

**DAV PUBLIC SCHOOLS, BHUBANESWAR**  
**PERIODIC ASSESSMENT-I (2022-23)**

- Please check that this question paper contains **5** printed pages.
- Check that this question paper contains **19** questions.
- Write down the Serial Number of the question in the left side of the margin before attempting it.
- 15 minutes time has been allotted to read this question paper. The question paper will be distributed 15 minutes prior to the commencement of the examination. The students will read the question paper only and will not write any answer on the answer script during this period.

**CLASS-VIII**

**SUBJECT-SCIENCE& TECHNOLOGY**

**Time Allowed: 1½ Hours**

**Maximum Marks : 40**

**General Instructions:**

- i) All questions are compulsory
- ii) Draw labelled diagram wherever necessary.
- iii) Questions 1 to 7 are very short answer type and carry one mark each.
- iv) Questions 8 to 11 are assertion-reason questions, case study based questions which should be answered in one word or one sentence. They carry one mark each.
- v) Questions 12 to 14 are short answer questions and carry two marks each.
- vi) Questions 15 to 18 are short answer questions and carry three marks each.
- vii) Question 19 is long answer type question and carries five marks.

- Q1.** State the effect of force that is associated with the following activities. (1)  
 (a) a potter making a pot  
 (b) a batsman hitting a cricket ball for sixer.
- Q2.** Venus is hotter than Mercury though it is relatively farther away from the sun. Give reason. (1)
- Q3.** A star appears to be fixed at one place and useful to travellers to find direction at night. Draw the diagram to locate the position of the star with reference to axis of the earth and also name that star. (1)
- Q4.** A piece of paper burns quickly than a piece of wood. Give reason for it. (1)
- Q5.** If a farmer continues to grow the same crop year after year in the same field then the yield gradually decreases. Give a reason. (1)
- Q6.** State the harmful impact of spraying of pesticides on the crop yielding plants. (1)
- Q7.** Specify the areas where drip irrigation is the best method of irrigation. Give reason to support your answer. (1)
- Q8. Assertion:** We can drink cold drink from a bottle with help of straw. (1)  
**Reason:** The pressure inside the straw is less than the pressure outside, while drinking.  
 a. Both Assertion and Reason are correct and Reason is the correct explanation for Assertion  
 b. Both Assertion and Reason are correct but Reason is not the correct explanation for Assertion  
 c. Assertion is correct but Reason is incorrect  
 d. Assertion is incorrect but Reason is correct
- Q9. Assertion:** Gram and barley are some of the major rabi crops of India. (1)  
**Reason :** Maize is grown in rainy season and is dependent on the western monsoon.  
 a. Assertion is correct, reason is wrong.  
 b. Assertion is wrong, reason is correct.  
 c. Assertion & reason are correct and reason is the correct explanation of A  
 d. Both Assertion & reason are correct but reason is not the correct explanation of A.
- Q10. This is a case study based question and contains five sub-parts and you are expected to answer any four sub-parts of this question. (1x4=4)**  
 The substances which are added to the soil in form of nutrients for the healthy growth of plants are called manures or fertilisers. Soil supplies mineral nutrients to the crop plants, which are essential requirement for the healthy growth of the plant. Manure is an organic substance obtained from the decomposition of plant or animal waste. Fertilisers are chemicals produced in factories rich in a particular nutrient. But

excessive use this fertiliser makes the soil less fertile. They have become the source of water pollution also. Therefore in order to maintain the fertility of the soil the farmers need to substitute fertilizers with organic manure, or leave the field uncultivated in between two seasonal crops. The use of manure, improves soil's texture as well as retains its water holding capacity. Another method of soil replenishment is through crop rotation that is growing different crops alternately. Farmer in northern India grow legume as fodder in one season and wheat in the next season. This help in increasing the fertility of the soil.

- i. Organic substances obtained from the decomposition of plant and animal waste which helps in healthy growth of plants are called as \_\_\_\_\_.
  - a. Manure
  - b. residue
  - c. Fertilizer
  - d. Chemicals
- ii. Excessive use of fertiliser is generally avoided as it will lead to \_\_\_\_\_.
  - a. Increase the amount of useful microbes in the soil
  - b. Will increase the amount of water holding capacity of the soil
  - c. Alters the chemical nature of the soil.
  - d. Increases the porosity of the soil.
- iii. Select the mineral element that is replenished in the soil by the leguminous plants.
  - a. oxygen
  - b. hydrogen
  - c. nitrogen
  - d. carbon
- iv. Select the correct option for leaving the field fallow for some time.
  - a. It will decrease the soil fertility
  - b. It will help in soil replenishment naturally
  - c. It will have no effect on the soil fertility
  - d. It will decrease the crop yield
- v. Another method in which the farmers use to replenish the soil fertility is by growing plants like Alfa Alfa, sun hemp etc. choose the incorrect option for the given statement.
  - a. They are called as green manure
  - b. They are not ploughed back into the soil
  - c. They increase the soil fertility
  - d. They improve the overall quality of the soil

**Q11. This is a case study based question and contains five sub-parts and you are expected to answer any four sub-parts of this question. (1x4=4)**

A flame is a region where combustion or burning of gaseous substance takes place. All the gases which undergo combustion produce flame. We have seen a candle flame, a kerosene lamp flame and a Bunsen burner flame. Actually, flame is the blaze of a fire and it is called “jwala” or “lapat” in Hindi. The solid and liquid fuels which vaporise on being heated, burn with a flame. Wax, camphor, kerosene oil and mustard oil get vaporised during burning and form flame. The type of flame produced depends on the proportion of oxygen or air available for burning. We have seen different colour of flame in our home while cooking in gas stove, burning of firewood, lighting of candle etc.

- i. Anu wants to boil water quickly in a test tube. On observing the different zones of the flame, she is not able to decide which zone of the flame will be best for boiling water quickly. Your suggestion to her is to choose \_\_\_\_\_ .
  - a. non luminous zone
  - b. luminous zone
  - c. innermost zone
  - d. yellow colour zone
- ii. In a burning candle, the unburnt carbon particles are found in the \_\_\_\_\_ of the flame.
  - a. innermost zone .
  - b. middle zone
  - c. outermost zone
  - d. both in middle and outermost zone.
- iii. Identify the substance which does not burn by producing a flame.
  - a. biogas
  - b. mustard oil
  - c. charcoal
  - d. magnesium
- iv. The outermost zone of a candle flame is the \_\_\_\_\_ .
  - a. Coldest part
  - b. Moderately hot part
  - c. Hottest part
  - d. Least hot part
- v. Which zones of the candle flame appear blue and yellow in colour respectively?
  - a. innermost zone and outer zone
  - b. innermost zone and middle zone
  - c. outermost zone and middle zone
  - d. middle zone and innermost zone

- Q12.** Write any four uses of artificial satellites. (2)
- Q13.** Explain how, combustion of a cracker different from combustion of sodium? (Write any two points) (2)
- Q14.** Different crops require, specific amount of water at different stages of their growth. Justify the statement in two sentences with suitable examples. (2)
- Q15.** Sheela saw that her grandmother was drying wheat under the sun in the open portico of their house. She did not like the idea as lot of dirt will get into the drying wheat, so she approached her grandmother for clearing her doubts. Her grandmother explained the reason behind this act. (3)
- (a) Why grains need to be sun dried before storing ?
  - (b) Suggest a common natural protective measure which is followed while storing the grains at home.
  - (c) Mention two ways of storing various types of crops like
    - (i) grains,
    - (ii) Perishable items like fruits, vegetables by government agencies like FCI, on a large scale.
- Q16.** (a) Ankit and Rajesh are applying forces on two opposite sides of a moving object. The object still moves with the same speed in the same direction. What do you infer about the magnitudes and directions of the forces applied? (3)
- (b) Two rods P and Q of same weight and equal length have different thickness, i.e. P is thicker than Q. They are held vertically on the surface of sand. Which of them will sink more into the sand surface and why?
- (c) It is difficult to cut clothes using a pair of scissors with blunt blades. Give reason.
- Q17.** Write down the three essential conditions required for burning a fuel? (3)
- Q18.** Why are gaseous fuels considered better than liquid or solid fuel? (3)  
(any three points)
- Q19.** (a) The liquid pressure, at a point, increases with the height of the liquid column above it. Explain an activity with help of a tin can and water. Draw labelled diagram for it. (5)
- (b) A force of 5N acts on surface, it produces a pressure of 500 pa. Find the area of the surface in square cm.

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