

SUMMATIVE ASSESSMENT - II (2014-15) COEOCBM SCIENCE Class - IX SDV SAMASTIPUR

Time allowed: 3 hours

Maximum Marks: 90

SECTION-A

1. Write the names of the elements present in quicklime. 1
2. What was Bohr's postulate on revolution of electrons in the orbits of atom? 1
3. What was the modification made by Carl Woese in Robert Whittaker's classification of living organisms? 1
4. A sound wave travels at a speed of 340 m/s. If its wavelength is 1.5 cm, what is the frequency of the wave? Will it be audible? 2
5. Why is depression less when a girl walks with flat shoes on the soft sand than with sharp heels? 2
6. (a) Carbon and oxygen combine in a ratio of 3 : 8 by mass to form carbon/dioxide. Deduce the ratio by number of atoms in the compound.
(b) While searching for various atomic mass units, scientists initially took 1/16 of the mass of an atom of naturally occurring oxygen as the unit. State two reasons. (atomic masses O=16, C=12) 3
7. (a) Which kind of elements have tendency to lose electron? Give example. 3
(b) What are nucleons?
8. (a) Define the following terms with one example each. 3
(i) Isotope (ii) Isobar
(b) Name the elements whose isotopes are used in :
(i) Nuclear Reactor (ii) Treatment of cancer
9. Write any three concrete examples of the characteristics that are used for a hierarchical classification. 3
10. An active immune system forms many cells to the affected tissue to kill off the disease causing microbes. Identify the process and mention its local and general effects. 3
11. Given below are few situations : 3
(i) Geeta of Class IX was having common cold. She sits with Sarika who also develops the diseases.
(ii) Animesh of Class IX shifted to a new residence, with his family, where water purification system has not been installed yet. He develops Cholera and dysentery.
Associate these situations with their mode of transmission and assign appropriate category to them.
12. A boy of mass 50 Kg runs up a staircase of 45 steps in 9 s. If the height of each step of the staircase is 15 cm, find the power of the boy. ($g=10\text{m/s}^2$) 3
13. The dimensions of a rectangular block of mass 10 kg kept on a table are $0.2 \times 0.1 \times 0.05 \text{ m}^3$. Find the pressure exerted by the block if it is kept on the table with sides of dimensions : 3
(a) $0.2 \times 0.1 \text{ m}^2$ and (b) $0.1 \times 0.05 \text{ m}^2$? (Take $g=10 \text{ m/s}^2$)
14. Name the types of waves and two examples associated with : 3
(a) Compressions and rarefactions. (b) Crests and troughs.

- 28 Which of the following is not a feature of monocots ? 1
(a) Trimerous flowers (c) Leaf with parallel venation
(b) Fibrous root system (d) Secondary growth
- 29 In order to verify the law of conservation of mass, we carry out chemical reactions in a closed container, so that 1
(a) gaseous products do not escape (c) reactants do not mix with the products
(b) heat transfer does not occur (d) none of the above
- 30 5.3 g acetic acid combines with 6 g sodium carbonate to form 2.2 g sodium ethanoate, 0.9 g carbon di-oxide and some water. If the law of conservation of mass in a chemical reaction is true, then the mass of water produced will be : 1
(a) 8.20 g (b) 8.02 g (c) 8.0 g (d) 0.3 g
- 31 The number of cotyledons found in a dicotyledonous plant is : 1
(a) 2 (b) 3 (c) 4 (d) 5
- 32 Which of the following statement is correct with respect to dicotyledonous plants ? 1
(a) Reticulate venation, tap root, pentamerous flowers.
(b) Parallel venation, tap root and pentamerous flowers.
(c) Parallel venation, fibrous root and trimerous flower.
(d) Trimerous flower, reticulate venation and tap root.
- 33 Out of the various stages in the life cycle of a mosquito in which stage it does not feed but gradually changes into adult ? 1
(a) Eggs (b) Pupa (c) Larvae (d) Late larvae
- 34 In the experiment of finding volume of a solid by immersing it into water, the initial reading of water level in graduated cylinder was 16.2 mL. On immersing the given solid completely into water, the water level in graduated cylinder rose to 19.7 mL. Find the volume of the solid. 2
- 35 A 200 g wt. solid block of aluminium (density Al = 2.70 g / cc) is placed in a beaker of water. The same is done in another beaker with a 200 g solid block of lead (density lead = 11.3 g/cc). Compare the amount of water displaced by block of aluminium and block of lead. 2
- 36 Name two specific features of the fish due to which they are categorized under phylum pisces. 4