SOUTH BENGAL PUBLIC SCHOOL

(Govt. Recognized)

Admission Test for class-08

(Syllabus Based on class-07)

Sub - English

Syllabus

WRITING SKILL (25 marks)

Paragraph Writing (Word limit-150) **10**
(Narrative or Descriptive Writing)
N.B.:-Point will be mentioned

Picture description (Word limit-100) **05**
[Picture will be given for analysis]

Letter Writing. (Body of the letter with Maximum 10 lines) **05**
[Formal and Informal]

Notice writing or E-mail **05**

GRAMMAR SKILL AND VOCABULARY SKILL

(25 marks)

[SYLLABUS:
GRAMMAR:

Sentences : Introduction, Classifications Example. Formation of the sentences. (Positive, Negative, Interrogative and Interrogative negative.)

Noun: Singular & plural number - countable and uncountable,. common, proper noun,Compound Nouns.

Singular and Plural :(adding ‘s’ , ‘es’, ’ves’ or ‘ies’ and examples like foot-feet, sheep-sheep)

Gender: Introduction and type, example.

Pronouns: Introduction, Kind of Pronouns, Uses of pronouns.

Verb: Kinds of verb, be verb, have verbs, doing words.

Auxiliary verb:

Clauses and Phrase:

Modal Auxiliaries:

Group Verb: Common group verb.

Adverbs: Introduction, uses of adverbs of Time and Place.

Adjective: Introduction, types of adjectives.

Conjunction: 'And' , 'But', 'Because' and 'As' Conjunctions etc.

Punctuation: Full stop (.), Comma (,), Question mark(?),Use of Capital letters & Exclamation mark(!)

Article: Indefinite articles , Definite and indefinite Article.

Preposition: Introduction, Type and Uses.

Tense:

Present – Simple, Continuous, Perfect and perfect continuous structure, rules and uses.

Past – Simple, Continuous, Perfect and perfect continuous structure, rules and uses.

Future – Simple, Continuous, Perfect and perfect continuous structure, rules and uses.

Voice Change: Present ,Past and Future Tense.

Narration Change: Present ,Past and Future Tense.

Framing questions.

VOCABULARY:

Synonym & Antonym,

Group of Collections,

Comparisons,

One word for a group of words or Substitution,

Homes,

Homophones etc

SOUTH BENGAL PUBLIC SCHOOL

(Govt. Recognized)

Admission Test (2025-26) for class-08

(Syllabus Based on class-07)

Sub - English

Total Marks-50 **Time-1 hour**

WRITING SKILL (25marks)

Question-01: Write a paragraph within 150 words on the topic: 10

Write a paragraph on the topic:"The Person I Admire Most"

[Hints: Who is the person? – Relationship – Qualities – Achievements – Why you admire – How they inspire you – Conclusion]

Ans.

Q2. Picture Description – 100 words **(5 Marks)**

Ans.

Q3. Letter Writing – Formal **(5 Marks)**

Write a letter to your class teacher requesting leave for two days.

(Body of the letter within 10 lines)

Ans.

Q4. E-mail Writing **(5 Marks)**

Write an e-mail to your school librarian requesting a new library card.

Ans.

GRAMMAR & VOCABULARY (25 Marks)

Q5. Multiple Choice Questions **(10 Marks)**

Choose the correct option:

1. Which of the following is a plural noun?
   (a) Child (b) Man (c) Mice (d) Foot
2. Gender of “lioness”:
   (a) Masculine (b) Common (c) Feminine (d) Neuter
3. Choose the auxiliary verb:
   (a) Was (b) Walk (c) Quickly (d) Garden
4. Proper noun:
   (a) Boy (b) River (c) Kolkata (d) School
5. “You ___ speak politely.”
   (a) Can (b) Might (c) Should (d) May
6. Choose correct tense:
   “They ___ football every Sunday.”
   (a) Play (b) Played (c) Plays (d) Playing
7. Identify the preposition:
   “She walked across the road.”
   (a) She (b) Walked (c) Road (d) Across
8. Correct conjunction:
   “I will go out ___ it rains.”
   (a) If (b) But (c) And (d) Yet
9. Correctly punctuated sentence:
   (a) when will you come (b) When will you come?
   (c) When Will you come (d) When will you come.
10. Adverb of time:
    (a) Here (b) Today (c) Slowly (d) Up

Q6. Fill in the blanks with correct tense **(5 Marks)**

1. I _____ (write) an essay now.
2. They _____ (not / know) the truth.
3. By evening, she _____ (finish) her work.

4. He usually _____ (take) the bus.
5. The children _____ (play) when it started raining.

Q7. Voice Change **(2 Marks)**

1. The gardener waters the plants.

   Answer: _____

2. They will organize the event.

   Answer: _____

Q8. Narration Change **(2 Marks)**

1. She said, “I love music.”

   Answer: _____

2. He asked, “Why are you crying?”

   Answer: _____

Q9. Vocabulary – Synonym/Antonym **(6 Marks)**

Choose the correct option:

1. Synonym of “Smart”:
   (a) Clever (b) Slow (c) Weak (d) Dull
2. Antonym of “Brave”:
   (a) Shy (b) Coward (c) Safe (d) Weak
3. Synonym of “Bright”:
   (a) Dull (b) Shiny (c) Dark (d) Weak
4. Antonym of “Deep”:
   (a) Tall (b) Shallow (c) Wide (d) Narrow
5. Synonym of “Silent”:
   (a) Quiet (b) Loud (c) Angry (d) Big
6. Antonym of “Rich”:
   (a) Wealthy (b) Poor (c) Happy (d) Sad

SOUTH BENGAL PUBLIC SCHOOL

(Govt. Recognized)

Admission Test

Questions Framework for Admission Test to Class – 8

(Syllabus Based on class-07)

Sub - Mathematics Syllabus

Total Marks-50 **Time-1 hr**

Theme 1: Number System

Key Concepts:

1. Multiplication and division of integers
2. Properties of operations on integers: Commutativity, associativity, existence of identity and inverse and distributivity
3. Problem solving using operations on integers
4. Solution of word problems involving integers (all operations)
5. Introduction to rational numbers (with representation on number line)
6. Word problems on rational numbers (all operations)
7. Decimal representation of rational numbers
8. Problem solving using operations on rational numbers and decimal fractions
9. Fraction as an operator
10. Reciprocal of a fraction
11. Multiplication and division of decimal fractions
12. Exponents only natural numbers.
13. Laws of exponents (through observing patterns to arrive at generalisation.)
14. Application of laws of exponents in simple daily life problems
15. Revision idea of sets
16. Equal, equivalent, universal sets
17. Cardinal property of sets

Theme 2: Ratio and Proportion

Key Concepts:

1. Ratio and proportion (revision)
2. Unitary method continued, consolidation, general expression for unitary method
3. Percentage- an introduction.
4. Understanding percentage as a fraction with denominator 100
5. Converting fractions and decimals into percentage and vice-versa.
6. Application to profit and loss (single transaction only)
7. Application to simple interest (time period in complete years).
8. Speed, distance, time

Theme 3: Algebra

Key Concepts:

1.Terms related to algebra like constants, variable, terms, coefficient of terms, like and unlike terms, etc.

2. Generate algebraic expressions

3.Performs operations (addition and subtraction) on algebraic expressions with integral coefficients only

4. Simple linear equations in one variable (in contextual problems) with two operations.

5. Inequalities and solution of simple inequalities in one variable

Theme 4: Geometry

Key Concepts:

1. Understanding shapes: Pairs of angles (linear, supplementary, complementary, adjacent, vertically opposite),

Properties of parallel lines with transversal (alternate, corresponding, interior, exterior angles).

2. Properties of triangles:

- Angle sum property
- Exterior angle property
- Pythagoras Theorem (Verification only)

3. Symmetry:

· Recalling reflection symmetry

· Idea of rotational symmetry, observations of rotational symmetry of 2-D objects. (900, 1200, 1800)

4. Representing 3-D in 2-D:

· Identification and counting of vertices, edges, faces, nets (for cubes cuboids, and cylinders, cones).

· Mapping the space around approximately through visual estimation.

5. Congruence:

· Congruence through superimposition

· Extend congruence to simple geometrical shapes e.g. triangles, circles.

· Criteria of congruence

6. Construction:

· Construction of a line parallel to a given line from a point outside it

· Construction of simple triangles.

Theme 5: Mensuration

Key Concepts:

1. Revision of perimeter and Idea of Circumference of Circle

2. Area ·Concept of measurement using a basic unit area of a square, rectangle, triangle, parallelogram and circle, rings and combined figures.

Theme 6: Data Handling

Key Concepts:

1. Collection and organisation of data – choosing the data to collect for a hypothesis testing

2. Mean, median and mode of ungrouped data – understanding what they represent

3. Constructing and interpreting bar graphs

4. Feel of probability using data through experiments. Notion of chance in events like tossing coins, dice etc. Tabulating and counting occurrences of 1 through 6 in a number of throws. Comparing the observation with that for a coin. Observing strings of throws, notion of randomness.

5. Solving linear equations in one variable in contextual problems involving multiplication and division (word problems) (avoid complex coefficient in the equations)

Questions Pattern: Mathematics.

I. Give answer of the following questions. 01x20=20

II. Section B: Short Answer Questions 01x20=20

III.Section-C:Higher Order Thinking Skills (HOTs) Questions. 01x02=10

Set 1: HOTs Questions (5 Marks)
(2 Marks) +(3 Marks)
Set 2: HOTs Questions (5 Marks)
(2 Marks) +(3 Marks)

SOUTH BENGAL PUBLIC SCHOOL

(Govt. Recognized)

Admission Test (2025-26) for class-08

(Syllabus Based on class-07)

Sub - Mathematics

Total Marks-50 **Time-1 hr**

Section A

Objective Type Questions (1×20 = 20 Marks)

1. What is (–9) ÷ (–3)?

Answer: _____

2. Which of the following is a terminating decimal?

a) 1/7 b) 2/5

c) 1/3 d) √2

3. The reciprocal of 4/9 is:

a) 9/4 b) –4/9

c) 4/9 d) –9/4

4. $10^3 \times 10^2$ =

Answer: _____

5. Which angles are alternate interior angles?

a) Same-side interior b) Matching angles

c) Supplementary angles d) Opposite sides of transversal

6. If A = {1, 3, 5} and B = {5, 3, 1}, the cardinality of A is:

a) 1 b) 2

c) 3 d) 5

7. Convert 140% to fraction.

Answer: _____

8. Which triangle satisfies the Pythagoras Theorem?

a) 8, 15, 17 b) 5, 5, 8

c) 9, 9, 9 d) 7, 8, 12

9. A shape with rotational symmetry of 90° is:

a) Circle b) Square

c) Pentagon d) Rhombus

10. Number of faces in a cone:

Answer: _____

11. 25% of 600 is:

Answer: _____

12. Area of circle of radius 7 cm (take π = 22/7):

Answer: _____

13. A line making 90° with another line is called:

a) Transversal b) Perpendicular

c) Parallel d) Secant

14. LCM of 12 and 16 is:

Answer: _____

15. A die is thrown once. Probability of getting a 6:

Answer: _____

16. Decimal form of 7/8:

Answer: _____

17. Complementary of 55° is:

Answer: _____

18. Number of edges of a cuboid:

Answer: _____

19. Which is the identity element in addition?

a) 1 b) 0

c) –1 d) 10

20. Median of: 3, 8, 4, 6, 9

Answer: _____

Section B:

Short Answer Questions **(2×10 = 20 Marks)**

1. Evaluate: 8 – [4 × (7 – 5)] ÷ 2

2. A vehicle travels 360 km in 6 hours. Find its speed.

3. Convert 2.75 kg into grams.

4. A shopkeeper buys a book for ₹150 and sells it for ₹180. Find profit %.

5. Find the area of a trapezium with parallel sides 8 cm & 12 cm, height 5 cm.

6. Simplify: $2^5 \div 2^2$

Sample Questions

7. If 45% of a number is 81, find the number.

8. Draw and label a number line showing –2 to 2.

9. List the elements of: B = {x : x is a multiple of 3 up to 15}.

10. Construct a ΔABC with sides 4 cm, 5 cm, 6 cm.

Section C

Higher Order Thinking Skills (HOTs) Questions (2×5 = 10 Marks)

SET – 1 (Application Based)

1. A bicycle's marked price is ₹6000. It is sold at 10% discount. Find selling price. (2 Marks)

2. A map shows 1 cm = 5 km. What is the real distance if two cities are 7 cm apart? (3 Marks)

SET – 2 (Reasoning Based)

1. Find the missing number: 5, 15, 45, 135, ___ (2 Marks)

2. If a triangle has angles x, (x + 30°), (2x + 20°), find x and the angles. (3 Marks)

SOUTH BENGAL PUBLIC SCHOOL

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Admission Test for class-08

(Syllabus Based on Class-07)

Sub - Science (PCB) Syllabus

Total Marks-75 **Time-1 hr 15 minutes**

Physics [25]

Theme 1: Physical Quantities and Measurement

Key Concepts:

1. Measurement of Volume (3D concept):
   - Concept of unit volume

2. Measurement of Area:
   - Estimate the Area of irregular shape using a Graph paper

3. Measurement of Density of regular solids:
   - Basic concept
   - Formula
   - Simple Numericals (SI units not required)

4. Calculation of Speed:
   - Basic Concept
   - Formula
   - Simple Numericals (SI units not required).

Theme 2: Force and Pressure: Motion

Key Concepts:

1. Motion as a change in position of an object with respect to time.
2. Types of motion:
   - Translatory
   - Circulatory
   - Oscillatory
   - Repetitive (Periodic and Non Periodic)
   - Random

3. Uniform and Non Uniform Motion: concept of distance and speed (average speed)

4. Weight:

- Concept
- Differences between Mass and Weight.

Theme 3: Energy

Key Concepts:

1. Energy:

- Energy as capacity to do work.
- Units of energy (joule and calorie).
- Different forms of energy.
- Inter-conversion of energy

2. Law of Conservation of Energy:

- Real world examples.

Theme 4: Light Energy

Key Concepts:

1. Reflection:

- Definition and Examples.
- Terms related to reflection - normal, plane, point of incidence, angle of incidence, angle of reflection.

2. Laws of Reflection.
3. Plane mirror:

- Uses.
- Ray Diagram (no mention of virtual image). Characteristics of the image formed (Lateral Inversion, same size, distance is preserved).

4. Speed of light (3 x 108 m/s).
5. Primary colours (RGB).
6. Formation of secondary colours by colour addition.
7. Appearance of colour of an object (based on reflection and absorption)
8. Colour subtraction.

Theme 5: Heat

Key Concepts:

1. Heat as a form of energy and its units, joule(J) and calorie (cal).
2. Different units of Temperature (°C, °F, K).
3. Effects of Heat:

- Change in Temperature.
- Change in Size (Expansion and contraction).
- Change in State.
- Good Conductors and Bad Conductors of Heat and their examples.
- Choice of conductors and insulators in day to day life (Pan handles, metal cooking utensils etc.)

4. Methods of Heat Transfer:
   - Conduction
   - Convection
   - Radiation
5. Thermos Flask: (Application of Heat Transfer)
   - Construction
   - Working

Theme 6: Sound
Key Concepts:

1. Sources of sound.
2. Sound as a longitudinal wave.
3. Characteristics of a sound wave: Amplitude (Relate amplitude with loudness) and Frequency.
4. Sound needs a medium to propagate.
5. Reflection and Absorption of sound.
6. Relative speed of sound in different mediums.

Theme 7: Electricity and Magnetism
Key Concepts:

1. Law of Magnetism
2. Test for a magnet (by repulsion)
3. Electromagnetism, Electromagnets and their applications- Electric bell
4. Electric current as a flow of charges
5. Electric cell as source of electricity
6. Resistors as components that oppose the flow of current.
7. Symbolic representation of electrical components (key, battery, bulb, conducting wire, resistor)
8. Simple electric circuitSeries and Parallel
9. Battery as a collection of cells connected in series.
10. Good and Bad conductors of electricity

Questions Pattrena: Physics

[Section A]

01. Give answer of the following questions. [MCQs] 01x10=10

[Section B]

02. Answer the following questions in one or two sentences each. Each question carries 1 mark. 01x10=10

[Section-C]

03. Answer the following questions. [Higher Order Thinking Skills (HOTs) Questions.] 01x05=05

Set-I Or Set-II

SOUTH BENGAL PUBLIC SCHOOL

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Admission Test (2025-26) for class-08

(Syllabus Based on Class-07)

Sub – Science (Physics)

Total Marks-25 Time-25 Minutes

SECTION-A

01. Choose the correct answer from the options given below. (MCQs) **[1 x 10 = 10]**

Q1. The area of a rectangle of length 6 cm and breadth 4 cm is:

A. 10 cm² B. 24 cm²

C. 12 cm² D. 20 cm²

Q2. Assertion (A): Density = Mass ÷ Volume

Reason (R): Volume decreases when mass increases.

A. A and R both true & R explains A

B. A and R both true but R does not explain A

C. A true, R false

D. A false, R true

Q3. A child running in a straight line shows which type of motion?

A. Circular B. Translatory

C. Oscillatory D. Random

Q4. Match List–I with List–II:

List–I	List–II
A. Kinetic energy	1. Stored energy
B. Potential energy	2. Energy in food
C. Calorie	3. Energy due to motion
D. Interconversion	4. Changing energy form

Options:

A. A–3, B–1, C–2, D–4 B. A–1, B–3, C–4, D–2

C. A–2, B–1, C–3, D–4 D. A–3, B–2, C–1, D–4

Q5. A polished mirror produces a clear image because it:

A. Refracts light
B. Absorbs light
C. Reflects light
D. Scatters light

Q6. Which is a secondary colour of light?

A. Blue
B. Red
C. Cyan
D. Green

Q7. Which of the following expands the most when heated?

A. Solids
B. Liquids
C. Gases
D. Metals only

Q8. Convection occurs mainly in:

A. Solids
B. Liquids & gases
C. Metals
D. Vacuum

Q9. Sound travels fastest in:

A. Air
B. Water
C. Steel
D. Vacuum

Q10. Which of the following circuits allows current to pass even when one bulb fuses?

A. Open circuit
B. Series circuit
C. Parallel circuit
D. Circuit with switch open

SECTION B

02. Answer the following questions in one or two sentences each.

[1 x 10 = 10]

Q1. Write the formula for calculating speed.

Answer: _____

_____

Q2. Define uniform motion.

Answer: _____

_____

Q3. What is meant by conservation of energy?

Answer: _____

_____

Q4. Mention any two characteristics of an image formed by a plane mirror.
Answer: _____

_____

Q5. Why do metals feel colder than wood at the same temperature?
Answer: _____

_____

Q6. What is amplitude of a sound wave?
Answer: _____

_____

Q7. What happens to air when it is heated?
Answer: _____

_____

Q8. Draw the circuit symbol of a switch (open).
Answer: _____

_____

Q9. Mention one example of translatory motion.
Answer: _____

_____

Q10. Name the unit used to measure heat energy in food.
Answer: _____

_____

SECTION C

03.Answer the following Higher Order Thinking Skills (HOTs) questions. [1 x 05 = 05]

(Attempt any one set of questions)

1. Why is the average speed useful when speed keeps changing during a journey?
2. Why does a pencil appear bent in water?
3. Why do we feel hot near a fire even without touching it?
4. Why do metallic objects make louder sounds when struck compared to rubber objects?
5. Why are electric wires covered with PVC?

OR

1. Why is a graph paper useful for measuring the area of irregular shapes?
2. Why do shadows change length during the day?
3. Why does a black object heat up faster in sunlight?
4. Why is it dangerous to touch electric appliances with wet hands?
5. Why are solar cookers painted black from inside?

SOUTH BENGAL PUBLIC SCHOOL

(Govt. Recognized)

Admission Test for class-08

(Syllabus Based on Class-07)

Sub - Science (PCB) Syllabus

Total Marks-75 **Time-1 hr 15 minutes**

Chemistry [25]

Theme 1: Matter and its Composition

Key Concepts:

1. Definition of matter.
2. Matter has mass and occupies space - Explanation.
3. Composition of matter – brief introduction

Theme 2: Physical and Chemical Changes

Key Concepts:

1. Physical and chemical changes.
2. Chemical change - formation of a new product with new properties.
3. Differentiating between physical and chemical change.
4. Classification as physical & chemical change.
5. Types of change involved when there is a change of state of matter.
6. Types of change involved when there is a change of energy.

Theme 3: Elements, Compounds and Mixtures (experimental techniques)

Key Concepts:

1. Identification of elements, and compounds from representation of their symbols and formulae.

2. Mixtures and compounds: difference between mixtures and compounds on the basis of the chemical composition of constituents.

3. Recall that a mixture is formed when two or more substances are mixed in any proportion such that their particles are in intimate contact with one another without undergoing a chemical change.

4. **Types of mixtures: -**
   - Homogeneous & Heterogeneous mixtures
   - On the basis of State: Solid –solid; Solid-liquid; Liquid-liquid.
5. **Separation techniques:**
   - evaporation,
   - distillation,
   - use of separating funnel,
   - sublimation,
   - fractional distillation.

6. Examine the principle behind each separation technique.

7. Chromatography as a separation technique; Paper chromatography.

Theme 4: Atomic Structure

Key Concepts: Atoms, Molecules and Radicals

1. An atom is the smallest particle of an element.
2. It is not capable of independent existence.
3. The properties of an element depend upon the atoms constituting it.
4. A molecule is the smallest particle of an element or compound, capable of independent existence. It consists of one or more than one atom of the same or different elements.
5. A radical is a single atom of an element or a group of atoms of different elements behaving as single charged unit.
6. Atomicity (no. of atoms in an entity) of elements and compounds – mono atomic, di atomic, tri atomic, polyatomic.
7. Associate the first 20 elements in the periodic table with their names and symbols
8. Valency is the combining capacity of an element or the number of hydrogen atoms with which it combines or replaces.

Theme 5: Language of Chemistry

Key Concepts: Chemical reactions

1. A chemical reaction may take place when two or more reactants come in contact with one another and transfer of energy takes place.

2. **Characteristics of occurrence of a chemical reaction: Change of:**
   - Colour
   - State
   - Smell
   - Evolution of gas
   - Precipitate formed
   - Heat evolved / released

3. Chemical Equations:

· Writing word equations for chemical reactions and emphasize on the observational skills and the names of products formed

· Some examples of word equations for practice.

Theme 6: Metals and Non-Metals
Key Concepts: Metals, non-metals

1. Properties

2. Distinguish between metals and non-metals with the general properties (lustre, conduction of electricity, heat, malleability, ductility, sonority, melting point, boiling point, density, strength.)

3. Classification of elements as metals & non-metals.

4. Corrosion of iron (rusting); ways to prevent rusting (oiling, painting, chrome plating, galvanization, tinning) (avoiding contact with air and water vapour).

5. Uses of certain metals (iron, gold, copper, aluminium, zinc, lead, magnesium).

6. Metalloids: elements that show the properties of both metals and non-metals – e.g. silicon, germanium, tungsten, antimony); uses.

Theme 7: Air and Atmosphere
Key Concepts:

1. Air a mixture of gases.

2. Composition of air and uses of its components.

3. Oxygen is needed for combustion.

4. Mass change during burning (burning of magnesium and candle).

5. Word equations for reactions of metals and non-metals (S, C, P, Na, K, Ca, Mg) with O.

6. Products formed in acid rain; effects of acid rain.

7. Air quality.

8. Study the properties of oxygen: (physical properties to include colour, odour).

9. Distinguish between:

· Respiration and combustion,

· Combustion and rusting.

Questions Pattrena: Chemistry

[Section A]

01. Give answer of the following questions. [MCQs] 01x10=10

[Section B]

02. Answer the following questions in one or two sentences each. Each question carries 1 mark. 01x10=10

[Section-C]

03. Answer the following questions. [Higher Order Thinking Skills (HOTs) Questions.] 01x05=05

Set-I Or Set-II

SOUTH BENGAL PUBLIC SCHOOL

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Admission Test (2025-26) for class-08

(Syllabus Based on Class-07)

Sub – Science (Chemistry)

Total Marks-25 Time-25 Minutes

[Section A]

01. Choose the correct answer from the options given below. (MCQs) **[1 x 10 = 10]**

Q1. Which statement correctly defines an element?

A. A substance made of two or more atoms

B. A substance that cannot be broken into simpler substances

C. A substance formed by mixing different materials

D. A substance that changes on heating

Q2. Assertion (A): Rusting of iron is a chemical change.

Reason (R): Iron reacts with oxygen and moisture to form a new substance.

A. A & R true; R explains A

B. A & R true; R does not explain A

C. A true, R false

D. A false, R true

Q3. Which of the following is a heterogeneous mixture?

A. Milk

B. Air

C. Oil and water

D. Sugar solution

Q4. Match List–I with List–II:

List–I	List–II
A. Distillation	1. Separation of coloured substances
B. Paper chromatography	2. Separation of solids from liquids
C. Filtration	3. Separation of miscible liquids
D. Sublimation	4. Separation of solid that directly converts to vapour

Options:

A. A–3, B–1, C–2, D–4

B. A–1, B–3, C–4, D–2

C. A–4, B–2, C–3, D–1

D. A–2, B–1, C–3, D–4

Q5. The smallest particle of an element is:

A. Molecule

B. Atom

C. Radical

D. Ion

Q6. Which of the following is NOT true of metals?

A. They are ductile

B. They are good conductors

C. They are lustrous

D. They are poor conductors of heat

Q7. Galvanization is coating iron with:

A. Copper

B. Zinc

C. Aluminium

D. Silver

Q8. Burning of magnesium is represented as:

A. $Mg + O \rightarrow MgO$

B. $Mg + O_2 \rightarrow MgO$

C. $MgO \rightarrow Mg + O_2$

D. $MgO_2 \rightarrow Mg + O$

Q9. Which gas is responsible for acid rain?

A. Hydrogen

B. Carbon monoxide

C. Sulphur dioxide

D. Helium

Q10. Which of the following correctly shows a chemical change?

A. Breaking chalk

B. Dissolving sugar

C. Melting ice

D. Burning paper

[Section B]

02. Answer the following questions in one or two sentences each. **[1 x 10 = 10]**

Q1. Define a compound.

Answer: _____

_____

Q2. Give one example of a chemical change.

Answer: _____

_____

Q3. What is evaporation used for?

Answer: _____

_____

Q4. What is meant by a diatomic molecule?

Answer: _____

_____

Q5. Write the word equation for the reaction of sulphur with oxygen.

Answer: _____

_____

Q6. Mention one use of copper.

Answer: _____

_____

Q7. Name two pollutants that cause air pollution.

Answer: _____

_____

Q8. What is meant by a radical?

Answer: _____

_____

Q9. State one difference between element and compound.

Answer: _____

_____

Q10. Why is oxygen placed in the atmosphere even though it is reactive?

Answer: _____

_____

[Section C]

03. Answer the following Higher Order Thinking Skills (HOTs) questions. [1 x 05 = 05]

(Attempt any one set of questions)

SET–1 HOTs

1. Why is chemical change permanent in most cases?
2. Why is separating funnel used only for immiscible liquids?
3. Why does iron nail gain weight after rusting?
4. Why is air considered a mixture, not a compound?
5. Why do fire extinguishers remove oxygen supply?

SET–2 HOTs

1. Why does salt solution not scatter light but milk does?
2. Why does an atom have no independent existence?
3. Why is magnesium ribbon cleaned before burning?
4. Why is aluminium a better conductor than rubber?
5. Why does wet iron rust faster than dry iron?

SOUTH BENGAL PUBLIC SCHOOL

(Govt. Recognized)

Admission Test for class-08

(Syllabus Based on Class-07)

Sub - Science (PCB) Syllabus

Total Marks-75 **Time-1 hr 15 minutes**

Biology (25)

Theme 1: Tissue

Key Concepts: Plant Tissues

1. Definition of tissue.
2. Classification of plant tissues: Meristematic and permanent (simple and complex).
3. Meristematic tissues: characteristics (any two), simple structure, location, function, examples.
4. Simple permanent tissues: parenchyma, collenchyma, sclerenchyma (simple structure, location and functions of each), examples.
5. Complex permanent tissues: xylem, phloem (only nature of cells and function. Elements of xylem and phloem not to be mentioned).

Animal Tissues

1. Epithelial tissue: simple location, and function (types of epithelial tissue not to be mentioned).
2. Connective tissue location and functions of areolar, adipose, bone, cartilage, blood, ligament, tendon.

3. Muscular tissue: location and one function of:
   - striated (voluntary or skeletal muscle),
   - unstriated (involuntary/ smooth muscle),
   - cardiac (specialized muscle).
4. Nerve tissue: parts of neuron (cell body, Dendron, axon).

Note: Only basic structure and basic functions of the above mentioned tissues to be done.

Theme 2: Kingdom Classification
Key Concepts:

1. Meaning and concept of classification.

2. Need and advantages of Classification.

3. Characteristics of each kingdom with suitable examples:

i) Monera: bacteria -shape ; useful bacteria, harmful bacteria (applications related to daily life to be discussed);

ii) Protista: Amoeba - basic structure and life processes (nutrition, locomotion, respiration, excretion and reproduction – by binary and multiple fission);

iii)Fungi: basic structure of mould, nutrition and respiration in mould, useful fungi, harmful fungi (applications related to daily life to be discussed);

iv)Plantae: characteristics and examples (classification of plantae not to be discussed);

v) Animalia:

(a)Vertebrates.

(b)Invertebrates: 9 major Phyla, Porifera, Cnidaria, Coelenterata, Platyhelminthes, nematoda, Annelida, Arthropoda, Mollusca, Echinodermata.)

(Two characteristics and two examples of each Phylum).

Theme 3: Plant Life
Key Concepts:

Photosynthesis

1. Definition, basic process, factors affecting photosynthesis: (light, carbon dioxide, water, chlorophyll), significance of photosynthesis, setup.

2. Experiment to demonstrate photosynthesis process.

Respiration

1. Basic process, word equation; respiration as a process which releases energy; respiration in plants: two types (aerobic and anaerobic: basic concept, word equations for both, examples).

2. Respiration and photosynthesis in plants, difference in both processes.

Theme 4: Human Body
Key Concepts: Excretory System

Excretion: Definition.

1. Organs and their excretory products (kidneys, sweat glands, lungs);

2.Renal Excretory System - kidneys, ureter, urinary bladder, urethra (location and functions to be explained along with diagram);

3. Role of kidneys infiltration of blood through millions of nephrons (details not required, structure of nephron not to be discussed); common disorders of the urinary system: Urinary Tract Infection, kidney stone.

Nervous System

1. Main parts: brain, spinal cord, nerves.
2. Brain: cerebrum, cerebellum, medulla oblongata (location and function).
3. Spinal cord: location and function.
4. Nerves: what are nerves; their general function.

Theme 5: Health and Hygiene

Key Concepts: Allergy

1. Concept of allergy.
2. Allergens: Common allergens like dust, pollen grain, mites, strong sunlight, particular food items.
3. Entry routes of allergens: mouth, nose, skin.
4. Symptoms of allergic reaction.
5. Types of allergies: seasonal and perennial with examples.
6. Precautions and care to be taken by a person who is prone to allergies.

Questions Pattrena: Biology

[Section A]

01. Give answer of the following questions. [MCQs] 01x10=10

[Section B]

02. Answer the following questions in one or two sentences each. Each question carries 1 mark. 01x10=10

[Section-C]

03. Answer the following questions. [Higher Order Thinking Skills (HOTs) Questions.] 01x05=05

Set-I Or Set-II

SOUTH BENGAL PUBLIC SCHOOL

(Govt. Recognized)

Admission Test (2025-26) for class-08

(Syllabus Based on Class-07)

Sub – Science (Biology)

Total Marks-25 Time-25 Minutes

[Section A]

01. Choose the correct answer from the options given below. (MCQs) [1 x 10 = 10]

Q1. Which tissue gives flexibility to the growing parts of plants?

A. Parenchyma B. Collenchyma

C. Sclerenchyma D. Xylem

Q2. Assertion (A): Xylem conducts water in plants.

Reason (R): Xylem is made of dead and thick-walled cells.

A. Both A & R true, R explains A

B. Both A & R true, R does not explain A

C. A true, R false

D. A false, R true

Q3. Bacteria are classified under kingdom Monera because they:

A. Have no nuclei B. Are multicellular

C. Have chlorophyll D. Have complex cell walls

Q4. Match List–I with List–II:

List–I (Organism/Phylum)	List–II (Feature/Example)
A. Nematoda	1. Stinging cells, e.g., Hydra
B. Cnidaria	2. Roundworm, thread-like body
C. Mollusca	3. Flattened body, e.g., Planaria
D. Platyhelminthes	4. Soft-bodied, e.g., Snail

Options:

A. A–2, B–1, C–4, D–3 B. A–1, B–2, C–3, D–4

C. A–3, B–4, C–2, D–1 D. A–4, B–3, C–1, D–2

Q5. The process that releases energy in plant cells is:

A. Photosynthesis
B. Transpiration
C. Respiration
D. Osmosis

Q6. Which of the following is released during aerobic respiration?

A. Alcohol
B. Lactic acid
C. Oxygen
D. Carbon dioxide

Q7. Sweat glands help remove:

A. Carbon dioxide
B. Urea and water
C. Glucose
D. Hormones

Q8. The part of the brain responsible for involuntary actions is:

A. Cerebellum
B. Cerebrum
C. Spinal cord
D. Medulla

Q9. Which of the following is a seasonal allergy?

A. Pollen allergy
B. Dust allergy
C. Food allergy
D. Medicine allergy

Q10. Which entry route is common for respiratory allergens?

A. Mouth
B. Skin
C. Nose
D. Eyes

[Section B]

02. Answer the following questions in one or two sentences each. [1 x 10 = 10]

Q1. What is permanent tissue?

Answer: _____

_____

Q2. State one function of collenchyma.

Answer: _____

_____

Q3. Mention one harmful bacterium.

Answer: _____

_____

Q4. Write two life processes of Amoeba.

Answer: _____

_____

Q5. Write the word equation for photosynthesis.

Answer: _____

_____

Q6. Name two excretory products of human body.

Answer: _____

_____

Q7. What is the function of cerebellum?

Answer: _____

_____

Q8. Define allergy.

Answer: _____

_____

Q9. Mention one cause of perennial allergy.

Answer: _____

_____

Q10. Why should allergens be avoided by sensitive individuals?

Answer: _____

_____

[Section C]

03. Answer the following Higher Order Thinking Skills (HOTs) questions. [1 x 05 = 05]

(Attempt any one set of questions)

SET – 1 HOTs

1. Why can sclerenchyma not perform photosynthesis?
2. Why do vertebrates fall under kingdom Animalia and not Protista?
3. Why is oxygen essential for aerobic respiration?
4. Why is urine formation essential?
5. Why do allergies differ from person to person?

SET – 2 HOTs

1. Why are meristematic cells capable of rapid division?
2. Why is Amoeba included under Protista despite having no fixed shape?
3. Why does photosynthesis stop at night?
4. Why does damage to the medulla cause serious problems?
5. Why is it important to identify allergens early?
