
Ali	Fibrous	Parallel	Tap	Reticulate
David	Tap	Parallel	Fibrous	Reticulate
Ravi	Fibrous	Reticulate	Tap	Parallel
Jaya	Tap	Reticulate	Fibrous	Parallel

The student whose observations are correct is :

- (a) Ali (b) David (c) Ravi (d) Jaya.

- 33 The stage in the life cycle of a mosquito which appears like a worm is :

- (a) Larva (b) Pupa
 (c) Adult (d) Egg

- 34 A student has compressed a body to one-third of its previous volume. What will be its density ?

