BHARTIYA SHIKSHA BOARD
Model Paper – Half Yearly
Science - Class 7
Session 2026-27

Time: 3 Hours **Max Marks: 80**

GENERAL INSTRUCTIONS:

- Read the questions carefully.
- Please check that this question paper contains 6 printed pages.
- 10 minutes of extra time have been allotted to read this question paper. During this time, students will not start writing the answers.
- This question paper contains five sections: Section A, Section B, Section C, Section D and Section E.
- Attempting all the questions is compulsory.

SECTION A

Choose the correct option (only one option is correct) 1 Mark each

1. Which of the following contain haemoglobin?
    a. Red blood cells
    b. White blood cells
    c. Platelets
    d. Heart muscle cells
2. Which of the following is not a plant tissue?
    a. Xylem
    b. Parenchyma
    c. Adipose
    d. Meristematic
3. Which of the following is not a plant?
    a. Cuscuta
    b. Venus flytrap
    c. Mushroom
    d. Hibiscus
4. Which of the following will give blue-black colour with iodine, which is retained with time?
    a. Saliva
    b. Wheat flour
    c. Wheat flour mixed with saliva
    d. Gram flour mixed with saliva

5. How many chambers do cows have in their stomach?
    a. 1
    b. 2
    c. 3
    d. 4
6. Which is the longest part of the digestive system in humans?
    a. Oesophagus
    b. Large intestine
    c. Small intestine
    d. Bile duct
7. Which of the following changes is an example of deposition?
    a. Ice changing into water
    b. Water changing into steam
    c. Water vapour changing directly into ice
    d. Camphor changing into vapour
8. The large craters on the Moon were mainly formed due to
    a. volcanic eruptions.
    b. heavy rainfall.
    c. impact of meteoroids.
    d. earthquakes.
9. Which of the following is an artificial satellite?
    a. Moon
    b. Phobos
    c. INSAT
    d. Titan
10. Which branch of science studies oceans?
    a. Geology
    b. Astronomy
    c. Oceanography
    d. Ecology

Instructions for Questions Based on Assertion and Reason

Question no 11 and 12 consists of two statements—**Assertion (A)** and **Reason (R)**. Read both statements carefully and choose the most appropriate answer from the options given.
Select:

a. If both Assertion and Reason are true, and Reason is the correct explanation of the Assertion.

b. If both Assertion and Reason are true, but Reason is **not** the correct explanation of the Assertion.
c. If Assertion is true, but Reason is false.
d. If Assertion is false, but Reason is true.
e. Both Assertion and Reason are false.

11. Assertion (A): A moving football slows down when a player kicks it in the direction opposite to its motion.
    Reason (R): A force acting opposite to the direction of motion increases the speed of an object.
    a. A and R both are true, and R is the correct explanation of A
    b. A and R both are true, but R is not the correct explanation of A
    c. A is true, but R is false
    d. A is false, but R is true
    e. Both A and R are false

12. Assertion (A): Pitcher plant is an insectivorous plant
    Reason (R): Pitcher plant is deficient in nitrogen
    a. A and R both are true, and R is the correct explanation of A
    b. A and R both are true, but R is not the correct explanation of A
    c. A is true, but R is false
    d. A is false, but R is true
    e. Both A and R are false

Choose the correct option (more than one option is correct) 1 Mark each

13. Which of the following statements about eclipses are correct?
    a. A solar eclipse occurs when the Moon comes between the Sun and the Earth.
    b. A lunar eclipse occurs when the Earth comes between the Sun and the Moon.
    c. Solar eclipses occur only during a full moon.
    d. Lunar eclipses occur only during a full moon.
14. Which of the following statements about petroleum are correct?
    a. Petroleum is formed over millions of years.
    b. Petroleum is found only on land.
    c. Offshore drilling is carried out under the sea.
    d. Seismic surveys help locate petroleum deposits.
15. Which of the following are sources of energy obtained from oceans?
    a. Tidal energy

b. Wave energy
c. Solar energy
d. Ocean Thermal Energy Conversion (OTEC)

16. Which of the following is a product of photosynthesis?
    a. Carbon dioxide
    b. Oxygen
    c. Water
    d. Glucose
17. Which of the following is a tissue?
    a. Blood
    b. Muscle
    c. Bone
    d. Kidney

Fill in the blanks: 1 Mark each

18. One particular day, moon looks like a beautiful thin C- shaped _____
19. A force can change the _____or _____ of a moving object.
20. The gravitational pull of the _____ is mainly responsible for tides on Earth.

Section B (2 Marks each)

1. What type of tissue is present in the intestine and what type of movement it does to push food forward?
2. Are non-green plants autotrophs? Why or why not?
3. Why can the smell of perfume spread quickly throughout a room while the smell of a solid piece of soap spreads much more slowly? Explain using the force of attraction between molecules.
4. Differentiate between natural satellites and artificial satellites. Give one example of each.
5. A bus travels 240 km in 4 hours. Find its speed.
6. Why does the temperature of ocean water decrease as we go deeper?

Section C (3 Marks each)

1. Write the symbolic equation for photosynthesis and explain how plants are energy transducers?
2. Explain the digestion process in amoeba with the help of a diagram
3. A jeweller, a doctor and an electrician use different elements in their professions.
   - The jeweller uses gold.
   - The electrician uses copper wires.

Answer the following:

a. Identify the symbols of these two elements. (1)
b. Explain why each element is suitable for its particular use by relating its properties with its application. (2)

4. A student notices that wet floors dry faster on a warm, windy day than on a cool, still day.
    a. Identify three factors responsible for this observation and explain how each factor affects evaporation.
5. Explain the different stages of a rocket and mention the function of each stage.
6. Explain the following with suitable reasons:
    a. Why do raindrops fall with only moderate speed although they fall from great heights? (2)
    b. Explain why a wooden log floats while an iron nail sinks in water. (1)
7. Answer the following questions:
    a. Differentiate between offshore drilling and onshore drilling. (2)
    b. State one use of oceanographic satellites. (1)

SECTION D (4 Marks each)

1. Megha was eating lunch quickly because she wanted to go to play. She suddenly got the hiccups. Her mother gave her water to drink and the hiccups went away.
    a. Why did Megha get hiccups?
    b. What gets digested in the mouth?
    c. How is saliva produced?
    d. Why doesn't food travel from the stomach to the oesophagus even if we stand upside down?
2. A blacksmith heated an iron rod and hammered it into the shape of a farming tool. Another worker drew copper into long, thin wires for electrical cables.

    Answer the following questions.

    a. Which property of iron allows it to be hammered into different shapes? (1)
    b. Which property of copper allows it to be drawn into wires? (1)
    c. Explain why both processes are examples of physical changes. (2)

3. Riya and her father were travelling by car to visit their grandparents. She noticed that the speedometer showed 60 km/h, while the odometer reading increased from 18,250 km to 18,370 km during the journey. Her father

explained that the speed of the car was not the same throughout the trip because they slowed down near villages and sped up on the highway. Answer the following questions:

a. Which instrument measures the speed of the car? (1)
b. Which instrument measures the total distance travelled? (1)
c. Calculate the distance travelled during the journey. (1)
d. Was the car in uniform motion? Give a reason. (1)

SECTION E (5 Marks each)

1. What are the different types of connective tissue? Explain with examples.
2. A science teacher gives four samples labelled A, B, C and D.
   - Sample A contains only iron particles.
   - Sample B contains water.
   - Sample C contains oxygen gas.
   - Sample D contains carbon dioxide.

   Answer the following:
   a. Identify which samples represent an element and which represent a compound. (2)
   b. Classify the molecules present in each sample as monoatomic, diatomic, triatomic or polyatomic. (2)
   c. Which sample can be broken into simpler substances only by a chemical process? Justify your answer. (1)

3. Answer the following questions:
   a. Define the scientific meaning of the weight of an object. (1)
   b. Compare the weight of an object on the Earth and the Moon. (2)
   c. A person weighs 60 kg (approximately 600 N) on Earth. What will be his approximate weight on the Moon? (1)
   d. Give the reason for the difference in weight. (1)