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PRACTICE PAPER FOR SUMMATIVE ASSESSMENT – I

2014-2015

STD:- IX

Sub: - Science and Technology

Time:- 3 Hours

Marks:- 90

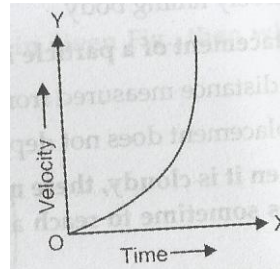
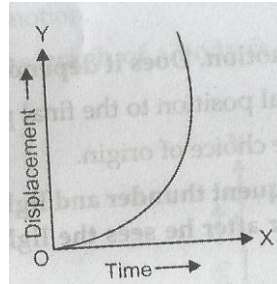
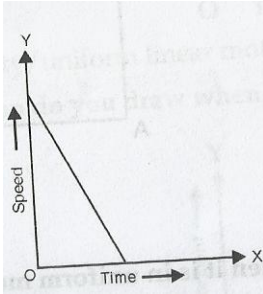
General Instructions:

- The question paper comprises two sections, A and B, you are to attempt both the sections.
- All questions are compulsory.
- There is no overall choice. However internal choice has been provided in all the five questions of five marks category. Only one option in such question is to be attempted.
- All questions of section A and all questions of Section B are to be attempted separately.
- Question numbers 1 to 3 in Section A are one mark questions. These are to be answered in one word or one sentence.
- Question numbers 4 to 7 are two marks questions, to be answered in about 30 words each.
- Question numbers 8 to 19 are three marks questions, to be answered in about 50 words each.
- Question numbers 20 to 24 are five marks questions, to be answered in about 70 words each.
- Question numbers 25 to 42 in Section B are multiple choice questions based on practical skills. Each question is a one mark question. You are to choose one most appropriate response out of the four provided to you.

SECTION – A

- 1) What is the effect of sprinkling of water on the roof or open ground? (1)
- 2) A person applies some force on an almirah but it does not move .Give reason. (1)
- 3) Which type of plastid stores starch, oil and proteins? (1)
- 4) A solution of alcohol in water has been prepared by mixing 150ml of alcohol with 600ml of water. Calculate the volume percentage of the solution. (2)
- 5) i) A man weighs 600 N on the surface of earth. What would be his mass and weight on the surface of moon?(Take $g= 10 \text{ m/s}^2$) (2)
- 6) State two distinguishing points between cell wall & cell membrane. (2)
- 7) Do the roots of a plant continue growing after their tips are removed? Explain giving reason. (2)
- 8) With the help of an activity show that diffusion become faster with the increase in temperature. (3)
- 9) Give the difference between mixture and compound. (3)

10) How will you interpret the following graphs?



(3)

- 11) State the law of inertia. Why do we fall in the forward direction if a moving bus stops suddenly and fall in the backward direction if it suddenly accelerates from rest? (3)
- 12) A stone released from the top of a tower of height 19.6m. Calculate its final velocity just before touching the ground. ($g = 9.8 \text{ m/s}^2$) (3)
- 13) Derive the formula for Newton's second law of motion. (3)
- 14) What happens to the magnitude of the force of gravitation between two objects if: (3)
- Distance between the objects is tripled?
 - Mass of both objects is doubled?
 - Mass of both objects as well as distance between them is doubled?
- 15) (a) Name the elements of xylem tissue. (3)
- (b) Explain the components of nucleus.
- 16) Differentiate between striated, unstriated and cardiac muscles on the basis of their structure/ site and location in the body. (3)
- 17) (a) Name the cell organelle that has powerful digestive enzymes. (3)
- (b) What will happen if the organization of a cell is destroyed due to some physical or chemical influence?
- 18) (a) Name one crop which can tolerate water logging in the field and one which cannot. (3)
- (b) Give two sources of irrigation.
- (c) What happens when matured wheat crop is irrigated?
- 19) (a) Suppose you are In-charge of a grain store. How will you find out presence of pests? Mention any two indicators. (3)
- (b) Which method is most effective for destroying insects in stored food grains, spraying or fumigation?
- 20) Explain giving examples the various factors on which rate of evaporation depends. (5)

OR

- (a) A spoonful of sugar is added to a beaker containing 500ml of water and stirred for a while .
- State any two observations recorded.
 - Account for your observation.
- (b) Naphthalene balls disappear with time without giving any solid. Why?

- 21) i) Name the method which is most suitable for separating the following: (3+2)
- | | |
|---------------------------------------|---|
| a) oxygen from liquid air | b) red blood cells from plasma |
| c) petrol and kerosene from crude oil | d) coffee grains from coffee solution |
| e) amino acids from fruit juice | f) ethanol and water |
| g) butter from curd | h) different pigments from extract of flower petals |

ii) A solution contains 40 g of common salt in 320 g of water. Calculate the concentration in terms of mass percentage of the solution.

iii) A solution contains 40 ml of ethanol in 100 ml of water. Calculate the concentration in terms of volume percentage of the solution.

OR

a) What is chromatography? How will you separate red and blue ink using this technique?

b) State 2 applications of centrifugation.

- 22) (a) Define momentum. State its S.I. unit. (5)
- (b) An object of mass 50Kg is accelerated uniformly from a velocity of 4m/s to 8m/s in 8s. Calculate the initial and final momentum of the object. Also find the magnitude of the force exerted in the object.

OR

(a) When a carpet is beaten with a stick dust comes out of it. Explain.

(b) Calculate the force required to impart a car with a velocity of 30m/s in 10s starting from rest. The mass of the car is 15000 kg.

- 23) (a) What is motion? (5)
- (b) State types of motion.
- (c) Write the unit of acceleration.

OR

An athlete runs on a circular track of radius 50 m from the starting point A with a constant speed. It takes 50 seconds for him to reach point B which is at the other end of the diameter drawn from A. Calculate the distance covered, displacement and the speed.

- 24) i) What do you mean by inland fisheries? (5)
- ii) Give one difference in composite & culture fishing.
- iii) State one advantage and disadvantage of composite fish culture system.
- iv) How can we overcome its disadvantage?

OR

i) What is poultry farming?

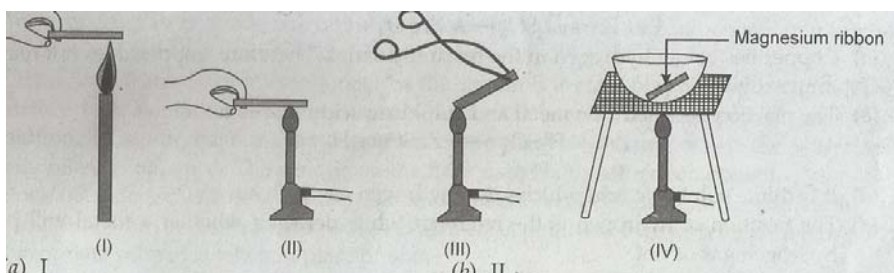
ii) What is meant by layers and broilers?

iii) What type of food should be given to broilers?

iv) List any two preventive measures of poultry diseases.

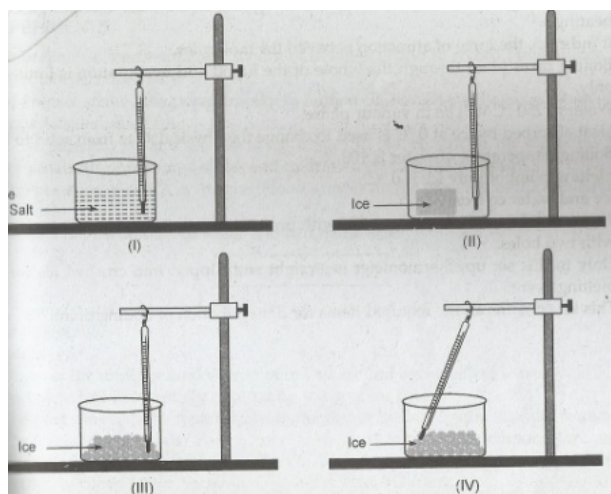
SECTION B

- 25) Which of the following is not a suspension? (1)
- a) Soil in water b) Sand in water
c) Chalk powder in water d) Copper sulphate in water
- 26) Tyndall effect is observed in (1)
- a) True solution b) Starch + water
c) Alum + water d) Table salt + water
- 27) When we start heating a mixture of sulphur powder and iron filings we observe that (1)
- a) sulphur starts melting b) iron filings start melting
c) mixture becomes red hot d) mixture evaporates
- 28) Four students used different ways of burning magnesium ribbon during an experiment as shown below. The correct way has been followed by the student. (1)



- a) I b) II c) III d) IV

- 29) Which one of the following is the correct setup to determine the melting point of ice? (1)



- a) I b) II c) III d) IV

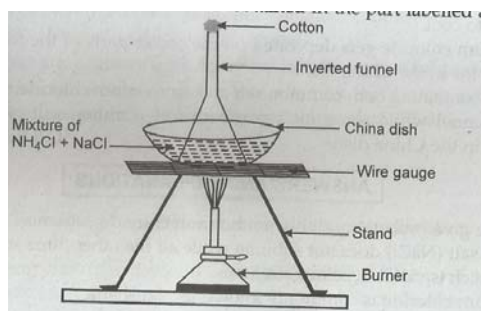
- 30) Which of the following apparatus is required to determine the boiling point of water? (1)
- Tripod stand, conical flask, thermometer, wire gauze, stand with clamp, pair of tongs.
 - Funnel, burner, clamp and stand, test tube, thermometer, wire gauze.
 - Boiling tube, beaker, thermometer, burner, cork with one hole, stand with clamp, wire gauze.
 - Round bottom flask, burner, thermometer, wire gauze, stand with clamp, cork with two holes, glass tube.

- 31) Zinc metal on treatment with dilute sulphuric acid produces (1)
- carbon dioxide gas
 - nitrogen gas
 - hydrogen gas
 - sulphur dioxide gas

- 32) A student by mistake mixed iron filings and sulphur powder. He wanted to separate them from each other. The method you would advise him to use is to dissolve the mixture in (1)
- boiling water
 - cold water
 - carbon disulphide
 - kerosene

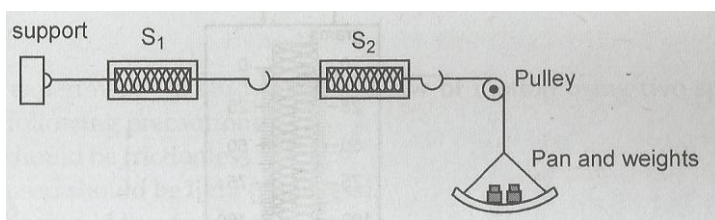
- 33) The colour of anhydrous copper sulphate is (1)
- blue
 - green
 - white
 - brown

- 34) A mixture of sodium chloride and ammonium chloride is heated in a setup shown below. After the experiment ammonium chloride will be obtained in the part labeled as (1)

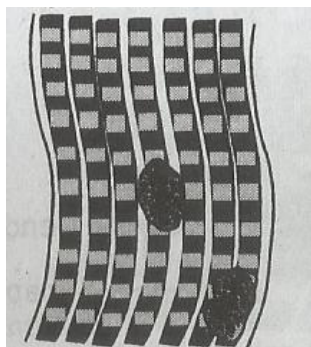


- China dish
 - Inverted funnel
 - The funnel and the china dish
 - The cotton plug
- 35) In an experiment to study the third law of motion using two spring balances a student used a pan of 40g mass and put weights 160g from weight box in the pan. The reading shown by each of the two balances is (1)
- 200g
 - 100g
 - 120g
 - 60g

- 36) A student setup the arrangement shown in figure here to study the third law of motion using two spring balances S1 and S2. On doing experiment he found that (1)



- a) reading of spring balance S1 is greater than that of S2
 b) reading of spring balance S2 is greater than that of S1
 c) reading of spring balance S1 is almost equal to that of S2
 d) reading of spring balance S1 is double than that of S2
- 37) Arun bought arhar dal from the market. On adding water to that dal, the water became yellow in colour. He took a sample of this yellow water to the laboratory and added a few drops of HCl. The sample became pink. This confirmed that the adulterant added to the dal was (1)
- a) turmeric
 b) metanil yellow
 c) yellow dye
 d) potassium dichromate
- 38) Seema on adding a solution X to rice extract, observed the conversion of color of solution to bluish black. Identify the compound X. (1)
- a) Bromine water
 b) Iodine solution
 c) distilled water
 d) salt solution
- 39) Why is glycerin put on the slide before putting cover slip? (1)
- a) To float the material
 b) To increase clarity of material
 c) To increase beauty of slide
 d) To avoid drying of the material
- 40) Deposition of lignin is found in (1)
- a) parenchyma tissue
 b) collenchymas tissue
 c) sclerenchyma tissue
 d) meristematic tissue
- 41) We should wipe off the raisin before taking reading of final absorption with (1)
- a) cotton
 b) muslin cloth
 c) nylon
 d) filter paper
- 42) Shweta observed a permanent slide given below in her practical class. She has forgotten the name to identify it. Help her by identifying it correctly. (1)



- a) Epithelial cell
 b) Straited muscles
 c) Unstrained muscles
 d) Neuron

