

DELHI PUBLIC SCHOOL, JAMMU
SESSION (2019-2020)
ASSIGNMENT

Class: IX

Subject: Science

GENERAL INSTRUCTIONS:

1. The question paper comprises three sections – A, B, C. Attempt all the sections.
2. All questions in section A are one mark questions comprising MCQ, VSA type and assertion-reason type questions. They are to be answer in one word or in one sentence.
3. All questions in section B are three marks, short answer type questions. These are to be answered in about 50-60 words each.
4. All questions in section C are five marks, long answer type questions. These are to be answered in about 80-90 words each.
5. This Assignment consists of a total of 30 questions.

SECTION A

1. Action-reaction forces act;
 - (a) On different bodies
 - (b) On the same body
 - (c) Along different lines
 - (d) In the same direction
2. The inertia of an object tends to cause the object;
 - (a) To increase its speed
 - (b) To decrease its speed
 - (c) To resist any change in its state of motion
 - (d) None of these
3. Rocket works on the principle of conservation of;
 - (a) Velocity
 - (b) Momentum
 - (c) Mass
 - (d) Energy
4. The quantitative definition of force is given by;
 - (a) Newton's 2nd law
 - (b) Newton's 1st law
 - (c) Newton's 3rd law
 - (d) None of these
5. The area under a speed time graph is represented by _____.
6. Newton's law of gravitation is valid _____.
7. The mass of the body is measured to be 12 kg on the earth. If it is taken to the moon, its mass will be
 - (a). 12 kg
 - (b). 6 kg
 - (c). 2 kg
 - (d). 72 kg
8. List any three general functions of connective tissues.
9. List any two functions of areolar tissue.
10. Who is known as father of taxonomy.
11. Radial symmetry is seen in
 - (a). sponges
 - (b). fishes
 - (c). star fishes
 - (d). mollusks

12. Cholera is caused by _____.
13. All living organisms on or around earth constitute _____.
14. Spirogyra belongs to class
- algae
 - fungi
 - lichens
 - reptilian
15. A, liquid non metal, amongst the following is
- bromine
 - mercury
 - phosphorous
 - both a and b
16. Oil and water donot mix easily. They are said to be _____.
17. Mass of one atom of oxygen is _____.
18. Take a piece of stone and tie it to one end of a rubber string.
Suspend the stone by holding the balance or the string. Note the elongation of the string or the reading on the spring balance due to the weight of the stone. Now slowly dip he stone in the water in a container. Observe what happens to elongation of the string or the reading on the balance.
- Define Archimedes principle.
 - Why ship float over the surface of water.
19. Concept of compressional and rarefaction waves by using slinky..
Clarification: Take a slinky. Ask your friend to hold one end. You hold the other end. Now stretch the slinky. Then give it a sharp push towards your friend. If you move your hand pushing and pulling the slinky alternatively, you will observe the slinky will move back and forth parallel to the direction of the propagation of the disturbance.
- Differentiate between compression and rarefaction.
 - Nature of light waves depends on _____.

In the following question, a statement of assertion is given by the corresponding statement of reason. Of the statements, mark the correct answer.

- If both the assertion and reason are true and reason is the correct explanation of assertion
 - If both assertion and reason are true, but reason is not the correct explanation of assertion.
 - If assertion is true but reason is false.
 - If assertion is false but reason is true.
20. Assertion: A mole of any substance contains as many chemical entities as the number of atoms present in 12 g of carbon-12.
21. Reason: The number is experimentally found to be equal to 6.023×10^{23} and is called one mole.
- Assertion : On firing the bullet moves forward with the momentum of mv.
- Reason: In order to conserve the momentum, the gun acquires the equal momentum of MV.

SECTION B

22. Why do gases expand more than solids for the same increase in temperature.
23. Differentiate between homogeneous and heterogeneous mixtures.
24. Explain why sugar cannot be separated from sugar solution by filtration.
25. Write the names of following compounds.
a. H_2S b. CO c. N_2O_4 d. PCl_3
26. The atomic mass of Cu is 64u. How many times the atoms of Cu are heavier than the C-atom?
27. Differentiate between hypotonic, isotonic and hypertonic solutions.
28. Draw a well labelled diagram of nucleus and explain its structure.
29. How many types of elements are present in phloem? Explain their functions.
30. Differentiate between acute and chronic diseases.
31. Explain the Kepler's law of planetary motion.
32. What is the work done in increasing the velocity of a car from 30 kmph to 60 kmph, if the mass of the car is 1500 kg.
33. Explain the experimental verification of reflection of sound.

SECTION C

34. Explain in detail the construction and working of Human Ear.
35. What is power? How do you differentiate kW from kWh? The Jog Falls in Karnataka state are nearly 250 m high. 9000 tonnes of water falls from it in a minute. Calculate the equivalent power if all this energy can be utilized?
36. On earth, a stone is thrown from a height in a direction parallel to earth's surface while another stone is dropped from the same height. Which stone would reach the ground first and why?
37. Draw labelled diagram of the different types of muscle tissue. Differentiate these muscles on basis of their occurrence, nature, activity, nucleus and striations.
38. What are phanerogams? Name the subkingdoms of phanerogamae. Give two characteristics of each subkingdom.
39. Explain the law of multiple proportions. Explain the drawbacks of Dalton's atomic theory.
40. Why did Rutherford select a gold foil in his alpha scattering experiment. In what ways Rutherford atomic model is different from Thomson atomic model.