

SUMMATIVE ASSESSMENT-I, 2016

SCIENCE

Time : 3 hrs.

Class IX

M.M. : 90

Date – 23.09.2016

General Instructions :

1. The question paper comprises **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 **Section-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. Each question is of **two marks**.

SECTION-A

- Q.1** Identify the plastid which contains a pigment necessary for photosynthesis. (1)
- Q.2** Mention the nature of motion of a body if its displacement-time graph is a straight line parallel to time axis. (1)
- Q.3** Name the property of bodies by virtue of which they resist a change in their state of rest or of uniform motion. (1)
- Q.4** Define sublimation. Which type of mixtures are separated by this technique ? (2)
- Q.5** How does endocytosis process help an organism like amoeba ? (2)
- Q.6** It is said that the mass of an object remains constant at all places while weight may change. Why ? (2)
- Q.7** (a) Differentiate between simple distillation and fractional distillation. (3)
(b) What is the function of beads in fractionating column used in fractional distillation?
- Q.8** Give three reasons to justify that water is a liquid at room temperature. (3)
- Q.9** Why water as steam may cause severe burns but water as ice has cooling effect ? Explain. (3)
- Q.10** Why the lysosomes are called suicide bags? Which cell organelle is involved in the formation of lysosomes? (3)

- Q.11** Correlate the first pair of words given below and accordingly insert a suitable word in the second pair. (3)
- (a) Heart : Cardiac muscles :: _____ : Smooth muscles
- (b) Tissue repair : Areolar :: Insulation : _____
- (c) Squamous epithelium : Protection :: _____ : Absorption and secretion.
- Q.12** State reason for the following : (3)
- (i) Road accidents at high speeds are very much worse than accidents at low speeds.
- (ii) When a motor car makes a sharp turn at a high speed, passengers get thrown to one side.
- (iii) The passengers in a bus tend to fall in the forward direction when a moving bus brakes to a stop.
- Q.13** (i) What is meant by free – fall ? (3)
- (ii) Why doesn't the moon fall into the earth by its attractive pull ?
- Q.14** Answer the following questions : (3)
- (i) The distance – time graph of motion of a body is parallel to 'X' axis. Identify the nature of motion of the body.
- (ii) Name the quantity measured by the slope of the distance – time graph of a moving body.
- (iii) Write two advantages of graphical representation of variation of velocity with time over tabular representation of velocity and time.
- Q.15** An object is moving with uniform speed in a circle of radius 7m. Calculate the distance and displacement when it completes half the circle. What type of motion does the object possess ? (3)
- Q.16** A heavy leather ball and a light tennis ball of equal size are kept on the floor of a moving train. When the train is suddenly stopped, they are set in motion. In which direction will they move? Which one of them will attain higher velocity ? (Assume that friction is same for both) (3)
- Q.17** In the summer vacation the students of IX standard were given an investigatory project. They were asked to visit a dairy farm and note down their observations. Vinay took information from the internet and made the project while Sakshi visited the dairy, saw how and what cattle are fed with, how much milk do they give per day She also learnt about the diseases they suffer from and how are they cleaned and taken care of. (3)
- (i) What kind of feed is given to cattle to increase the milk production ?
- (ii) Write down two symptoms of a sick animal.
- (iii) Whose characteristics would you like to adopt between Sakshi and Vinay? Why?

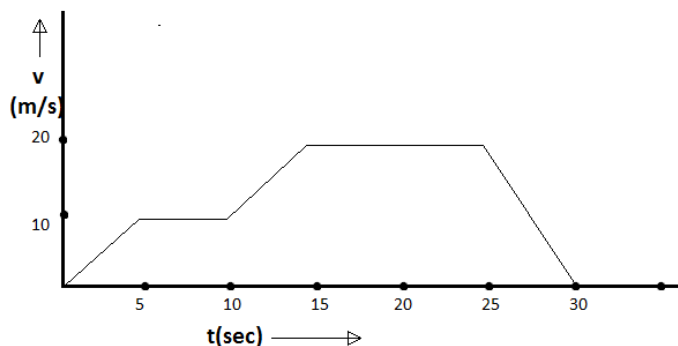
- Q.18** Mention three ways by which storage grains can be protected from degradation and loss in weight. (3)
- Q.19** (a) Compare metals and nonmetals based on their physical properties (any four points). (5)
- (b) What are metalloids? Give two examples.
- (c) Identify metals from the following – boron, sodium, mercury, carbon.

- Q.20** State any three characteristics of the particles of matter. (5)
- Which of the following are matter?
table, oxygen, affection, milk, cold, thirst, salt.

- Q.21** (a) Draw a neat diagram of transverse section of collenchyma tissue and label any four parts on it. (5)
- (b) Write any two differences between parenchyma and collenchyma tissues.

- Q.22** (a) Draw a velocity-time graph for an object in uniform motion. Using the graph show that the slope of the velocity-time graph gives the acceleration of the object. (5)
- (b) An aeroplane starts from rest with an acceleration of 3 ms^{-2} and takes a run for 35s before taking off. What is the minimum length of the runway and with what velocity the plane took off ?

- Q.23** (5)



From the given graph of an object of mass 20 kg, answer the question that follow:

- (a) Find acceleration between 10 - 15 sec.
- (b) Find the force applied from 0 - 5 sec.
- (c) Find momentum after 10 sec.
- (d) State the nature of force between 25 - 30 sec.
- (e) Find magnitude of force between 15 - 25 sec.
- Q.24** (a) Mention the type of shelters which should be provided to cattles in dairy farming and for birds in poultry farming. (5)
- (b) Mention the preventive measures taken to control diseases of dairy animals and poultry birds.

SECTION - B

- Q.25** Deliberate contamination of food material with low quality, cheap and inedible substances is called food adulteration the adulterant which is used in arhar dal is : (1)
- (a) khesari dal (b) lead chromate
(c) metanil yellow (d) both (a) and (c)
- Q.26** Ritu took samples of extracts from boiled rice and boiled dal in test tubes and added iodine solution to each. She observed that : (1)
- (a) both turned blue black
(b) rice solution turned blue black
(c) dal solution turned blue black
(d) there was no change in any sample
- Q.27** When Iron filings and sulphur powder are heated strongly in a china dish, then it forms (1)
- (a) an element (b) a compound
(c) homogeneous mixture (d) heterogeneous mixture
- Q.28** We can separate iron filings from the mixture of iron filings and sulphur powder by : (1)
- (a) adding water to the mixture followed by filtration
(b) by centrifugation
(c) by using a bar magnet
(d) by heating strongly
- Q.29** When magnesium burns in air this is an example of type of reaction :- (1)
- (a) Combination (b) Decomposition
(c) Displacement (d) Precipitation
- Q.30** Tina was observing a human cheek cell slide stained with methylene blue under a microscope. The colour of the cell appears to be : (1)
- (a) red (b) blue (c) black (d) yellow
- Q.31** The brain, spinal cord and nerves are all composed of the nervous tissue. The cells of this tissue are called : (1)
- (a) nephron (b) neuron
(c) adipose (d) tendon
- Q.32** The process used to separate salt , sand and iron fillings is : (1)
- (a) dissolving in water and filtration.

- (b) use of magnet, dissolving in water and filtration.
- (c) use of magnet, dissolving in water, filtration and evaporation.
- (d) use of magnet, filtration, dissolving in water and distillation.

Q.33 Least count of a spring balance is : (1)

- (a) the correction that needs to be done in the observed value of weight in a spring balance
- (b) the smallest difference in weight that can be detected by a spring balance
- (c) the difference between highest value of weight and the lowest value of weight that can be measured with a spring balance
- (d) all of the above

Q.34 Three aqueous solutions are given to you with different solutes. (2)

A - sugar

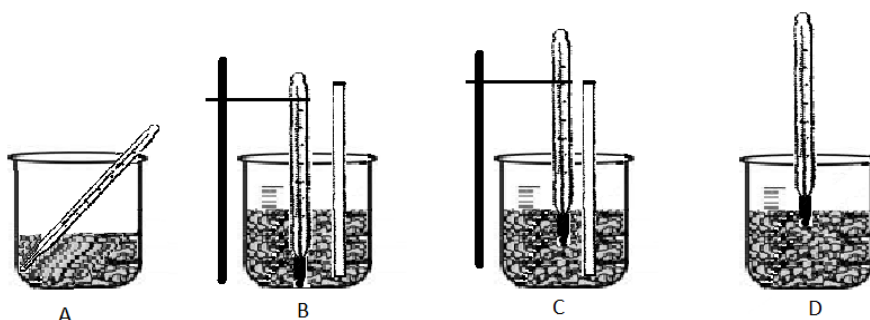
B - starch

C - fine sand

In which of these solutions will you get :

- (I) a translucent filtrate
- (II) a residue on filter paper on filtration ?

Q.35 Experimental setups done by four students A, B, C and D for determining melting point of ice are shown below. Name the student whose arrangement is correct. Justify your answer in two points. (2)



Q.36 Each one of three students A, B and C were given 5 g raisins. The raisins were soaked in distilled water at room temperature. A soaked the raisins for 10 minutes, B for overnight and C for 60 minutes. Then they calculated the percentage of water absorbed by raisins. Now answer the following questions :- (2)

- (a) Name the students whose raisins will show the maximum percentage and minimum percentage of water absorbed respectively.
- (b) If C observed that weight of his raisins has become 7g, find the percentage of water absorbed by raisins

