AIR FORCE SCHOOL PANCHWATI
PERIODIC TEST II (2024 -25)
CLASS VII
SCIENCE

Time: 1 Hour 30 Min   M.M: 40

General Instructions:
1. This question paper consists of 20 questions. All questions are compulsory.
2. Question paper is divided into FIVE sections- Section A, B, C, D and E.
3. Section A consists of 10 objective type questions carrying 1 mark each.
4. Section B consists of 5 Very Short questions carrying 02 marks each. Answers to these questions should be in the range of 30 to 50 words.
5. Section C consists of 2 Short Answer type questions carrying 03 marks each. Answers to these questions should be in the range of 50 to 80 words.
6. Section D consists of 2 Long Answer type questions carrying 05 marks each. Answer to these questions should be in the range of 80 to 120 words.
7. Section E consists of 1 source-based/case-based units of assessment of 04 marks each with sub-parts.

SECTION A

Select and write one most appropriate option out of the four options given for each of the questions 1-10.   [1x10=10]

1. What are flowers that contain only either the pistil or stamens called?
   (a) Unisexual flowers
   (b) Bisexual flowers
   (c) Asexual flowers
   (d) None of the above

2. The image formed by a convex mirror is:
   (a) Erect and diminished
   (b) Erect and enlarged
   (c) Inverted and diminished
   (d) Inverted and enlarged

3. Which of the following is not a source of wastewater?
   (a) Sewers
   (b) Homes
   (c) Industries
   (d) Hospitals

4. Which portion of WWTP retains large objects like rags, sticks, etc.?
   (a) Bar screen
   (b) Sludge
   (c) Sedimentation tank
   (d) Sewerage

5. A simple pendulum takes 32 seconds to complete 20 oscillations. What is the pendulum's time period?
   (a) 640 s
   (b) 0.625 s
   (c) 1.60 s
   (d) None of these

6. The middle colour in sunlight spectrum is:
   (a) Yellow
   (b) Green
   (c) Blue
   (d) Orange

7. All oscillatory motions are
   (a) Rotatory motions
   (b) Rectilinear motions
   (c) Circular motions
   (d) Periodic motions

8. In fern, asexual reproduction takes place through
   (a) Spore formation
   (b) Fragmentation
   (c) Budding
   (d) Binary fission

Directions: In each of the following questions, a statement of Assertion is given and a corresponding statement of Reason is given just below it. Of the statements, given below mark the correct answer as:
(a) Both assertion and reason are true and reason is the correct explanation of assertion.
(b) Both assertion and reason are true but reason is not the correct explanation of assertion.
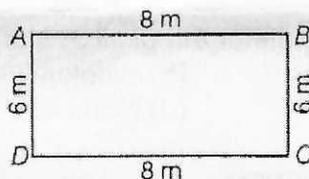(c) Assertion is true but reason is false.
(d) Assertion is false but reason is true.

9. Assertion (A) : Vegetative propagation is a method of asexual reproduction in plants.
   Reason (R) : In asexual reproduction new plants are obtained without use of seed or spore.

10. Assertion (A): In an image formed by a mirror, the left side of the object is seen as the right side in the image.
    Reason (R): The capital English letter 'I' does not show a lateral inversion.

SECTION B

Q.11 to 15 are very short answer questions.   [2x5=10]

11. Mention the mode of reproduction in the following plants
    (a) Spirogyra   **(b)** Yeast   **(c)** Money plants   **(d)** Amoeba

12. What measures can you take at home to ensure the efficient functioning of the sewerage system?

13. Starting from A, Paheli moves along a rectangular path ABCD as shown in figure. She takes 2 min to travel each side. Plot a distance-time graph and explain whether the motion is uniform or non-uniform.

14. The side mirror of a scooter got broken. The mechanic replaced it with a plane mirror. Mention any inconvenience that the driver of the scooter will face while using it.

15. (i) Give one difference between zygote and embryo.
    (ii) Flowers are colourful and fragrant. Give reason supporting the statement.
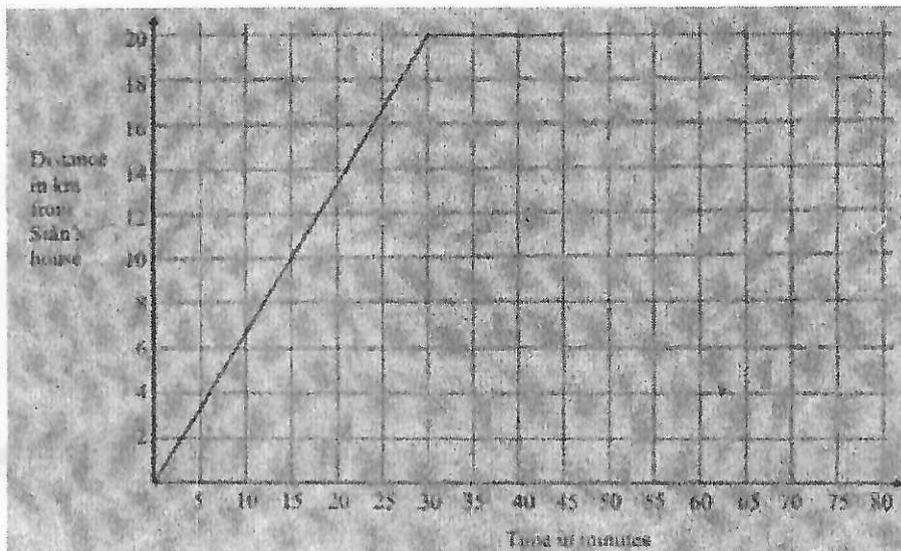
SECTION C

Q16 to 17 are short answer questions.   [2x3=6]

16. (i) What are onsite composting methods?
    (ii) Outline your role as an active citizen concerning sanitation.

17. (i) A simple pendulum takes 15 seconds to complete 5 oscillations. What is the time period of pendulum?
    (ii) Sumit covers a distance of 2.4 Km from his house to reach her college on a scooter. If the scooter has a speed of 6m/sec, calculate the time taken by her to reach the college.
    (iii) Give an example when objects undergo combinations of different types of motion?
    .OR

Consider the following distance time graph and answer the questions that follow.

(i) What was Sian's speed for the first 30 minutes of her journey?

(ii) 15 minutes after starting the journey how far had Sian reached?

(iii) What is plotted in the X- axis and what is plotted in the Y- axis?

SECTION-D

Q18 to 19 are long answer questions.   **[2x5=10]**

18. **(i)** David is observing his image in a plane mirror. The distance between the mirror and his image is 4 m. If he moves 1 m towards the mirror, then find out the distance between David and his image.

    (ii) Show how light gets reflected from a plane mirror with the help of an activity.

19. Describe the different methods of asexual reproduction along with diagrams.Give examples.

<div align="center">OR</div>

Describe the structure of a flower(with diagram).

SECTION-E

Q20 is case - based/data -based questions with 4 short sub - parts.   **[4x1=4]**

Air is pumped into the clarified water to help aerobic bacteria to grow. Bacteria consume human waste, food waste, soaps and other unwanted matter still remaining in clarified water.After several hours, the suspended microbes settle at the bottom of the tank.
As activated sludge. The water is then removed from the top.The activated sludge is about 97%water. The water is removed by sand drying beds or machines. Dried sludge is used as manure, returning organic matter and nutrients to the soil. The treated water has a very low level of organic material and suspended matter. It is discharged into a sea, a river or into the ground. Nature cleans it up further. Sometimes it may be necessary to disinfect water with chemicals like chlorine and ozone before releasing it into the distribution system.

(i)What is aeration?
(ii) Which chemical is used to disinfect water?
(iii) What is the percentage of activated sludge in the waste water treatment?
(iv) What is the difference between sludge and activated sludge?