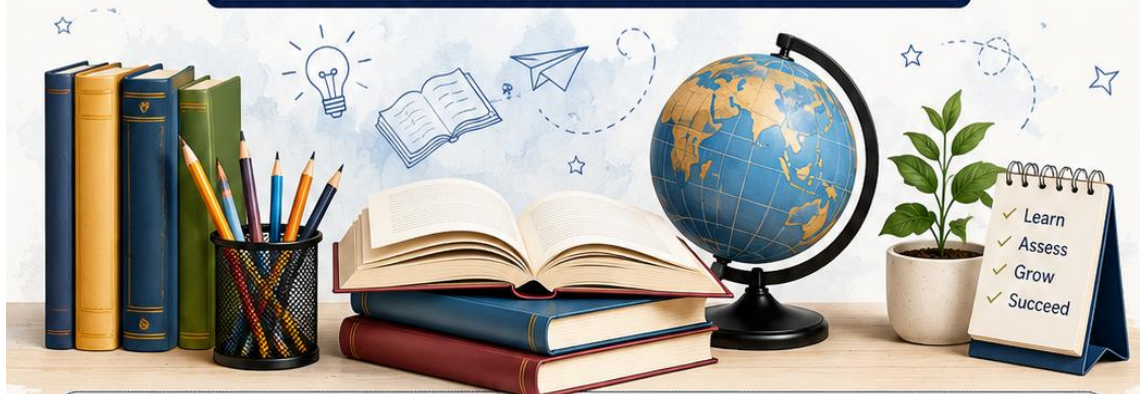


Goa State Council of Educational
Research and Training (GSCERT)

Porvorim, Goa

SUMMATIVE EVALUATION
2026-27

SAMPLE QUESTION PAPER



MARKS



TIME



TOTAL SECTIONS



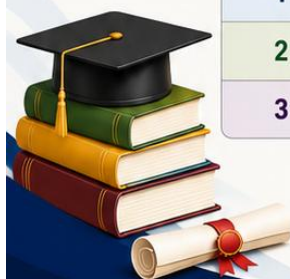
TOTAL QUESTIONS



INSTRUCTIONS

CONTENTS

Sr. No.	Particulars	Page No.
1	 Blue Print	_____
2	 Question Paper	_____
3	 Answer Key	_____



Prepared by
ASSESSMENT CELL
Goa State Council of Educational
Research and Training (GSCERT),
Porvorim, Goa



A competency-based assessment aligned
with NEP 2020 and the State Curriculum Framework.

SUMMATIVE EVALUATION

Year - 2026-27

SAMPLE QUESTION PAPER

GRADE: 8

MARKS 50

SUBJECT: Science

SUBJECT CODE: 8SCIENG

DURATION: 120 Minutes

SAMPLE QUESTION PAPER

2026- 2027

1. Weightage to Content

CHAPTER No.	CHAPTER	Marks
1		
2	The invisible world: Beyond our naked eye	9
3	Health: The Ultimate Treasure	8
4	Electricity: Magnetic and Heating Effects	8
5	Exploring Forces	8
6	Pressure, Winds, Storms, and Cyclone	9
7	Particulate Nature of Matter	8
Total		50

2. Weightage to the cognitive level as per Revised Bloom’s Taxonomy

Bloom’s level	Marks	Percentage
Remember	5	10 %
Understand	10	20 %
Apply	10	20 %
Analyze	10	20 %
Evaluate	10	20 %
Create	5	10 %
Total	50	100

3. Weightage to the difficulty level

Difficulty level	Marks	Percentage
Easy	15	30 %
Average	20	40 %
Difficult	15	30 %
Total	50	100

4. Weightage to the question form

Question Form	Marks	Percentage	Suggested item
MCQ/VSA	20 (20×1)	40 %	Multiple-choice questions.
SA	12 (6×2)	24 %	Brief explanation, steps, inference or reason.
LA	18 (6×3)	36 %	Case, passage, problem, data, judgment or creation.
Total	50	100	

5. Weightage to the assessment style

Assessment style	Marks	Percentage	Requirement
Competitive-style competency-based	25	50 %	All items should be mapped to CG/Competency and unfamiliar, integrative or high discrimination formats should be used.
Regular competency-based	25	50 %	All items should be application-oriented, age-appropriate and mapped to the assessed competency.
Total	50	100 %	

SAMPLE QUESTION PAPER
2026- 2027

GRADE: 8– English Medium

MARKS: 50

SUBJECTCODE:8SCIENG

SUBJECT: Science

No. of Questions: 32

DURATION: 120 Minutes

General Instructions:

1. All questions are compulsory.
 2. The question paper contains 32 questions.
 3. Question 1 to 20 are MCQ questions of 1 mark each and are to be marked on the OMR sheet provided.
 4. Question 21 to 26 is short answer questions of 2 marks each.
 5. Question 27 to 32 is long answer questions of 3 marks each.
-

Choose the correct alternatives from the options provided below and mark your responses in the OMR sheet provided to you. (20 × 1 = 20 Marks)

Q1. Rhizobium bacteria trap nitrogen from the air and make it available for plant. The part of Legume plant where Rhizobium lives is _____.

- A. leaves
- B. stem
- C. root nodules
- D. flowers

Q2. The region of lowest pressure at the centre of the cyclone is known as _____.

- A.the eye of the cyclone
- B.the body of the cyclone
- C. the air of the cyclone
- D. None of the above

Q3. Rohan connects a bulb, a switch, wires, and a battery to make a simple electric circuit. When he closes the switch, the bulb glows. The component that provides the electrical energy needed to light the bulb is _____.

- A. Switch
- B. Battery
- C. Bulb
- D. Wire

Q4. Your friend is carrying a heavy bag with a thin strap and complains that it hurts the shoulder. The best suggestion would be _____.

- A. Carry bag with one hand to reduce pressure on the shoulder.
- B. use a bag with broad strap to reduce pressure on the shoulder
- C. Add more books to the bag to increase pressure on the shoulder
- D. pull the strap lightly to increase pressure on the shoulder

Q5. When the cyclone reaches land the source of moist air is cut off and it gradually ____.

- A. Increases in strength.
- B. Loses its strength.
- C. Becomes lightning.
- D. Thunders and becomes a thunderstorm

Q6. Two students conduct an experiment using identical batteries. Student A uses a copper wire, while Student B uses a nichrome wire of the same length and thickness. After allowing same amount current to flow for one minute, the most likely observation would be_____.

- A. The copper wire becomes hotter than the nichrome wire.
- B. Both wires become equally hot.
- C. The nichrome wire becomes hotter than the copper wire.
- D. Neither wire becomes warm.

A. Q7. During lightning, we should protect ourselves by _____.

- A. going into water
- B. standing near the tall objects
- C. using umbrella with a metallic rod
- D. Crouching down on a low-lying open area.

Q8. A municipality decides to convert an open garbage dump near a residential neighbourhood into a covered, managed composting site; this urban hygiene intervention by municipality directly reduces the incidence of _____.

- A. Vector-borne diseases
- B. Genetic disorders
- C. Airborne allergies
- D. Nutritional deficiencies

Q9. A Baker mixes a microorganism with water and then adds it to flour to make the dough soft and fluffy. The microorganism used here is _____.

- A. bacteria
- B. virus
- C. Yeast
- D. algae

Q10) The sequence correctly arranges the three states of matter in increasing order of force of attraction between particles of matter is _____

- A. Solid → Liquid → Gas
- B. Gas → Liquid → Solid
- C. Liquid → Gas → Solid
- D. Gas → Solid → Liquid

Q11) Meera is preparing compost using vegetable peels and dry leaves. To help the compost decompose quickly, it should be kept in a _____.

- A. Dry and cold place
- B. Warm and moist place
- C. Wet and cold place
- D. Hot and dry place

Q12) A health officer asks people to prevent breeding of Aedes mosquitoes. The most effective solution is to _____.

- A. Use mosquito coils every night
- B. wear full sleeved clothes outdoor
- C. Remove stagnant water from coolers, tyres and pots
- D. apply mosquito repellent cream

Q13) Vaccination work by preparing the body to _____

- A. Produce antibodies against specific pathogens
- B. Increase body weight
- C. Replace white blood cells
- D. Destroy all microbes permanently

Q14) Mohit uses rechargeable batteries in his toys instead of disposable batteries. This helps protect the environment because rechargeable batteries _____.

- A. can be used many times
- B. produce unlimited electricity
- C. never wear out
- D. None of the above

Q15) During dry weather, while combing hair, sometimes we notice that the hair strands move away from each other, the force responsible for this is _____.

- A. force of gravity
- B. electrostatic force
- C. force of friction
- D. magnetic force

Q16) A student prepares the following flow chart to explain the formation of a cyclone.

Warm sea water → Warm air rises → _____ → Air from surrounding areas rushes in → Strong rotating winds develop

The missing step is _____ -

- A. High-pressure area is formed.
- B. A low-pressure area is created.
- C. Rainfall stops completely.
- D. Sea temperature decreases suddenly

Q17) Mahesh makes the following changes in his daily routine; he eats more fruits and vegetables, Walk for 30 mins every day, Reduces sugary intake.

The disease that is most likely to be prevented by the combined effect of this daily routine is

_____.

- A. Malaria
- B. Dengue
- C. obesity
- D. Tuberculosis

18. The statement that best explains why the roof of a weak house may be lifted during a storm is

_____.

- A. High wind speed creates low air pressure above the roof, so the higher pressure inside pushes it upward.
- B. The roof becomes lighter during strong winds.
- C. High wind speed increases air pressure above the roof.
- D. Gravity pulls the roof upward.

Directions:

Q.No 19 and 20 are Assertion-reason based questions. These consist of two statements

Assertion (A) and Reason (R).

Answer these questions by selecting the appropriate option.

- A. Both A and R are true and R is the correct explanation of A.
- B. Both A and R are true and R is not the correct explanation of A.
- C. A is true but R is false.
- D. A is false but R is true.

19. Assertion (A): A magnet can pull an iron nail without touching it.

Reason (R): Some forces can act without direct physical contact between objects.

20. Assertion (A): Children are strictly advised never to touch electrical switches with wet hands.

Reason (R): Distilled water is an excellent conductor of electricity.

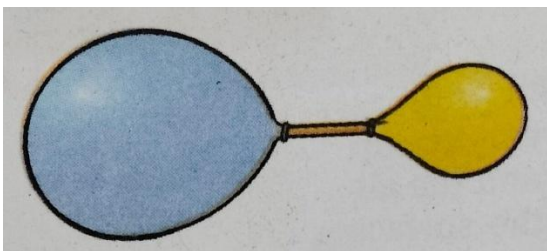
Answer the following questions:

(6x2 =12 Marks)

21. During a visit to a harbour, Rohan noticed that a huge steel ship was floating on water, while a small steel nail thrown into the water sank immediately. Explain why the steel ship floats but the steel nail sinks, using the concept of buoyant force.

22. Some microorganisms are useful while others are harmful .Give one example of each and explain how they affect humans.

23. Two balloons are connected by a straw; one balloon is fully inflated while the other is empty as shown in the figure given below.



Predict and explain the direction of air flow and the reason behind it.

24. A class teacher notices that many students are absent due to an infectious disease. On observing the classroom, she finds that students often sneeze without covering their mouths and do not wash their hands regularly. Analyse the situation and write any two precautions that should be followed to reduce the spread of the disease.

25. Students are advised to switch off lights, fans and other electrical appliances before leaving the classroom. Evaluate how this action benefits society.

26. Draw a labelled diagram to compare the arrangement of particles in a solid, a liquid, and a gas. Write one characteristic of each state.

Answer the following questions:

(6x3= 18 Marks)

27. During a storm, the wind exerts a force of 600 N on a window of area 3 m².

a) Calculate the pressure exerted by the wind.

b) If the area of the window is increased to 6 m² while force remain same. Calculate the new pressure.

c) Based on your calculations, what happens to the pressure when the area of contact increases while the force remains constant?

28. Imagine your school wants to grow microalgae for an environment project. Design a simple plan explaining how you would grow microalgae and mention any two benefits of using them.

29. A student insists on taking antibiotics for a common cold. What advice would you give? Justify your answer with reference to antibiotic resistance.

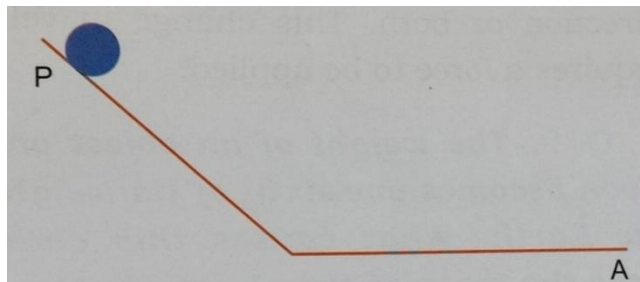
30. A bottle is completely filled with water and tightly closed. Predict what will happen if it is kept in a freezer and explain your answer using the particulate nature of matter.

31. A student wants to make a simple electromagnet using a nail, copper wire, and a battery. Write the steps involved and mention one factor that can make the electromagnet stronger.

32. A game designer wants to control the distance travelled by a marble rolling down a ramp. Evaluate the following situation and suggest: (Shape of the ramp should not be changed)

1. One modification that would make the marble stop before point A.
2. One modification that would make the marble stop after point A.

Give a scientific reason for each modification based on the forces acting on the moving marble.



***** THE END *****

Answer Key of Sample Question Paper (Science)

Section A: Multiple Choice Questions (1 × 20 = 20 Marks)

1. C. Root nodules
 2. A. The eye of the cyclone
 3. B. Battery
 4. B. Use a bag with a broad strap to reduce pressure on the shoulder
 5. B. loses its strength
 6. C. The nichrome wire becomes hotter than the copper wire
 7. D. Crouching down on a low-lying open area
 8. A. Vector-borne diseases
 9. C. Yeast
 10. B. Gas → Liquid → Solid
 11. B. Warm and moist place
 12. C. Remove stagnant water from coolers, tyres and pots
 13. A. produces antibodies against specific pathogen
 14. A. can be used many times
 15. B. electrostatic force
 16. B. A low-pressure area is created
 17. C. Obesity
 18. A. High wind speed creates low air pressure above the roof, so the higher pressure inside pushes it upward.
 19. A. Both A and R are true and R is the correct explanation of A.
 20. C. A is true but R is false.
21. A steel ship floats because its hollow shape displaces a large volume of water, producing a buoyant force equal to or greater than its weight. A steel nail displaces very little water, so the buoyant force is less than its weight and it sinks.
22. Useful microorganism: Yeast– used in baking to make bread soft and fluffy.
Lactobacillus – used in curd formation
Or any other useful microorganism with correct use
Harmful microorganism: Plasmodium-causes malaria
Virus –causing diseases such as AIDS

Or any other harmful microorganism

23. Air will flow from the fully inflated balloon to the empty balloon through the straw.

Reason:

The fully inflated balloon has higher air pressure inside it because it contains more compressed air. The empty balloon has lower air pressure. Air always moves from a region of **higher pressure** to **lower pressure** until the pressure in both balloons becomes nearly equal.

24. (Any two precautions)

- * Cover the mouth and nose while sneezing or coughing.
- * Wash hands regularly with soap.
- * Avoid close contact with infected persons.
- * Wear a mask when necessary.

25. Switching off electrical appliances:

- * Saves electricity and natural resources.
- * Reduces electricity bills.
- * Prevents wastage of energy and lowers pollution.

26.

Diagram: Students should draw labelled particle arrangements of:

Fig 7.12 on page no 109

Solid: Closely packed particles.

Liquid: Particles close together but able to move.

Gas: Particles far apart

- * Solid – Definite shape and volume.
- * Liquid – Definite volume but no definite shape.
- * Gas – Neither definite shape nor definite volume.

27.

a) Given:

* Force = 600 N

* Area = 3 m²

$$\begin{aligned}\text{Pressure} &= \text{Force} \div \text{Area} \\ &= 600 \div 3 = 200 \text{ Pa}\end{aligned}$$

b) If Area = 6 m²

$$\text{Pressure} = 600 \div 6 = 100 \text{ Pa}$$

C) Pressure decreases when the area of contact increases while force remains constant.

28) Plan:

* Fill a transparent container with water and nutrients.

* Add microalgae culture.

* Keep it in sunlight.

* Supply air by gentle stirring or aeration.

* Allow growth for several days.

Benefits (any two):

* Produces oxygen.

* Absorbs carbon dioxide.

* Can be used as biofuel.

* Used as food/feed or fertilizer.

29. Advice:

Do not take antibiotics for a common cold because it is caused by viruses, while antibiotics work only against bacteria. Unnecessary use of antibiotics leads to antibiotic resistance, making bacterial infections harder to treat in the future.

30. When kept in a freezer, water freezes into ice and expands. Since the bottle is tightly closed, the increased volume creates pressure, causing the bottle to bulge or even burst. This happens because particles in ice are arranged farther apart than in liquid water.

31.**Steps:** (any two) (1)

1. Take an iron nail.
2. Wind insulated copper wire around the nail.
3. Connect the wire ends to a battery.
4. The nail becomes an electromagnet and attracts iron objects.

One factor to make it stronger: (1)

Increase the number of turns of the coil.
(or) Use a stronger battery.

32.(i) To make the marble stop before the target point (or point C):

Increase the friction by making the floor rough (e.g., spread sand, place a rough mat, or use a carpet

The increased friction opposes the marble's motion more, causing it to lose speed quickly and stop before the target.

(ii) To make the marble stop after crossing the target point (or point C):

Decrease the friction by making the floor smooth (e.g., polish the floor or place a smooth plastic sheet). (1)

The reduced friction offers less resistance, allowing the marble to roll a longer distance and stop after crossing the target.
