



A Unit of Soundarya Educational Trust (R)
SOUNDARYA CENTRAL SCHOOL
Affiliated to CBSE – New Delhi

ANNUAL EXAMINATION 2018 – 2019

SUBJECT: SCIENCE

Grade: IX

Marks: 80
Time: 3 hrs.

General Instructions:-

- The question paper comprises two sections, A and B. You are to attempt both the sections.
- All questions are compulsory.
- All questions of section A and B are to be attempted separately.
- There is an internal choice in three questions of three marks each, two questions of five mark each and one question (for assessing the practical skill) of two mark.
- Question numbers 1 – 2 are one mark questions. These are to be answered in one word or in one sentence.
- Question numbers 3 – 5 are two marks questions. These are to be answered in about 30 words each.
- Question numbers 6 – 15 are three marks questions. These are to be answered in about 50 words each.
- Question numbers 16 – 21 are five marks questions. These are to be answered in about 70 words each.
- Question numbers 22 – 27 in Section B are based on practical skill. Each question is a two mark question. These are to be answered in brief.

SECTION A

1. Define the law of conservation of momentum.
2. Where is the chemical Suberin located in plants? State its role.
3. Give the symbols of the following elements:
(a) Copper (b) Potassium (c) Neon (d) Chlorine

OR

A student was given with the mixture of iron filings and sulphur. He was asked to heat the mixture. On the basis of his observation answer the following:

- (a) What is the colour of the compound formed?
 - (b) Write the action of carbon disulphide on it.
4. A motorboat starting from rest on a lake accelerates in a straight line at a constant rate of 4.0ms^{-2} for 10.0s. How far does the boat travel during this time?
 5. Lysosomes are regarded as the waste disposal system of the cell. Explain.
 6. (a) In ammonia, elements nitrogen and hydrogen are always present in the ratio of 14 : 3 by mass. State the law which explains the above statement.
(b) During the formation of ammonia what mass of hydrogen gas would be required to react completely with 42 g of nitrogen gas?
(c) Define atomicity. What is the atomicity of a molecule of nitrogen?
 7. Mention one function each of the following:-
(a) Smooth muscles (b) Neuron (c) Areolar connective tissue
- OR**
- (a) Draw a neat labelled diagram of the phloem tissue.
 - (b) Give two points of differences between the water transporting tissue xylem and food translocating tissue phloem.
8. Explain how the human ear works.
 9. (a) What is the charge and mass of a neutron?
(b) Where is the neutron located in an atom?
(c) Helium atom has an atomic mass 4u and its atomic number is 2. How many neutrons does it have?

10. Explain the different types of cropping patterns followed to obtain maximum yield.

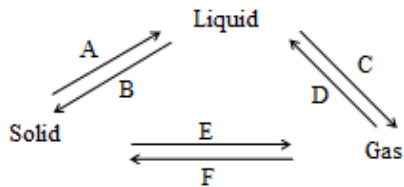
OR

- (a) In brief, explain the composite fish culturing system.
- (b) Specify one problem usually encountered and a remedial measure followed in fish culturing.

11. A ball is thrown vertically upward with a velocity of 50 m/s. Calculate:

- (i) the maximum height to which it rises.
- (ii) the total time taken to return to surface of earth.

12. Complete the triangle of inter-conversion of states of matter.



13. (a) Write any three characteristic features of the following organisms:-

- (i) Sea Urchin
- (ii) Chiton

(b) Name the phylum to which the above mentioned organisms belongs to.

14. (a) Describe an activity for the process of 'Osmosis' taking animal egg as an example.

(b) What is an isotonic solution?

15. (a) Name the technique and principle to separate:

- (i) Camphor from salt
- (ii) Acetone and water

OR

(b) Enlist any three differences between a compound and a mixture.

16. Justify the following statements:

- (a) Carbon dioxide is a gas.
- (b) Osmosis is a special kind of diffusion.
- (c) A gas cylinder cannot be half filled.
- (d) Perspiration keeps our body cool.
- (e) Ice floats on water.

17. (a) Explain the working of a sonar with a neat labelled diagram.

(b) What is loudness of sound? Mention the factors, loudness depend on.

18. Explain the gold foil experiment conducted by Ernest Rutherford with a neat diagram.

OR

(a) Calculate the number of molecules present in 2.5 mole of water

(b) A tumbler contains 180 g of water, how many molecules of water are present in it?

19. (a) With a schematic representation explain carbon cycle.

(b) Write a brief note on Green House effect and its consequences.

20. (a) A force produces an acceleration 2m/s^2 in a body of mass 6kg. If the same force acts on a body of 4kg mass, calculate the acceleration produced in it?

(b) Why does a glass pane of a window gets shattered when a flying pebble hits it?

(c) Why does a block of plastic released under water come up to the surface of water?

OR

(a) Calculate the work required to be done to stop a car of 2500kg moving at a velocity of 90km/hr.

(b) A submarine emits a sonar pulse, which returns from an underwater cliff in 2.04s. If the speed of sound in salt water is 1830m/s, how far is the cliff?

(c) Why sound wave is called a longitudinal wave?

21. (a) Give two examples each for the following:-
 (i) Non infectious diseases (ii) Sexually transmitted diseases (iii) Vector borne diseases
 (b) Name the causal organism of AIDS.
 (c) Enlist the different means by which the AIDS can spread.

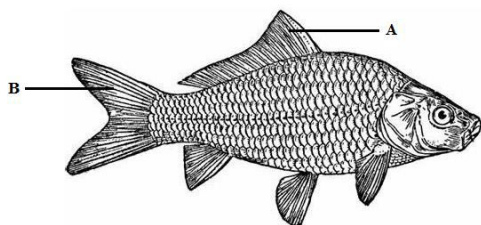
OR

- (a) What are macro and micronutrients of crops?
 (b) Specify any two examples for each.
 (c) Discuss how does a farmer supply these to the crops?

SECTION B

22. A spring balance is of least count 1gf. Its pointer is 4 divisions below the zero mark no weight is suspended from it. When a stone is suspended from it, the reading is 58gf. When the same suspended stone is immersed in water, the reading is 46gf. Calculate
 (i) true weight of stone
 (ii) weight of stone when immersed in water

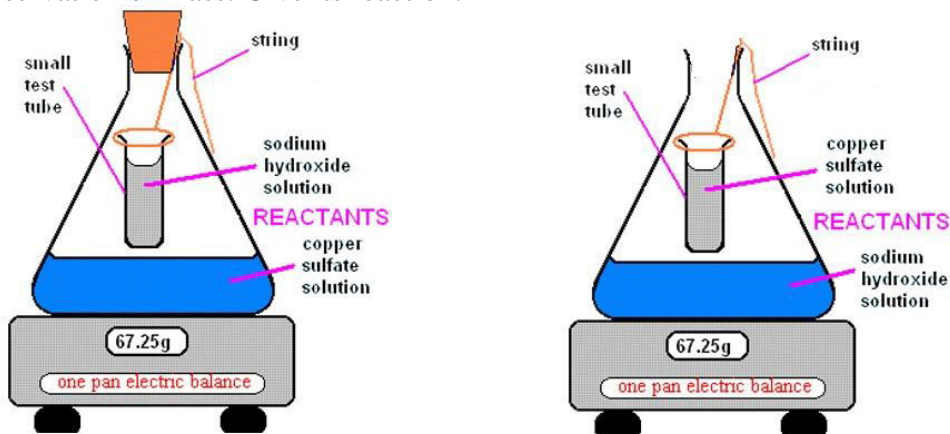
23. (a) Label the parts A and B.



- (b) Write a brief note on the reproduction and developmental aspects of fishes.

24. A piece of wood of mass 40gf is floating on the surface of water. What is the apparent weight of wood in water? Give reason for your answer.

25. Study the figures given below and identify which amongst them is the correct setup to establish the law of conservation of mass. Give its reaction.



26. Enlist the characteristics of the organism “Funaria.”

27. How will you obtain coloured component (dye) from blue or black ink? Explain with the help of a diagram.