

Arvind

9-D

Roll no 5

SUMMATIVE ASSESSMENT - II (2015-16)

8VOEMUF

SCIENCE

Class - IX

Time allowed: 3 hours

Maximum Marks: 90

General Instructions :

- (i) The question paper comprises of three Sections, A, B and C. You are to attempt all the sections.
- (ii) All questions are compulsory.
- (iii) All questions of Section-A, Section-B and Section-C are to be attempted separately.
- (iv) Question numbers 1 to 3 in Section-A are one mark questions. These are to be answered in one word or in one sentence.
- (v) Question numbers 4 and 5 in Section-A are two marks questions. These are to be answered in about 30 words each.
- (vi) Question numbers 6 to 16 in Section-A are three marks questions. These are to be answered in about 50 words each.
- (vii) Question numbers 17 to 21 in Section-A are five marks questions. These are to be answered in about 70 words each.
- (viii) Section B has 3 OTBA questions. Question number 22 is two marks, Question number 23 is three marks and Question number 24 is five marks question.
- (ix) Question numbers 25 to 33 in Section-C are multiple choice questions based on practical skills. Each question is a one mark question. You are to select one most appropriate response out of the four provided to you.
- (x) Question numbers 34 to 36 in section C are two marks questions based on practical skills. These are to be answered in about 30 words each.

SECTION-A

- 1 Write the names of the elements present in quicklime. 1
- 2 Electron attributes negative charge, protons attribute positive charge. An atom has both but why there is no charge ? 1
- 3 Give one word for the following : 1
 - (a) a collection of related species
 - (b) Plants with naked seeds
- 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 Compute the speed of 2kg ball having kinetic energy of 4 J. 2
- 6 What are ions ? Write the formulae of two divalent cations and anions each. 3
- 7 (a) From the symbol ${}_{16}^{32}\text{S}$ state : 3
 - (i) Atomic number of sulphur
 - (ii) Mass number of sulphur
 - (iii) Electronic configuration of sulphur

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- (7) Which of the two elements given below would be chemically more reactive 'X' of atomic number 18 or element Z of atomic number 16 and why ?
- 8) Calculate the percentage composition by mass of each of the constituent atoms in a single molecule of carbon dioxide. 3
(Given atomic mass of C = 12 u, O = 16 u)
- 9) State a characteristic feature of thallophytes? Name two thallophytes which are predominantly aquatic. 3
- 10) What is the basis of principle of immunisation? Explain in brief. 3
- 11 Differentiate between acute and chronic diseases and classify the following diseases into these two groups : elephantiasis, dysentery, measles, tuberculosis. 3
- 12 (a) Name the forces acting on a body when it is fully or partially immersed in a liquid. 3
(b) Briefly explain, why some objects float and some sink in the liquid.
- 13 (i) The speed of certain waves depends on the medium. 3
(a) What kind of waves are they?
(b) Give two kind of such waves and give one difference between them. Give one example of each.
(ii) Name one type of wave which does not need any material medium to propagate.
- 14 Define : 3
(a) potential energy
(b) work done
(c) kinetic energy. Give SI unit of each.
- 15 Define relative density. Relative density of mercury is 13.6. The density of water is 10^3 kg/m^3 . What is the density of mercury in S.I. unit ? 3
- 16 Harsha was watching a programme based on ships on television. She saw a device attached to a ship through which the man on the ship located the enemy submarines and sent the message to the headquarters. 3
(a) Name the device fitted in the ship.
(b) On which principle does the device work ?
(c) What values are shown by Harsha ?
- 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 :
- (a) What is the mass number of A and B ?
(b) What is the atomic number of B ?
(c) Which two elements represent a pair of isotopes and why ?

(d) What is the valency of element C ?
Also justify your answers.

18 Associate the following features with appropriate organisms and their kingdom (in ii and iv), 5
division (in i) and phylum (in iii and v) :

- (i) Presence of pyrenoids
- (ii) Presence of heterocysts
- (iii) Presence of genital papillae and anus
- (iv) Presence of chloroplast and flagella
- (v) Presence of palp and parapodia.

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Vikas Bharti

19 Akhilesh is having headache and fever. He takes some pills to bring down the fever and 5
headache before going to the doctor. What is this type of treatment called ? How can we
reduce the effects of the disease ? What is the limitation of this type of treatment ? What is the
possible remedy of these diseases ?

- 20 (a) Define power. Give its SI unit. 5
(b) How is KWh different from KW. Find the relation between commercial and SI unit of
energy.
(c) A body of mass 100 kg is lifted up by 10 m. Find :
(i) the amount of work done,
(ii) potential energy of the body at that height. ($g = 10 \text{ m/s}^2$)

- 21 (a) A cube of side 5 cm is immersed in water and then in saturated salt solution. In which 5
case will it experience a greater buoyant forces ? If each side of the cube is reduced to 4
cm and then immersed in water, what will be the effect on the buoyant force
experienced by the cube as compared to the first case for water. Give reason for each
case.
(b) A ball weighing 4 kg of density 4000 kg/m^3 is completely immersed in water of
density 10^3 kg/m^3 . Find the buoyant force on it. (Given $g = 10 \text{ m/s}^2$)

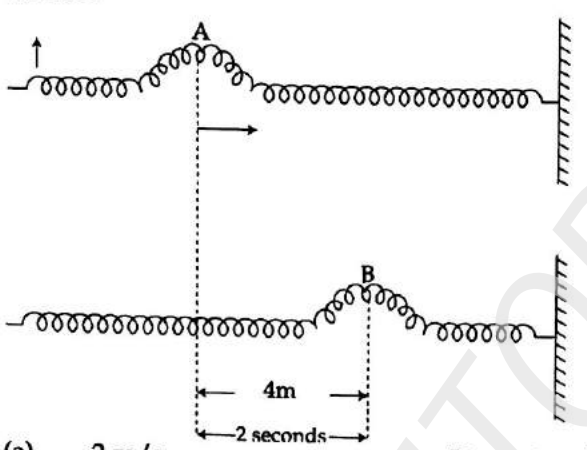
SECTION - B (OTBA)

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

- 22 Which are the main inland water resources of our country? 2
- 23 What are the main causes of misuse of water bodies? What are the necessary precautions that 3
need to be taken?
- 24 What lessons are learnt from the project carried out in Tikamgarh district of Madhya Pradesh 5
in order to conserve water and the water bodies?

Section - C

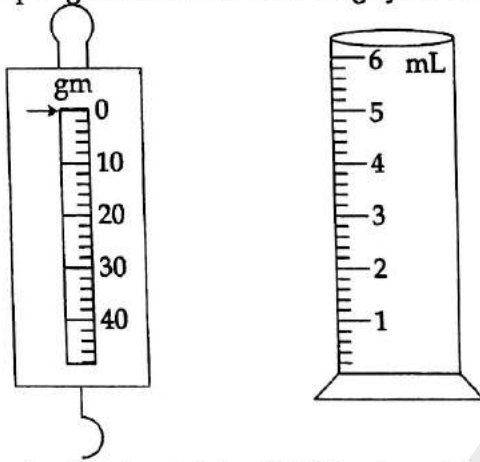
- 25 The sound received in the ears while doing the experiment to verify the laws of reflection of 1
sound should be :
- (a) The direct sound from the clock.
 - (b) The sound reflected from any reflecting surface.
 - (c) The sound coming through the tube after reflection.
 - (d) Any of these.

26. A metallic cuboid of mass 15 kg and dimensions 10cmx15cm x 5cm is placed on ground which exerts pressure on its surface. The minimum pressure which the metallic cuboid exerts on the ground is
- (a) 10000 Pa (b) 20000 Pa
(c) 15000 Pa (d) 30000 Pa
27. A slinky is attached with a fixed support as shown in figure. After disturbance pulse cover a distance of 4 m in 2 seconds. The velocity of a pulse propagated through a stretched slinky will be :
- 
- (a) 2 m/s (b) 8 m/s
(c) 0.2 m/s (d) 1 m/s
28. The leaves in dicotyledonous plants show :
- (a) Reticulate venation (b) Parallel venation
(c) No venation (d) Both (a) and (b)
29. In an experiment to verify the law of conservation of mass weighing of those contents which is essential are :-
- (a) Only reactants
(b) Only products
(c) Both reactants and the products
(d) Weighing is not essential
30. To verify the law of conservation of mass in the laboratory, a student carried out the reaction between 1.16 g sodium chloride and silver nitrate in conical flask. How much silver nitrate should react with 1.16 g sodium chloride to form 1.7 g sodium nitrate and 2.87 g silver chloride ?
- (a) 3.41 g (b) 2.86 g
(c) 2.87 g (d) 4.57 g
31. Leaves of which of the following plants have parallel venation ?
- (a) Rose (b) Tulsi
(c) Pipal (d) Grass
32. Monocotyledonous and Dicotyledonous plants belong to ?
- (a) angiosperms (b) gymnosperms
(c) bryophyta (d) pteridophyta

33 Out of the following statements regarding the different stages in the life cycle of a mosquito 1
which one is incorrect ?

- (a) The eggs of mosquito are deposited on stagnant water.
- (b) The larvae hatch out from the eggs within a few hours.
- (c) The larva stage is followed by the pupa stage.
- (d) From the pupa an adult mosquito emerges.

34 The figures below show a spring balance and a measuring cylinder. Find the least count of 2
spring balance and measuring cylinder.

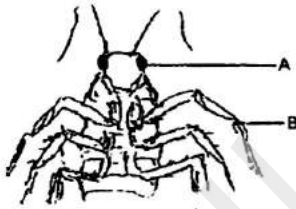


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9-2 Vikas Buarati

35 An object weighing 10 N in air, weighs 8N in a liquid A and 9N in liquid B. In which liquid 2
the buoyant force experienced by the liquid is more and why ?

36 Identify the organism given below and label the parts A and B : 2



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