PRACTICE PAPER FOR SUMMATIVE ASSESSMENT – I, 2015

Class – IX     Sub - **SCIENCE**    Time Allowed : 3 hours     Maximum Marks : 90

1.    The question paper comprises of two Sections, A and B. You are to attempt both the sections.
2.    All questions are compulsory
3.    All questions of Section-A and all questions of Section-B are to be attempted separately.
4.    Question numbers 1 to 3 in Section-A are one mark questions. These are to be answered in one word or in one sentence
5.    Question numbers 4 to 6 in Sections-A are two marks questions. These are to be answered in about 30 words each.
6.    Question numbers 7 to 18 in Section-A are three marks questions. These are to be answered in about 50 words each
7.    Question numbers 19 to 24 in Section-A are five marks questions. These are to be answered in about 70 words each.
8.    Question numbers 25 to 33 in Section-B are multiple choice questions based on practical skills. Each question is a one mark question. You are to select one most appropriate response out of the four provided to you.
9.    Question numbers 34 to 36 in Section-B are questions based on practical skills are two marks questions.
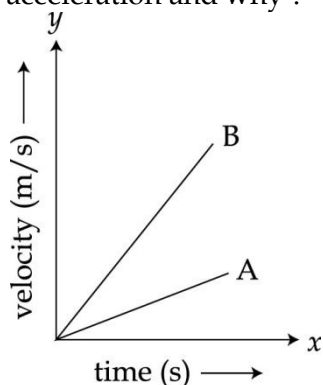
## SECTION-A

Q.1.    State the energy currency of the cell ?

Q.2.    State the type of motion exhibited by a freely falling body.

Q.3.    While playing football the goalkeeper didn't get sufficient time to stop a fast ball shot towards him. Why did he hurt his hand while doing so ?

Q.4.    Gases are easily compressible, where as it is impossible to compress a solid or a liquid. Explain why ?

Q.5.    Identify the two types of tissues given in the diagram. Write two distinguishing features each of the two.
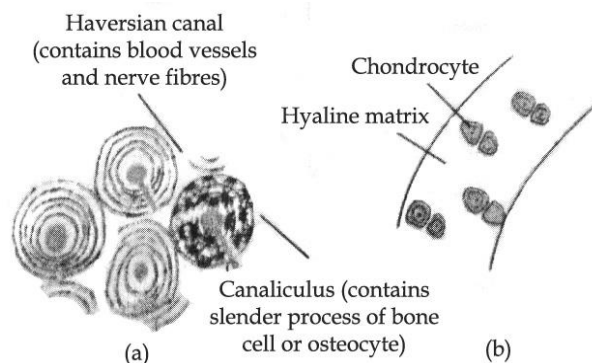


Q.6.    A particle is thrown up vertically with a velocity of 50 m/s. What will be its velocity at the highest point of the journey ? How high would the particle rise ?

Q.7.    (a)      Identify two non-metals from the following elements :
     i.e. Carbon, Sodium, Chlorine, Neon, Platinum.
     (b)      Name the appropriate methods to separate nitrogen from air.
     (c)      Identify dispersed phase and dispersion medium in foam and rubber.

Q.8.    Differentiate between miscible and immiscible liquids. Give an example of each.

Q.9.    With the help of labeled diagram describe an activity to show that particles of matter are very small.
     (a)      Define osmosis
     (b)      What happens to the cell when external concentration is equal to the internal concentration of the cell ?
     (c)      What are such solutions called ?

Q.10.    (a)      Name the elements that make up the phloem tissue.
     (b)      Which of these elements is responsible for transportation ?
     (c)      Which of these elements is dead ?

Q.11.    Using velocity time graph of uniformly accelerated motion along a straight line, derive the equation for position-velocity relation.

Q.12. There is a distinction between average speed and the magnitude of average velocity.
(a) Give an example that illustrates the difference between these two quantities.
(b) Give an example that illustrates average speed is equal to magnitude of average velocity.

Q.13. A car acquires a velocity of 72 km per hour in 10 seconds starting from rest. Find
(a) the acceleration
(b) the distance travelled in this time and
(c) the average velocity.

Q.14. A car acquires a velocity of 72 km per hour in 10 seconds starting from rest. Find
(a) the acceleration
(b) the distance travelled in this time and
(c) the average velocity.

Q.15. Define uniform circular motion.

Q.16. A particle is travelling in a circle of diameter 15 m. Calculate the distance covered and the displacement when it completes two rounds.
(i) Which is a more fundamental quantity - The mass of a body or its weight ? Why ?
(ii) Can a body has mass, but no weight. Give seasons for your answer.

Q.17. Krishna used to go to the fields with her father often. She observed her father preparing the soil by ploughing before sowing the seeds. Then he added fertilizers. Krishna insisted that he should add manure in place of fertilizers and explained its advantages.
(i) What is the purpose of adding manure ?
(ii) Write two advantages of using manure over fertilizers.
(iii) State two values exhibited by Krishna.

Q.18. "Application of fertilisers increases the crop productivity but it destroys the soil fertility". State three disadvantages of using fertilisers

Q.19. (a) Explain why the temperature remains constant during sublimation.
(b) Draw a neat and well labeled diagram to show the sublimation of camphor.

Q.20. A student was given the mixture of Iron filings and sulphur. He was told to heat it and observe the following –
(a) What is the colour of the compound formed ?
(b) Write the effect of magnet on it.
(c) Write the action of carbon disulphide on it.
(d) Describe the effect of adding dilute hydrochloric acid to it. Identify the gas and write its two properties

Q.21. Name the constituents of xylem tissue. Draw labelled diagram of any three constituents.

Q.22. Explain the following phenomena on the basis of Newton's Laws of Motion.
(a) Falling of buildings during an earthquake.
(b) Shattering of car windows due to a bomb blast.
(c) Cell phone breaks into pieces on falling from a table.
(d) Finger cuts while suddenly pulling the thread of an air borne kite.
(e) Guitarists' finger gets injured while sliding it on a guitar string.

Q.23. (a) Derive the equation of motion, $v = u + at$ by graphical method.
(b) Which of the two bodies A and B in the following graph is moving with higher acceleration and why ?



Q.24. Mention the desirable characters of bee varieties in bee keeping. How does pasturage affect the productivity and quality of honey ?

## SECTION - B

Q.25. Metanil yellow is added to arhar dal so that its :
    (a)    Colour and appearance gets improved
    (b)    Weight gets increased
    (c)    Taste gets improved
    (d)    Consumption become unfit

Q.26. Pink colour appears on adding conc. HCl in a mixture of yellow dal and water to the presence of :
    (a)    turmeric powder    (b)    yellow dye
    (c)    metanil yellow    (d)    potassium dichromate

Q.27. On adding Carbon disulphide in greyish black compound of Iron sulphide, the correct observation is :
    (a)    the solution of Carbon disulphide colourless.
    (b)    the solution turns blue.
    (c)    the solution of Carbon disulphide turns green.
    (d)    the solution of Carbon disulphide turns yellow.

Q.28. Sulphur powder and Iron filings were mixed in a china dish. The colour of sulphur powder observed by students is :
    (a)    black    (b)    grey
    (c)    yellow    (d)    reddish

Q.29. During the reaction between iron and copper sulphate, the copper sulphate taken is in :
    (a)    solid state    (b)    molten state
    (c)    aqueous solution form    (d)    in non-aqueous solution

Q.30. While preparing a temporary mount of onion peel, cells are stained to :
    (a)    Highlight the cell organ    (b)    Make the cells turgid
    (c)    Moisten the cell    (d)    Help in cell division

Q.31. On viewing under a microscope the material in the permanent slide shows alternating light and dark bands with multi nucleate and unbranched cells. It is :-
    (i)    nerve cell    (ii)    parenchyma
    (iii)    striated muscle    (iv)    sclerenchyma

Q.32. The sublimation process requires a funnel and cotton piece. The reason is that it becomes :
    (a)    easy to collect the sublimate
    (b)    easy to heat it
    (c)    easy to transport it
    (d)    easy to evaporate it

Q.33. If the net external force acting on a body is zero, then total momentum of the body is :
    (a)    zero    (b)    variable
    (c)    constant    (d)    information not sufficient

Q.34. Rima took fine chalk powder, egg albumin, starch powder and alum powder in four test tubes A, B, C and D respectively. After adding water to all the four test tubes, identify the test tubes as true solution, suspension and colloid.

Q.35. If in the determination of melting point of ice, the ice is contaminated with some non-volatile impurity like common salt, how the melting point of ice is affected?

Q.36. A student recorded the mass of dry raisins as 2.0 g and the mass of raisins after soaking as 3.5 g. Calculate the percentage of water absorbed by raisins.