Class9 Science Sample Question Paper 2017-18

Time allowed: 03 Hours   **Science Class – IX**   **Maximum Marks: 80**

Instruction:

(i) Question numbers 1 and 2 in Section-A are one mark question. They are to be answered in one word or in one sentence.

(ii) Question numbers 3 to 5 in Section- A are two marks questions. These are to be answered in 30 words each.

(iii) Question numbers 6 to 15 in Section-A are three marks questions. These are to be answered in about 50 words each.

(iv) Question numbers 16 to 21 in Section-A are 5 marks questions. These are to be answered in 70 words each.

(v) Question numbers 22 to 27 in Section- B are based on practical skills. Each question is a two marks question. These are to be answered in brief

(vi) There is an internal choice in two questions of three marks each and one question of five marks.

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Section-A

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Question numbers 1 and 2 in Section-A are one mark question

1. Name the isotope of an element which is used in treatment of cancer

2. A boy throws a ball vertically upwards. The ball reaches a maximum height 'h'. He catches the ball on its return. What is the distance travelled by the ball and its displacement

Question numbers 3 to 5 in Section- A are two marks questions

3. What is chromatography? Write it's any two applications.

4. How many chambers do most of the reptiles have in their heart? Name one reptile which has four chambered heart.

5. A force of 250 N acts on a surface of area 15 cm2. Calculate thrust and pressure.

Question numbers 6 to 15 in Section-A are three marks questions

6. A teacher told three students A, B and C to prepare 25% solution (mass by volume) of KOH. Student .A dissolved 25g of KOH in 100g of water, student B dissolved 25g of KOH in 100 ml of water and student C dissolved 25g KOH in water and made the volume 100 ml. Which one of them has made required 25% solution? Give your answer with reason.

7. Account for the following: (a) On moon, man feels lighter than earth. (b) Mass is scalar while weight is a vector quantity.

8. Give reason (a) gases exert pressure on the walls of the container (b) Gases undergo diffusion very fast

9. Draw the diagram of smooth muscle cell and a sperm cell. Comment on the variety of shapes of cell by taking two more examples.

Or, Write two distinguishing features between the muscles present in the alimentary canal and limbs of man. Draw labelled diagrams of the two kinds of muscles.

10. (a) A body thrown vertically upwards reaches a maximum height h. It then returns to ground. Calculate the distance travelled and its displacement.

(b) In a long distance race, the athletes were expected to take four rounds of the track such that the line of finish was same as the line of start. Suppose the length of the track was 200 m.

(i) What is the total distance to be covered by the athletes?

(ii) What is the displacement of the athletes when they touch the finish line?

(iii) is the motion of the athletes uniform or non-uniform ?

11. A powerful motorcycle can accelerate from rest to 28 m/s in only 4 s.

a) What is its average acceleration? (b) How far does it travel in that time ?

12. Paras visited a poultry farm with his younger brother who perturbed to see that the caretakers were feeding them with grains fell in the harvested field which humans cannot consume. Paras explained to him that it would not harm them.

(i) List the two major purposes of a poultry farming (ii) Name an indigenous and one exotic poultry breed

(iii) Why brother of Paras was perturbed ?

13. Define hybridization. How it is useful for crop variety improvement

14. "Scientific nomenclature is called binomial nomenclature." Why? Who proposed this system? Write significance of scientific naming.

OR, Write the definition of health according to WHO. Explain in brief about the three dimensions of health.

15. An engine supplies 148 Joules of energy. If it is used to raise vertically an object of mass 500g, how high can it be lifted? (g =10m/s^2)

OR, How is the power related to the speed at which a body can be lifted? How many kilograms will a man working at the power of 100 W, be able to lift at constant speed of 1 m/s vertically? (g=10 m/s2).
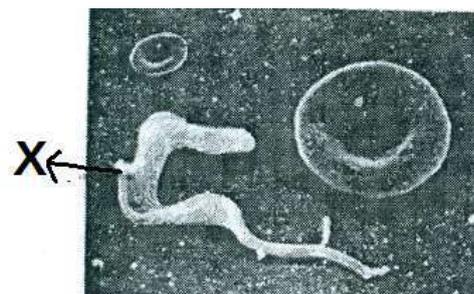
Question numbers 16 to 21 in Section- A are 5 marks questions

16. (a) Identify the organism (X) shown in the picture given below :

(b) To which kingdom does it belong?

(c) Which disease is caused by this organism?

(d) Name one more organism of this kingdom and the disease caused by it.

17 (a) Define the work done by a constant force. Write its SI unit and define this unit.

(b) A 3000 kg truck moving at a speed of 72km/ h slops after covering some distance. The force applied by brakes is 24000 N. Compute the distance covered and work done by this force.

18.(a) An army tank weighing more than a hundred ton can move easily on an even earthen road. Why ? Explain. (b) Explain any three applications of Archimedes principle.

19. State Newton's First Law of Motion, Why is this law called law of inertia ? Define the term inertia and state the relationship between mass and inertia? Explain why it is advised to tie any luggage kept on the roof of a moving vehicle with a rope?

OR, prove that if the earth attracts two bodies at the same distance from the centre of earth with equal force, then their mass will be the same.

(b) Mathematically express the acceleration due to gravity in terms of mass of the earth and radius of the earth

(c) Why G is called universal constantan?

20. Comment on the following statement: (a) Evaporation cause cooling (b) Why do we observe water droplets outside the tumbler containing ice cold water? Explain reason?

21. (a) Define animal husbandry (b) Mention four ways by which health of animals can be maintained during cattle farming.

Section-B

Question numbers 22 to 27 in Section- B are based on practical skills. Each question is a two marks question

22. If two balls made of iron and aluminium of equal volumes are immersed in a liquid, then will they experience equal up-thrust? Justify your answer.

23. To establish the relation between loss of weight of solid when it is fully immersed in a liquid, to the weight of water displaced can you calculate the density of liquid by using this method ? If yes, write the formula to calculate the density of liquid.

24. State any two specific features of Earthworm.

25. You are asked to prepare aqueous solutions of sodium chloride and starch powder. How would you compare them on the basis of transparency and stability.

26. To determine the melting point of ice we use the formula $(\frac{t_1 + t_2}{2})\ ^0C$. What do t_1 and t_2 indicate?

27. Write the formula for determining the percentage of water absorbed by raisins? State one important precaution for this experiment.