SET - 2

INDIAN SCHOOL SOHAR
PERIODIC ASSESSMENT – 3 (2019-20)
SCIENCE

CLASS: IX **MAX. MARKS: 20**
DATE: 09/01/2020 **DURATION: 45 MINS**

General Instructions:

*(i) The question paper consists of **10** questions. All questions are compulsory.*
*(ii) Question numbers **1** to **6** are one- mark questions comprising of **MCQ, VSA** and **Assertion- Reason** type questions. These are to be answered in one word or in one sentence.*
*(iii) Question numbers **7** to **9** are three- marks questions. These are to be answered in about 30 words each.*
*(iv) Question number **10** is a five- mark question. This is to be answered in about 50 words.*
(v) There is no overall choice. However, an internal choice is provided in one question of 3 marks and in one question of 5 marks.
*(vii) Directions to attempt **Assertion- Reason** questions. In questions (5 and 6), the Assertion(A) and Reason (R) has been put forward. Read both the statements carefully and choose the correct alternative from the following:*

- *Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion, then mark (**A**)*
- *The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion, then mark (**B**)*
- *The Assertion is true but the Reason is false, then mark (**C**)*
- *The Assertion is false but the Reason is true, then mark (**D**)*
- *Both the statements are false, then mark (**E**)*

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1. Action force and reaction force act on…….
   a) the same body in opposite directions. b) different bodies in opposite directions.
   c) the same body in the same direction. d) different bodies in the same direction. 1

2. We can separate different gases from air by
   (a) Filtration (b) Fractional distillation
   (c) Sublimation (d) Simple distillation 1

3. Sugar crystals dissolve faster in hot water than cold water. Justify. 1

4. State the two factors which determine the magnitude of buoyant force acting on a body, immersed in a fluid. 1

5. **Assertion (A):** 17 g of ammonia decomposed to produce 14 g of nitrogen and 3 g of hydrogen.
   Reason (R): In ammonia, nitrogen and hydrogen are always present in the ratio of 3:14 by mass.
   a) A b) B c) C d) D e) E 1

6. **Assertion (A)**: Plants with well differentiated reproductive tissue that make seeds are called cryptogams.
   Reason (B): Angiosperms are divided into two groups as monocots and dicots.
   a) A b) B c) C d) D e) E 1

7. You must have observed the following animals in your surrounding or in a museum. Mention the class/phylum to which they belong? Give one important characteristic feature that assigns them to their respective class/phylum.

a) Prawns b) Salamander c) Jellyfish

OR

(a) Name the following:

(i) The process by which amoeba acquires its food.

(ii) Packaging and dispatching unit of the cell.

(iii) Animal tissue connecting muscles to bones.

(b Name the phylum/group/class that have the following characteristics.

(i) Animals without tissues, body bearing pores.

(ii) They are saprotrophs, have cell wall made of a complex sugar called chitin.

(iv) Animals which are jawless,have slimy skin and are ectoparasites. 3

8**. Answer the questions on the basis of your understanding of the following paragraph and the related studied concepts.**

According to the World Health Organization, more than 8.8 million people worldwide are infected with tuberculosis, and almost 1.6 million people per year die from tuberculosis. There are about 14,000 cases of tuberculosis every year in the U.S. "TB continues to be a really major problem in the world. It's huge," Hamilton says.

a) Name the causative agent of the above disease.

b) How is this disease transmitted from one person to another?

c) Write two preventive measures to overcome it. 3

9. (a) Write the chemical formula of Zinc nitrate.

(b) Give an example of tetratomic molecule of an element.

(c) Find the number of moles in 65g of $CaCO_3$.

(Atomic Masses of Ca=40u, C=12u, O=16u) 3

10. a) Define the term work. State two factors on which the magnitude of work depends.

b) What is the work done by the force of gravity on a satellite moving around the earth?

c) What work to be done to increase the velocity of a car from 36km/h to 72km/h, if the mass of the car is 500kg?

OR

a) Write the formula to find the magnitude of the gravitational force between earth and an object on the surface of the earth.

b) Gravitational force acts on all objects in proportion to their masses. Why then, a heavy object does not fall faster than a light object?

c) An object is thrown up with a velocity of 20m/s. Find,

i) the maximum height attained by it

ii) the total time taken by it to return back. 5

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SET - 1

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1. The slope of a velocity time graph shows……
   a) speed b) distance c) uniform acceleration d) displacement 1

2. A mixture of acetone and water can be separated by…….
   a) Filtration b) Evaporation c) Sublimation d) Distillation 1

3. Wet clothes dry quickly in the sun than in the shade. Give reason. 1

4. Name the forces acting on a body when it is fully or partially immersed in a liquid. 1

5. **Assertion (A):** 9 g of water decomposed to produce 1 g of hydrogen and 8 g of oxygen.
   Reason (R): In water, hydrogen and oxygen are always present in the ratio of 2:1 by mass. 1
   a) A b) B c) C d) D e) E

6. **Assertion (A):** Reptiles are cold blooded animals, have scales and are oviparous.
   Reason (B): All reptiles have four chambered heart. 1
   a) A b) B c) C d) D e) E

7. a) Write the chemical formula of Aluminium phosphate.
   b) Give an example of polyatomic molecule of an element.
   c) Find the number of moles in 87g of K_2SO_4.
   (Atomic Masses of K=39u, S=32u, O=16u) 3

8. You are given Neries & Scorpion and both have segments and organ level organization. How will you classify them? State any two salient features of each.

OR

(a) Name the following:

(i) Packaging and dispatching unit of the cell.

(ii) The meristem located at the node.

(iii) Incipient nucleus of prokaryotes.

(b) Which phylum/group/class shows the following characteristic features?

(i) Body of the animal is scale less , slimy and has circular mouth.

(ii) The plants of this group bear naked seeds and are usually perennial.

(iv) Animals are spiny skinned, have tube feet and show radial symmetry in adults. 3

9. **Answer the questions on the basis of your understanding of the following paragraph and the related studied concepts**.

An estimated 1.7 million individuals worldwide became newly infected with **HIV** in **2018**. Although people know a lot more about HIV than they used to, there are still plenty of misconceptions about the virus. Unfortunately, false assumptions can increase the risk of infection and the odds of transmitting the virus to someone else.

a) Name the disease caused by HIV?

b) Write any two modes of transmission of the virus.

c) Mention two preventive measures to overcome it. 3

10. a) Define the term potential energy.

b) Name the type of energy possessed by the following.

i) stretched slinky ii) speeding car

c) A 2.5kg ball is thrown upwards with a speed of 14m/s (g=10m/s^2).

i) Calculate the maximum height attained by it?

ii) Find the potential energy when it reaches the highest point?

OR

a) What is the importance of Universal law of Gravitation? (two points)

b) How does the weight of an object vary from place to place?

c) Gravitational force on the surface of the moon is only $^1/_6$ as strong as that on earth. What is the weight in Newtons of an 18kg object on the moon and on the earth? 5

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