

O. P. JINDAL SCHOOL, SAVITRI NAGAR
HALF YEARLY EXAMINATION (2023 – 2024)

CLASS : VIII

MM:80

SUBJECT: SCIENCE

TIME: 3 HOURS

(Fifteen minutes extra will be given for reading the question paper.)

General Instructions:

- The question paper comprises of five sections A, B, C, D, E. There are 32 questions in the question paper. All questions are compulsory.
- Section A, question no. 1 to 8 is of MCQ type carrying 1 mark each.
- Section B, question no. 9 and 10 are of case based type questions. Question no. 11 is reason and assertion type question.
- Section C, question no. 12 to 20 is very short answer type questions carrying 2 marks each.
- Section D, question no. 21 to 29 is short answer type questions carrying 3 marks each.
- Section E, question no. 30 to 32 is long answer type questions carrying 5 marks each.

SECTION – A

Choose the correct option.

- Q1.** Which of the following should be used by a farmer with a large farm to harvest his crops quickly and efficiently?
(a) Winnowing machine (b) Combine (c) Sickle (d) Seed drill
- Q2** The frictional force exerted by fluids is called
(a) slide (b) drag (c) Stream line (d) static friction
- Q3,** Partial sterilization of a product such as milk at a high temperature is known as:
(a) Pasteurization (b) Filtration (c) Picking (d) Refrigeration
- Q4** Which of the following is the best fire extinguisher for electrical equipment and inflammable substances?
(a) Water (b) CO₂ (c) O₂ (d) All of the above
- Q5** Which of the following is the purest form of carbon?
(a) Coal gas (b) Coal tar (c) Coke (d) None of the above
- Q6.** Which of the following units expresses fuel efficiency in terms of calorific value?
(a) kg/kJ (b) kJ/kg (c) J/kg (d) J/g
- Q7.** Weeds are controlled by chemicals called

- (a)Pesticides (b)Fungicides (c)Weedicides (d)Insecticides

Q8. A dropper to fill ink works because of which of the following?

- (a)Friction (b)Magnetic force (c)Atmospheric pressure (d) Electrostatic force

SECTION- B

Q9. Read the passage carefully and attempt the questions given below.(any-4)

A chemical process in which a substance reacts with oxygen to give off heat is called combustion. The substance that undergoes combustion is said to be combustible. It is also called a fuel. The fuel may be solid, liquid or gas. Sometimes, light is also given off during combustion, either as a flame or as a glow. The lowest temperature at which a substance catches fire is called its ignition temperature. The substances which have very low ignition temperature and can easily catch fire with a flame are called inflammable substances. Examples of inflammable substances are petrol, alcohol, Liquefied Petroleum Gas (LPG)

(i) What is combustible substance?

- (a) Substance that undergoes combustion (b) Substance reacts with ozone
(c) Substance that glows (d) All of these

(ii) Fuels can be :

- (a) Solids only (b) Liquids only
(c) Gases only (d) All of these

(iii) What is ignition temperature?

- (a) Lowest temperature at which a substance catches fire.
(b) Temperature when water boils
(c) Temperature at which ice is formed
(d) Temperature of LPG.

(iv) Identify the inflammable substance from the following.

- (a) Soil (b) Water (c) Alcohol (d) Vinegar

(v) What are inflammable substances?

- (a) Substances with low ignition temperature
(b) Substances which catches fire easily with a flame
(c) Only option a
(d) Both a and b

Q10. Read the passage carefully and attempt the questions given below.(any-4)

Microorganisms are used for various purposes. They are used in the preparation of curd, bread and cake. Microorganisms have been used for the production of alcohol since ages. They are also used in cleaning up of the environment. For example, the organic wastes are broken-down into harmless and usable substances by bacteria. Recall that bacteria are also used in the preparation of medicines. In agriculture they are used to increase soil fertility by fixing nitrogen. , Lactobacillus promotes the formation of curd. It multiplies in milk and converts it into curd. Bacteria are also involved in the making of cheese, pickles and many other food items. Bacteria and yeast are also helpful for fermentation of rice idli and dosa batter. Kneading of Yeast and sugar into the flour

causes the flour to rise and double in size. Yeast is used for commercial production of alcohol and wine. This process of conversion of sugar into alcohol is known as fermentation. Louis Pasteur discovered fermentation in 1857.

- (i) In the process of fermentation the sugar is converted into
(a) Vinegar (b) Curd (c) Salt (d) Alcohol
- (ii) Name the bacterium which when added to milk, multiplies in it and converts milk into curd?
(a) Lactobacillus (b) Streptococcus (c) Salmonella (d) Vibrio
- (iii) Louis Pasteur a French chemist in 1857 discovered the process of ...
(a) Fermentation (b) Pollination (c) Saturation (d) respiration
- (iv) Composting Which one of the following is not produced by the process of fermentation?
(a) Cheese (b) Milk (c) Yoghurt (d) Wine
- (v) What does yeast produce during respiration?
(a) oxygen (b) nitrogen (c) carbon dioxide (d) natural gas

Q11. Directions: In the question given below are two statements labeled as Assertion (A) and Reason (R). In the context of the question which of the following is correct? (**Answer any four**)

- (i) **ASSERTION:** The microorganisms or microbes are cannot be seen with the unaided eye.
REASON: Because microorganisms or microbes are not small in size.
a) Assertion and reason both are correct statement and reason is correct explanation for assertion.
b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.
c) Assertion is correct statement but reason is wrong statement.
d) Assertion is wrong statement but reason is correct statement.
- (ii) **ASSERTION :**It is done to provide the shoes better grip on the floor
REASON: The reason of shoes grip so that you can move safely.
a) Assertion and reason both are correct statement and reason is correct explanation for assertion.
b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.
c) Assertion is correct statement but reason is wrong statement.
d)Assertion is wrong statement but reason is correct statement
- (iii) **ASSERTION:** While taking a penalty kick in football, the player applies a force on the ball and ball move toward the goal.
REASON: The goal keepers try to save the goal and therefore he applies force to stop the ball.
a) Assertion and reason both are correct statement and reason is correct explanation for assertion.
b) Assertion and reason both are correct statement and reason is not correct explanation for assertion
c) Assertion is correct statement but reason is wrong statement.
d)Assertion is wrong statement but reason is correct statement

(iv) **ASSERTION:** Farmers have to add manure to the fields to replenish the soil with nutrients.

REASON: Continuous cultivation of crops makes the soil rich in nutrients.

- a) Assertion and reason both are correct statement and reason is correct explanation for assertion.
- b) Assertion and reason both are correct statement and reason is not correct explanation for assertion.
- c) Assertion is correct statement but reason is wrong statement.
- d) Assertion is wrong statement but reason is correct statement.

(v) **ASSERTION** – Magnesium and charcoal are combustible substances.

REASON – A chemical process in which a substance reacts with oxygen to give off heat is called combustion.

- a) Assertion and reason both are correct statement and reason is correct explanation for assertion.
- b) Assertion and reason both are correct statement and reason is not correct explanation for assertion
- c) Assertion is correct statement but reason is wrong statement.
- d) Assertion is wrong statement but reason is correct statement.

SECTION – C

Q12 Wheat is sown in the kharif season, what would happen?

OR

Explain how soil gets affected by the continuous plantation of crops in a field.

Q13. Name two diseases that are caused by virus.

Q14. Explain why fossil fuels are exhaustible natural resources.

Q15. Although wood has a very high calorific value, we still discourage its use as a fuel. Explain.

Q16. It is much easier to burst an inflated balloon with a needle than by a finger. Explain.

Q17. The handle of a cricket bat or a badminton racquet is usually rough. Explain the reason.

OR

People often rub their hands in winter. Why?

Q18. What are the weeds? How can we control them?

Q19. Fresh milk is boiled before consumption while processed milk is stored in packets and can be consumed without boiling.

Q20. A rocket has been fired upwards to launch a satellite in its orbit. Name the two forces acting on the rocket immediately after leaving the launching pad.

SECTION-D

Q21. Give three examples to show that friction produces heat.

OR

The sliding friction is slightly smaller than the static friction. Explain why?

Q22. What is pressure? What is the relation of pressure with area on which it is applied?

Q23 What is the similarity between electrostatic and magnetic forces?

Q24. What is ploughing or tilling? State its advantages

Q25. What is coke? Write its two uses.

Q26. Name three constituents of petroleum and write their uses also.

Q27. Define communicable diseases. Give some examples.

OR

Draw Nitrogen cycle.

Q28. What does CNG stand for and why is it considered to be a better fuel than petrol?

Q29. Write any three properties of ideal fuel.

OR

Draw different zones of candle flame.

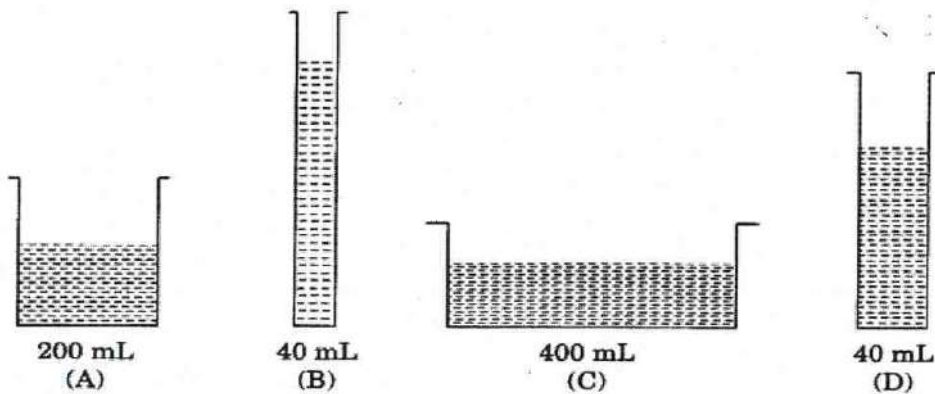
SECTION - E

Q30. Explain how fertilisers are different from manure.

OR

What is irrigation? Describe two methods of irrigation which conserve water.

Q31. Observe the figures given below carefully.



(i) Volume of water in each vessel is shown above. Arrange them in order of decreasing pressure

(ii) Explain why objects moving in fluids must have special shapes.

OR

(i) List the characteristics of pressure exerted by a liquid.

(ii) Name the forces acting on a plastic bucket containing water held above ground level in your hand. Discuss why the forces acting on the bucket do not bring a change in its state of motion.

Q32.(i) What are the various types of friction? Explain.

(ii) Write advantages and disadvantages of friction.

OR

(i) What do you mean by fluid friction? How can fluid friction be reduced?

(ii) The sliding friction is slightly smaller than the static friction. Explain why?

(iii) Why are lubricants applied between the moving part of a machine?
