



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

TERM -1 (2026-27)

SET-2

SCIENCE(M S)

Class: VII

Time: 3hours

Date: 07/09/26

Max Marks: 80

Admission no:

Roll No -

General Instructions:

- (i) This question paper consists of 39 questions in 3 sections. Section A is Biology, Section B is Chemistry and Section C is Physics.
- (ii) All questions are compulsory. However, an internal choice is provided in some questions. A
- (iii) student is expected to attempt only one of these questions.

SECTION- A BIOLOGY

1. a) Gall bladder
2. c) Widening of hips
3. a) Increased brain development
4. d) Physical, emotional and mental changes
5. a) Trachea
6. a) Small intestine
7. d) Breath
8. a) Both A and R are true, and R is the correct explanation of A.
9. a) Both A and R are true, and R is the correct explanation of A.
10. During puberty, hormones increase the activity of the oil (sebaceous) glands in the skin. Excess oil blocks the skin pores, allowing bacteria to grow, which causes acne and pimples.
11. a) Girls generally experience a growth spurt earlier than boys. Boys continue growing for a longer period and usually become taller than girls.
b) Girls: Around 16–18 years
 - Boys: Around 18–20 years
12. a) Defecation:

Defecation is the process of removing undigested food and waste materials from the body through the anus.

b) Rumination:

Rumination is the process in which cud-chewing animals bring partially digested food back to the mouth, chew it again, and swallow it.

13. Mouth

- Oesophagus
- Stomach
- Liver
- Pancreas
- Small intestine
- Large intestine
- Rectum

OR

Lime water turns milky when carbon dioxide is passed through it. Since exhaled air contains carbon dioxide, blowing exhaled air into lime water makes it turn milky due to the formation of calcium carbonate. This proves that exhaled air contains carbon dioxide.

14. RKSK (Rashtriya Kishor Swasthya Karyakram): Provides health education, counselling, and medical services for adolescents.

- MHS (Menstrual Hygiene Scheme): Promotes menstrual hygiene awareness and provides sanitary napkins to adolescent girls.
- Jan Aushadhi Suvidha Sanitary Napkin Initiative: Makes affordable, quality sanitary napkins available through Jan Aushadhi Kendras, improving menstrual hygiene.

15. a) Adolescence.

b) She is growing taller. (*Voice change is also acceptable.*)

c) During adolescence, hormones released by endocrine glands increase rapidly. These hormonal changes affect emotions and behaviour, causing mood swings and increased emotional sensitivity.

OR

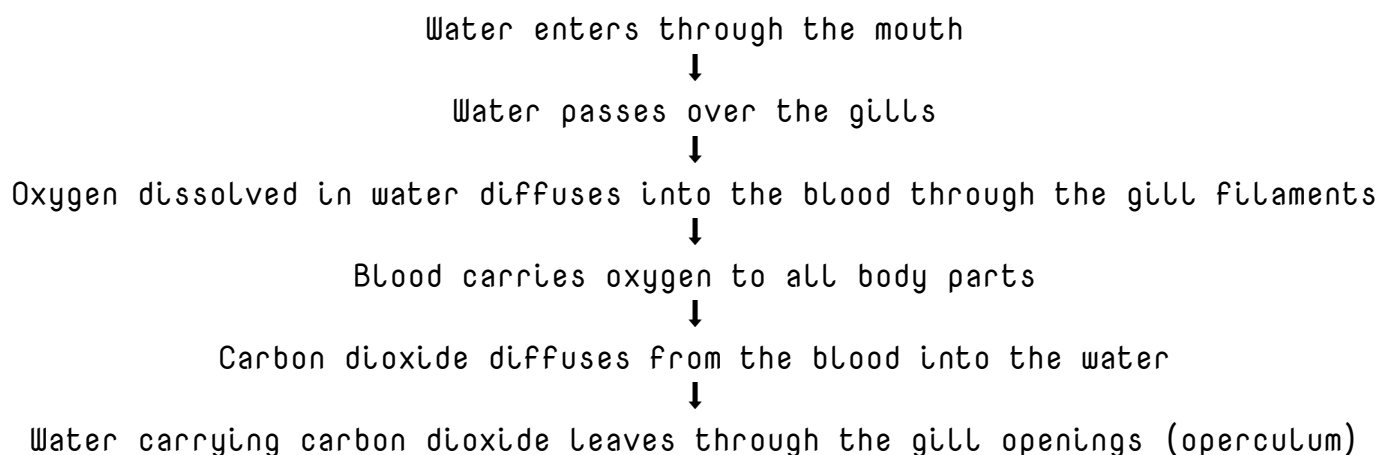
- Eat a balanced and nutritious diet.
- Exercise regularly and maintain personal hygiene.

16. The stomach secretes:

1. Hydrochloric Acid (HCl)
 - Makes the food acidic.
 - Kills harmful germs.
 - Activates digestive enzymes.
2. Pepsin
 - Digests proteins into simpler substances.
3. Mucus
 - Protects the stomach lining from acid.
 - Prevents damage to the stomach wall.

OR

Flowchart



Explanation:

Fish breathe through gills. As water flows over the gills, oxygen is absorbed into the blood while carbon dioxide is released into the water. This process helps fish carry out respiration.

SECTION- B CHEMISTRY

17. b) Scientists improved the model of the atom after new discoveries.

18. b) Repeat the experiment carefully.

19. c) Baking soda solution

20. c) Orange juice

21. c) They conduct heat well.

22. c) Sulphur

23. b) Graphite

24. b) Both A and R are true, but R is not the correct explanation of A.

25. AnS:

- Repeating experiments helps to check the accuracy of the results.
- It reduces errors and makes the results more reliable.

26. Ans:

Acids	Bases
Turn blue litmus red.	Turn red litmus blue.
Sour in taste.	Bitter in taste.
pH is less than 7.	pH is greater than 7.
Example: Lemon juice/Vinegar	Example: Baking soda solution/Soap solution

27. Ans:

1. **Good conductors of heat** – Used for making cooking utensils.
2. **Malleable** – Used for making aluminium foil and metal sheets.
3. **Ductile** – Used for making electrical wires.

OR

. Ans:

- The iron spoon will become very hot but will not burn because iron has a high melting point and is a good conductor of heat.
- The plastic spoon will melt or burn because plastic has a low melting point and is a poor conductor of heat.

28. a) Which substance is acidic?

Ans: **Vinegar.**

b) Name one basic substance from the passage.

Ans: **Soap solution or Baking soda solution.**

c) Which substance is neutral?

Ans: **Distilled water.**

d) What colour change is shown by a base with red litmus paper?

Ans: **Red litmus paper turns blue.**

29. Ans:

Property	Metals	Non-metals
Appearance (Lustre)	Shiny (lustrous)	Usually dull
Conductivity	Good conductors of heat and electricity	Poor conductors of heat and electricity (<i>except graphite</i>)
Malleability	Malleable	Brittle
Ductility	Ductile	Non-ductile
Sonority	Sonorous	Non-sonorous

SECTION- B PHYSICS

30. (b) Radiation

31. (a) Wooden piece

32.(a) Both A and R are true, and R is the correct explanation of A

33. **Working: Diagram of LED**

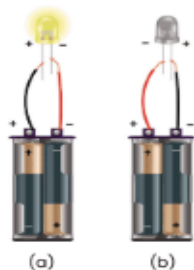


Fig. 3.20: Making an LED glow

An LED (Light Emitting Diode) produces light when electric current passes through it in the correct direction.

It allows current to flow only from the positive terminal to the negative terminal and converts electrical energy into light energy.

34. Light-coloured clothes reflect most of the sunlight and absorb less heat, keeping us cool in summer. Dark-coloured clothes absorb more heat energy, helping us stay warm in winter.

35. Conductors are materials that allow heat or electricity to pass through them easily. Metals like aluminium and copper are good conductors.

The bases of cooking utensils are made of conductors because they transfer heat quickly and evenly from the flame to the food, making cooking faster.

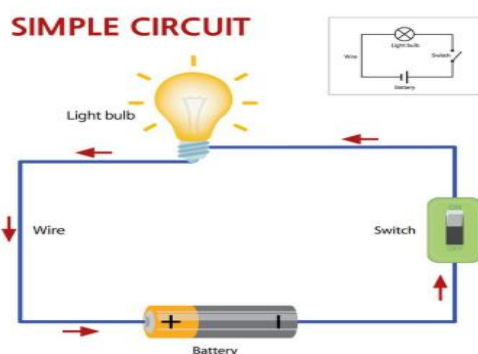
36 A torch works by converting electrical energy from cells into light energy.

Main components:

- Cells (battery) – source of electricity
- Switch – controls the flow of current
- Bulb/LED – produces light
- Connecting wires – provide a path for current

37. These components are connected in a closed circuit. When the switch is turned on, current flows through the bulb/LED and it glows.

A simple electric circuit consists of a cell, lamp, switch, and connecting wires connected in a closed path.



Working:

When the switch is closed, current flows from the positive terminal of the cell through the lamp and returns to the negative terminal. The lamp glows.

38. a. A closed circuit is a circuit that provides an uninterrupted path for electric current to flow from the positive terminal to the negative terminal of a cell.

b. An open circuit is a circuit with a gap that breaks the path of electric current. Current cannot flow through an open circuit.

c. The two types of electric circuits are:

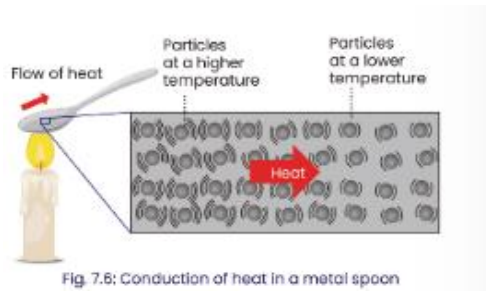
1. **Closed circuit:** Provides a complete path for current flow.
2. **Open circuit:** Has a break or gap, so current cannot flow.

OR

d. A bulb does not glow in an open circuit because the gap prevents the flow of electric current through the filament.

39. Conduction is the process of transfer of heat from a hotter part of a substance to a colder part without the actual movement of particles.

In solids, particles are closely packed. When one end of a solid is heated, its particles gain energy and vibrate faster. These vibrations transfer energy to neighbouring particles, causing heat to move through the solid.



or

Convection is the transfer of heat in liquids and gases by the movement of particles.

When a fluid is heated, its particles move faster and become less dense. The hot fluid rises, and the cooler, denser fluid moves down to take its place. This movement forms convection currents.

Land Breeze:

At night, land cools faster than the sea. The air above the land becomes cooler and denser, so it moves towards the sea. The warmer air above the sea rises and forms convection currents. This movement of air from land to sea is called a land breeze.

*****ALL THE BEST*****