CLASS 9TH

FULL SYLLABUS TEST - 01

GENERAL INSTRUCTION

Maximum Marks = 80 Marks

Maximum Time = 180 minutes

Syllabus Covered : Full Syllabus of Class 9 Science NCERT

1. This question paper consists of 27 questions in 5 sections.
2. All the questions are compulsory.
3. Section A consists of 2 questions carrying 1 mark each.
4. Section B consists of 3 very short type questions carrying 2 marks each. Answer to these question shoud in the range of 30 to 50 words.
5. Section C consists of 10 Short type questions carrying 3 marks each. Answer to these question shoud in the range of 50 to 80 words.
6. Section D consists of 6 Long answer type questions carrying 5 marks each. Answer to these question shoud in the range of 80 to 120 words.
7. Section E consists of 6 source bases case based questions carrying 2 marks each.

Section A

1. Mention the various methods of inter-crop hybridisation.

2. Which type of farming system yields healthier grains?

Section B

3. A ball is dropped from a height of 10m. If the energy of the ball reduces by 40% after striking the ground, how high can the ball bounce back?

4. What are the characteristics of the particles of matter.

5. Mention the elements and the ratio by mass of elements present in:
(a) Ammonia (b) Carbon dioxide

Section C

6. In the following table, the mass numbers and the atomic numbers of certain elements are given. **[3]**

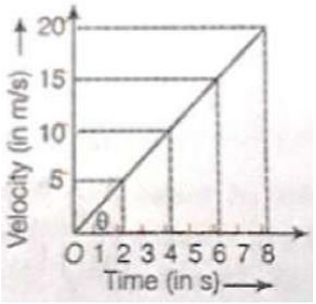
Element	A	B	C	D	E
Mass no.	1	7	14	40	40
At. no.	1	3	17	18	20

(i) Select a pair of isobars from the above table.
(ii) What would be the valency of element C listed in the above table ?
(iii) Which two sub-atomic particles are equal in number in a neutral atom ?

7. Mention the rules to be followed according to Bohr and Bury's atomic model for writing the number of electrons in each orbital shell.

8. A stone is thrown in a vertically upward direction with a velocity of 5 ms^{-1}. If the acceleration of the stone during its motion is 10 ms^{-2} in the downward direction, what will be the height attained by the stone and how much time will it take to reach there ?

9. The motion of a body of mass 5kg is shown in the velocity-time graph.



Find from the graph
(i) The acceleration
(ii) The force acting on the body.
(iii) The change in momentum of the body in 2s after the start.

10. Differentiate between RER and SER.

11. Explain how the second law of motion influences a cricket fielder while catching a ball.

12. A 40 W tube light is used for 8 hr/day. Find how much units of energy is consumed by the tube light in one day?

13. Which of the following has more inertia :
a. A rubber ball and a stone of the same size ?
b. A bicycle and a train ?
c. A five ruppe coin and a one ruppe coin ?

14. An object of mass 1 kg travelling in a straight line with a velocity of 10ms^{-1} collides with and sticks to a stationary wooden block of mass 5kg. Then they both move off together in the same straight line. Calculate the total momentum just before the impact and just after the impact. Also, calculate the velocity of the combined object.

15. Write the chemical formula of the substances formed:
a. Ammonium dichromate b. Aluminium sulphate
c. Calcium phosphate d. Iron (III) oxide

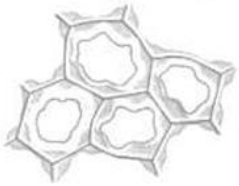
Section D

16. i. Identify the tissue given in the following figure.

ii. Mention the characteristic features of the cells.

iii. Specify the function of this tissue.

iv. Name any one part of the plant, where these cells are present.



17. A stone is allowed to fall from the top of a tower 100 m high and at the same time another stone is projected vertically upwards from the ground with a velocity of $25ms^{-1}$. Calculate when and where the two stones will meet.

18. Define acceleration due to gravity. Derive an expression for acceleration due to gravity in terms of mass of the earth (M) and Universal Gravitational Constant (G).

19. What are cell organelles ? Write the name of different cell organelles.

20. i. Describe the role played by the lysosomes. Why are they called suicidal bags ? How do they perform their function ?

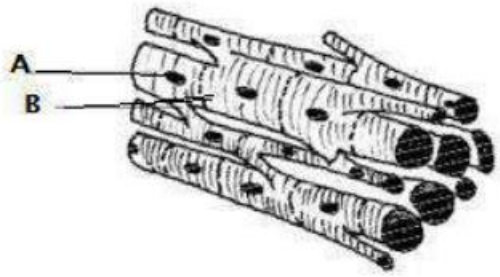
ii. What happens to the dry raisins, when placed in plain water for some time ? State the reason for whaterver is observed. What would happen if these raisins are then placed in concentrated salt solution ?

21. Derive the equation of motion v = u + at using graphical method.

Section E

22. a. Identify the following diagram and label the parts A and B.

b. What type of muscle cell is this?



23. When 4.5 g of sodium carbonate reacts with 5 g of acetic acid, the products formed are 6.5 g of sodium acetate, 0.6 g of water, and 2.4 g of carbon dioxide. Mention the law which this reaction abides and explain how?

24. Two bodies A and B weighs 2 kg each. When the body A was dropped into a container containing water, it displaced equal amount of weight of water. Similarly, when body B was dropped into the container, it displaced more than its weight of water. Which of the two bodies will sink and which will float and explain why?

25. Two boys A and B weighing 60kg and 40 kg respectively, climb on a staircase each carring a load of 20kg on their head. The staircase has 10 steps, each of height 50cm. if A takes 20s to climb and B takes 10s to climb, then

(i) Who posses greater power ?

(ii) Find the ratio of their powers.

26. Two balls of the same size of different materials, rubber and iron are kept on the smooth floor of a moving train. The brakes are applied suddenly to stop the train. Will the balls start rolling? If so, in which direction? Will they move with the same speed? Give reasons for your answer.

27. There are 15 protons and 16 neutrons in the nucleus of an element. Calculate its atomic number and mass number. How will represent the element ?

----------**ALL THE BEST**----------