BISHOP SCOTT BOYS' SCHOOL

SUMMER VACATION ASSIGNMENT

11

Date of Submission

18-06-2026

Session: 2026–2027

Teacher's Note

Dear Parents,

Teachers and parents both play an equally important role in shaping a child's learning journey. At school, teachers guide, support, and nurture students by helping them understand concepts and develop essential skills. At home, parents observe, encourage, and reinforce these learnings, creating a balanced environment for growth. This strong partnership between school and home ensures that students feel supported, confident, and motivated in all aspects of their education.

Keeping this in mind, holiday homework has been thoughtfully designed to help students remain connected with their studies during the summer break. It provides an opportunity for children to revise what they have learned, apply their knowledge in practical ways, and reflect on their understanding. Through these activities, students can explore their creativity, strengthen their skills, and become more independent learners. With your continued support and encouragement, we hope this vacation will be both enjoyable and enriching for your child.

SUBJECT : ENGLISH CORE (301)

THE PORTRAIT OF A LADY

1. *In today's fast-paced world, nuclear families and digital lifestyles often reduce interaction between grandparents and grandchildren.* **Compare this situation with the relationship between the author and his grandmother. How can modern families ensure stronger emotional bonds despite changing lifestyles?**
2. *The grandmother disapproved of English education and Western subjects taught in the city school.* **If you were in the author's place, how would you balance respect for your grandmother's traditional beliefs with your need for modern education?**
3. *The grandmother spent her time praying and feeding sparrows after moving to the city.* **How does this reflect the issue of loneliness among the elderly today? Suggest practical ways society and families can support senior citizens.**
4. *The grandmother rarely expressed her love through words but showed it through actions.* **In modern times, people often express emotions verbally or digitally. Do you think actions speak louder than words? Explain with reference to the story and real life.**
5. *The grandmother accepted her death peacefully and stopped talking before she died.* **What does her behavior teach us about acceptance of life and death? How can such attitudes help individuals deal with loss?**
6. *The story highlights a clear gap between traditional and modern values.* **Analyse how generational differences can lead to misunderstandings. How can mutual respect help bridge this gap?**
7. *The sparrows gathered silently around the grandmother's body after her death.* **Interpret this incident symbolically. What does it suggest about the grandmother's life and her connection with nature?**
8. *The grandmother followed a strict daily routine throughout her life.* **Evaluate the importance of discipline and routine in achieving mental peace and stability in today's world.**
9. *The author's perception of his grandmother changes over time.* **How does this reflect the process of emotional maturity? Relate it to your own experiences with elders.**
10. *The story presents a contrast between traditional Indian values and modern urban life.* **Do you think modernization leads to the loss of cultural values? Support your answer with examples from the story and present-day society.**

A PHOTOGRAPH

11. *A person finds an old childhood photograph of themselves with their parents, which brings both joy and sadness.* **Relate this situation to the poem. How does the photograph become a source of both happiness and pain for the poet?**
12. *In today's digital age, thousands of photos are stored, but few are revisited meaningfully.* **How does the poem highlight the emotional value of a single photograph compared to modern digital memories?**
13. *The poet reflects on her mother's death with calm acceptance rather than intense sorrow.* **What does this suggest about the process of healing over time? How can people learn to cope with loss in a healthy way?**
14. *The poem shows the poet remembering her mother through a photograph.* **How do memories help maintain emotional bonds even after a loved one is gone? Give examples from real life.**
15. *The sea remains unchanged while human life passes quickly.* **What message does this contrast convey about life and time? How should this influence our priorities?**

PORTFOLIO TASKS

THE PORTRAIT OF A LADY

1. Imagine you are the author living in Bihar. Write a diary entry describing your feelings after leaving your grandmother to go to a city like Patna or Delhi.

2. Write a paragraph (120–150 words) on the topic: "Changing Family Values in Bihar: Joint Family vs Nuclear Family."
3. Write a research project on: "Family Traditions and Cultural Values in Bihar." Include details about festivals (like Chhath Puja), family structure, and the role of elders, in about 250-300 words.

A PHOTOGRAPH

4. Imagine a photograph taken during your childhood on the banks of the Ganga River. Write a descriptive paragraph or short narrative (120–150 words) capturing the scene and your emotions.

THE SUMMER OF THE BEAUTIFUL WHITE HORSE

5. Rewrite the story in about 150–200 words by setting it in a village of Bihar. Use local names and adapt the story according to the local culture and environment.

NB: The portfolio must be prepared on A4-size sheets and compiled neatly in a project file. All entries should be handwritten in a clear and legible manner. You may add pictures wherever necessary.

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SUBJECT : BIOLOGY

BOTANY

1) If viruses are considered non-living outside the host but living inside, which characteristics justify placing them at the boundary of life? Critically analyze with examples.
2) A student observes an organism that has cell walls made of chitin, stores glycogen, and shows absorptive nutrition. Which kingdom does it belong to? Justify why it cannot be placed in Plantae despite having a cell wall.
3) Compare the five-kingdom classification system proposed by Robert Whittaker with the three-domain system of Carl Woese. Which one better reflects evolutionary relationships and why?
4) Why are cyanobacteria (blue-green algae) classified under Monera instead of Plantae despite performing photosynthesis? Discuss based on cellular organization.
5) An organism lacks a true nucleus but shows membrane-bound organelles in some stages of its life cycle. How would you classify it? What challenges does this pose to rigid classification system?
6) Explain why lichens are considered a symbiotic association rather than a single organism. How does this challenge traditional classification criteria?
7) A microbiologist isolates two organisms: one reproduces by binary fission and another by budding. Can both belong to the same kingdom? Justify with examples and exceptions.
8) Discuss the evolutionary significance of the transition from prokaryotic to eukaryotic cells. Which features provided selective advantage?
9) Why is kingdom Protista considered a "heterogeneous group"? Provide examples showing diversity in nutrition, locomotion, and reproduction.
10) If a newly discovered organism shows characteristics of both algae and fungi, how would you approach its classification? What criteria would you prioritize and why?

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ZOOLOGY

11. Explain the evolutionary progression of body organization in animals from Porifera to Chordata, highlighting key innovations at each level.
12. Why do Poriferans lack true tissues?
13. Which phylum shows the first appearance of a true coelom?
14. What is the key difference between diploblastic and triploblastic animals?
15. Which animals show both intracellular and extracellular digestion?
16. Why are arthropoda considered the most diverse group?
17. Why are echinoderms considered more complex in body organization than coelenterates?
18. Why do sponges have canal system?
19. Why do echinoderms show bilateral symmetry in larval stage but radial in adults?
20. An animal has radial symmetry, diploblastic body, and tentacles. Identify the phylum and justify.
21. Describe the water vascular system in echinoderms.
22. Which adaptations make arthropods evolutionarily successful in diverse habitats?

SUBJECT : CHEMISTRY

1) What is limiting reactant?
2) Define molarity and mass percentage.
3) What Is amu?
4) If 500 mL of a 5M solution is diluted to 1500 mL, what will be the molarity of the solution obtained?
5) One mole of any substance contains 6.022×10^{23} atoms/molecules. Number of molecules of H_2SO_4 present in 100 mL of 0.02M H_2SO_4 solution is ?
6) The empirical formula and molecular mass of a compound are CH_2O and 180 g respectively. What will be the molecular formula of the compound?
7) Which of the following pairs have the same number of atoms?
   (i) 16 g of $O_2(g)$ and 4 g of $H_2(g)$
   (ii) 16 g of O_2 and 44 g of CO_2
   (iii) 28 g of N_2 and 32 g of O_2
   (iv) 12 g of C(s) and 23 g of Na(s)
8) Which of the following solutions have the same concentration?
   (i) 20 g of NaOH in 200 mL of solution
   (ii) 0.5 mol of KCl in 200 mL of solution
   (iii) 40 g of NaOH in 100 mL of solution
   (iv) 20 g of KOH in 200 mL of solution
9) One of the statements of Dalton's atomic theory is given below:
   "Compounds are formed when atoms of different elements combine in a fixed ratio"
   Which of the following laws is not related to this statement?
   (i) Law of conservation of mass
   (ii) Law of definite proportions
   (iii) Law of multiple proportions
10) Hydrogen gas is prepared in the laboratory by reacting dilute HCl with granulated zinc. Following reaction takes place.
   $Zn + 2HCl \rightarrow ZnCl_2 + H_2$
   Calculate the volume of hydrogen gas liberated at STP when 32.65 g of zinc reacts with HCl. 1 mol of a gas occupies 22.7 L volume at STP; atomic mass of Zn = 65.3 u.
11) The reactant which is entirely consumed in the reaction is known as limiting reagent.
   In the reaction $2A + 4B \rightarrow 3C + 4D$, when 5 moles of A react with 6 moles of B, then
   (i) which is the limiting reagent?
   (ii) calculate the amount of C formed?
12) Calculate the amount of carbon dioxide that could be produced when
   (i) 1 mole of carbon is burnt in air.
   (ii) 1 mole of carbon is burnt in 16 g of dioxygen.
   (iii) 2 moles of carbon are burnt in 16 g of dioxygen.
13) Calculate the mass of sodium acetate required to make 500 mL of 0.375 molar aqueous solution. Molar mass of sodium acetate is 82.0245 g mol^{-1}.
14) A sample of drinking water was found to be severely contaminated with chloroform, $CHCl_3$, supposed to be carcinogenic in nature. The level of contamination was 15 ppm (by mass).
   (i) Express this in per cent by mass.
   (ii) Determine the molality of chloroform in the water sample.

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15) Calculate the number of atoms in each of the following
(i) 52 moles of Ar
(ii) 52 u of He
(iii) 52 g of He

16) A welding fuel gas contains carbon and hydrogen only. Burning a small sample of it in oxygen gives 3.38 g carbon dioxide, 0.690 g of water and no other products. A volume of 10.0 L (measured at STP) of this welding gas is found to weigh 11.6 g. Find:
(i) Empirical formula
(ii) Molar mass of the gas, and
(iii) Molecular formula

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SUBJECT : PHYSICS

Note: To be done in Physics Notebook.

Units and Measurements (Questions 1–15)

1. Define fundamental and derived units. Give two examples of each.
2. What are the SI units of force, pressure, and energy? Express them in terms of base units.
3. The length of a rod is measured as 2.34 m. How many significant figures are there in this measurement? Explain the rules for determining significant figures.
4. If the formula for a physical quantity is given by $X=c^{1/2}d^{1}/4a^{3}b^{2}$ and the percentage errors in the measurement of a, b, c, and d are 1%, 2%, 6%, and 8% respectively, calculate the percentage error in X.
5. Check the dimensional correctness of the equation $v = u + at$, where v and u are velocities, a is acceleration, and t is time.
6. Derive the dimensional formula for (i) universal gravitational constant G and (ii) coefficient of viscosity η.
7. Convert 1 kilowatt-hour into joules using dimensional analysis.
8. A student measures the time period of a simple pendulum as 2.15 s using a stopwatch with least count 0.01 s. Calculate the percentage error in the measurement.
9. State the principle of homogeneity of dimensions. Using this principle, find the dimensions of the constant k in the relation $T= 2\pi\sqrt{l/g}$ where T is time period, l is length, and g is acceleration due to gravity.
10. The side of a cube is measured as 5.0 cm with an error of 0.1 cm. Calculate the percentage error in the volume of the cube.
11. What do you mean by least count of a measuring instrument? The vernier caliper has 10 vernier divisions coinciding with 9 main scale divisions of 1 mm each. Find its least count.
12. Derive the dimensional formula of (i) angular velocity and (ii) surface tension.
13. A physical quantity P is related to four observables a, b, c and d as follows:

$$P = \frac{a^3 b^2}{\sqrt{cd}}$$

The percentage errors of measurements in a, b, c and d are 1, 3, 4, 2 respectively. What is the percentage error in the quantity P? If the value of P calculated using the above relation turns out to be 3.763, to what value should you round off the result?

14. Explain the difference between accuracy and precision in measurements with a suitable example.
15. Using dimensional analysis, convert 1 Newton into dyne.

Motion in a Straight Line (Questions 16–30)

16. Define displacement and distance. Can displacement be zero even when distance travelled is not zero? Explain with an example.
17. A car travels from A to B at 40 km/h and returns from B to A at 60 km/h. Calculate the average speed and average velocity for the whole journey.
18. Derive the three equations of motion graphically (using velocity-time graph).
19. A body starts from rest and moves with uniform acceleration. It covers 100 m in the first 5 s. Find the acceleration and the distance covered in the next 5 s.
20. Define uniform and non-uniform motion. Give one example of each.
21. The position of a particle moving along x-axis is given by ($x = 3t^2 - 6t + 2$) m. Find the velocity and acceleration at t = 2 s.
22. A train moving with a velocity of 90 km/h is brought to rest in 10 s by applying brakes. Calculate the retardation and the distance travelled during this period.
23. Two cars A and B are moving in the same direction with velocities 20 m/s and 30 m/s respectively. Calculate the relative velocity of A with respect to B and B with respect to A.

24. A stone is dropped from the top of a tower 100 m high. Simultaneously another stone is projected upward from the base of the tower with 25 m/s. Find when and where the two stones meet. (Take g = 10 m/s^2)
25. Draw the position-time graph for (i) a body at rest, (ii) a body moving with uniform velocity, and (iii) a body moving with uniform acceleration.
26. A ball is thrown vertically upward with a speed of 20 m/s. Calculate the maximum height reached and the time taken to return to the ground. (g = 10 m/s^2)
27. Define average velocity and instantaneous velocity. When are they equal?
28. A particle moves along a straight line with velocity given by ($v = 5t - 3t^2$) m/s. Find the displacement in the first 3 seconds and the acceleration at t = 2 s.
29. Explain the concept of relative velocity. Two trains are moving on parallel tracks in opposite directions with speeds 72 km/h and 90 km/h. Calculate the relative velocity of one train with respect to the other.
30. A body covers the first half of the total distance with velocity v_1 and the second half with velocity v_2. Derive the expression for average velocity for the whole journey.

SUBJECT : MATHEMATICS

CHAPTER – 1 SETS

MULTIPLE CHOICE QUESTIONS:

1. Which one of the following sets is infinite?
   (A) The set of whole numbers less than 10 (B) The set of prime numbers less than 10
   (C) The set of integers less than 10 (D) The set of factors of 10
2. Which one of the following is the null set?
   (A) The set of subsets of null set (B) The set of even prime numbers
   (C) The set of factors of 7 (D) The set of rational expressions for π
3. The set builder form of the set {1, 4, 9, 16, 25, …} is
   (A) X = {x: x is a set of prime numbers} (B) X = {x: x is a set of whole numbers}
   (C) X = {x: x is a set of natural numbers} (D) X = {x: x is a set of square numbers}
4. If the set S = {x ∈ Z | x ≥ -2} ∪ { x ∈ Z | x ≤ 4}, then what is another name for S?
   (A) S = {x ∈ **Z**: − 2 ≤ x ≤ 4} (C) S = {−2, −1, 0, 1, 2, 3, 4}
5. The set builder notation of set S = {…, **−2**, **−1**, **0**, **1**, **2**, **3**, **4**, **5**} is
   (A) S = {x ∈ **Z**: − 5 ≤ x ≤ 5} (C) S = {x ∈ **Z**: x < 5}
6. A, B and C are three sets such that A is a subset of B and B is a subset of C. Which one of the following statements must always be true?
   (A) B is a subset of A (B) C is a subset of B
   (C) C is a subset of A (D) A is a subset of C

7. Let A and B be two sets in the same universal set. Then A-B equals to
   (A) $A \cap B$ (B) $A' \cap B$ (C) $A \cap B'$ (D) $A' \cap B'$
8. Which of the following real values lie outside the interval (1, 8)?
   (A) 1.5 (B) 7 (C) 4 (D) 1and 8
9. How do we write the set $\{x: x \in R, -8 \leq x < -5\}$ in interval notation?
   (A) (-8, -5) (B) (-8, -5] (C) [-8, -5) (D) [-8, -5]
10. Which of the following statement regarding the set $A = \{\{-2, 2\},\{-1, 1\}, 0\}$ is true?
   (A) $\{\{0\}\} \in A$ (B) $\{\{-1, 1\}\} \in A$ (C) $\{-2, 2\} \in A$ (D) $\{-1, 0, 1\} \in A$

ASSERTION - REASON BASED QUESTIONS:

In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Pick the correct option:

A) Both Assertion (A) and Reason(R) are true and Reason(R) is the correct explanation of Assertion (A).

B) Both Assertion (A) and Reason(R) are true but Reason(R) is not the correct explanation of Assertion (A).

C) Assertion (A) is true but Reason(R) is false.

D) Assertion (A) is false but Reason(R) is true.

11. Assertion: The set $A=\{2,4,6,8,10\}$ can be written in set-builder form as $A=\{x : x$ is an even natural number less than or equal to 10$\}$.
    Reason: The set-builder form lists all elements while roster form describes the property of elements.
12. Assertion: The set $\{x \in R: 3< x \leq 7\}$ is represented in interval notation as (3,7).
    Reason: Open interval indicates exclusion and closed interval indicates inclusion of an endpoint in an interval.
13. Assertion: The empty set is a subset of every set.
    Reason: A set with no element is called a null set.
14. Assertion: If $A \subseteq B$ and $B \subseteq A$, then $A = B$.
    Reason: Two sets are equal if and only if each element of one set is also an element of the other set.
15. Assertion: If W is the set of whole numbers and N is the set of Natural numbers then W-N is an empty set.
    Reason: A-B is the set of elements of A which are not in B.
16. Assertion: The union of two sets is the set of elements that are in either set.
    Reason: The intersection of two sets is the set of elements that are in both sets.
17. Assertion: If $A \subseteq B$, then the Venn diagram will show that the circle representing A is completely inside the circle representing B.
    Reason: A set is always a subset of itself.
18. Assertion: If $A \cap B = A$, then $A \subseteq B$.
    Reason: The intersection of two sets is always equal to the smaller set.
19. Assertion: If $A \cup B = B$, then $A \subseteq B$.
    Reason: The union of two sets contains all elements that belongs to either set.
20. Assertion: If A is the set of letters of the word 'FOLLOW' and B is the set of letters of the word 'WOLF', then A and B are equal sets.
    Reason: Two sets are equal if they have same number of elements.

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21. Write the solution set of the equation x^2 + form as {-3, –2}.
22. List all the subsets of the set {–1, 0, 1 }.
23. Show that the set of letters needed to spell " CATARACT " and the set of letters needed to spell " TRACT" are equal.
24. Let A = {1, 2, 3, 4, 5, 6}, B = {2, 4, 6, 8}. Find A – B and B – A.
25. Find the complement of A if the Universal Set U = {x ∈Z | -4 ≤ x < 4} and A = {0}.
26. Let A, B and C be three sets. If A ∈ B and B ⊂ C, is it true that A ⊂ C? If not, give an example.
27. Find the set (A U B)' if U = {x: x ∈ N, x ≤ 9}; A = {x: x is an even number, 0 < x < 10} and B ={2, 3, 5, 7}.
28. Let X = {1, 2, 3, 4, 5, 6}. If n represent any member of X, express the values of n as sets.
    (i) n + 5 = 8
    (ii) n is greater than 4
29. Express set A = {x | x is a positive integer less than 10 and 2^x – 1 is an odd number} in roster form.
30. Use the properties of sets to prove that for all the sets A and B, A – (A ∩ B) = A – B
31. Let U = {1, 2, 3, 4, 5, 6}, A = {2, 3} and B = {3, 4, 5}. Find A′, B′, A′ ∩ B′, A ∪ B and hence show that (A∪B)′ = A′∩ B′.
32. In a survey of 600 students in a school, 150 students were found to be drinking Tea and 225 drinking Coffee, 100 were drinking both Tea and Coffee. Find how many students were drinking neither Tea nor Coffee.
33. Using properties of sets, prove that:
    (i) A ∪ (A ∩ B) = A (ii) A ∩ (A ∪ B) = A
34. Let A, B, C be the sets such that A ∪ B = A ∪ C and A ∩ B = A ∩ C. Show that B = C.
35. Two finite sets have m and n elements. The total number of subsets of first set is 56 more than the total number of subsets of the second set. Find the value of m and n.
36. Let A and B be two sets such that: n (A) = 20, n (A ∪ B) = 42 and n (A ∩ B) = 4. Find
    (i) n (B) (ii) n (A – B) (iii) n (B – A)
37. Let X = the set of all letters in the word 'NEW DELHI' and Y = the set of all letters in the word 'CHANDIGARH'. Find (i) X∪Y (ii) X ∩Y (iii) X-Y.

    Also verify that (a) n(X∪Y)= n(X) + n(Y) –n(X ∩Y)
    (b) n(X-Y)= n(X∪Y) - n(Y)
38. A college awarded 38 medals in football, 15 in basketball and 20 in cricket. If these medals went to a total of 50 men and only five men got medals in all the three sports, how many received medals in exactly two of the three sports?

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SUBJECT : ACCOUNTANCY

Q1. What are the attributes of accounting?

Q2. Differentiates between accounting accountancy and bookkeeping.

Q3. What are the limitations of accounting?

Q4. Explain accounting process in brief.

Q5. What are the various branches of accountancy?

Q6. What are the characteristics of accounting information?

Q7. What do you mean by double entry system?

Q8. List all the accounting concepts and conventions

Q9. What is Accrual Assumption?

Q10. What do you mean by Accounting Standards?

Q11. What are the two contradictory accounting concepts. Explain both with example.

Q12. Define these terms:

Account, Assets, Capital, Goodwill, Trade Payable.

Q13. What are various types of accounts?

Q14. Take 20 transaction of a hypothetical business firm and prepare Accounting Equation.

Q15. Give rules of Journal Entry.

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SUBJECT : BUSINESS STUDIES

Q1. What are the various categories of human activities?

Q2. What are the various type of economic activities explain each with the help of an example

Q3. Define business.

Q4. What are the various characteristics of business explain each.

Q5. Differentiate between business profession and employment.

Q6. What do you understand by auxiliaries to trade.

Q7. Define industry and commerce.

Q8. Classify the various the types of industry.

Q9. Give a tabular differentiation between industries commerce and trade.

Q10. What are various banking and non banking functions of a banker?

Q11. What do you mean by business risk how does it created?

Q12. Explain four important characteristics of profession.

Q13. What are the various forms of business organisation?

Q14. What do you mean by sole proprietorship how is it different from partnership?

Q15. Water various advantage and disadvantage of sole proprietorship?

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SUBJECT : ECONOMICS

1. What is meant by an economy? What are its different types?

2. Explain the concepts of positive and normative economics with illustrations.

3. Distinguish between microeconomics and macroeconomics.

4. What is economic problem? Why does its arise?

5. What are the three central problems of an economy?

6. What does a production possibility curve show? When will it shift to the right?

7.Given the following data, draw a production possibility curve. Also find marginal opportunity cost.

Possibilities	Wheat(kg)	Rice(kg)
A	100	0
B	95	10
C	85	20
D	70	30
E	50	40
F	25	50

8. Explain basic properties of PPC.

9. Define Statistics as a singular noun and as a plural noun.

10. Distinguish between ‘quantitative’ and ‘qualitative’ data, and give some example of both.

11. What are the main features of Statistics as a numerical data? Describe any four.

12. State the main limitations of Statistics.

13. What are primary data? Enumerate the various methods of collecting primary data.

14. What are secondary data.

15. Distinguish between primary and secondary data.

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SUBJECT : HISTORY

1. What is the meaning of the word Mesopotamia?
2. Why was Mesopotamia important for Europeans?
3. Explain the role of temples in Mesopotamian society?
4. Describe the geographical features that influenced Mesopotamian urbanization?
5. How did the city of Mari function?
6. What do you know about Uruk?
7. Describe the salient features of the city of Babylon?
8. How did the construction of temples and the activities around them evolve in Mesopotamia?
9. What do you know about the epic of Gilgamesh?
10. What do you know about the palace of Mari of king Zimrilim?
11. How did writing in Mesopotamian civilization contribute to the growth of urban centres?
12. Discuss the contribution of Mesopotamia to world civilization.
13. Why was labour division important in Mesopotamian city life?
14. How did irrigation contribute to the prosperity of Mesopotamia?
15. Describe the role of kings in Mesopotamian society?

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SUBJECT : GEOGRAPHY

1) Differentiate between the Big Bang Theory and the Steady State Theory regarding the origin of the universe.

2) Explain the process of differentiation and how it led to the formation of the Earth's layered structure.

3) Distinguish between Endogenic and Exogenic forces. How do they work together to shape the Earth's surface?

4) Describe the process of Chemical Weathering with specific reference to carbonation and oxidation.

5) Compare and contrast the Himalayan Rivers and the Peninsular Rivers based on their origin, flow regime, and catchment area.

6) Differentiate between the Continental crust and Oceanic crust.

7) Explain the process of Plate Tectonics and provide evidence to support the theory.

8) Describe the features associated with glacial deposition.

9) What are the main types of rocks and how are they formed?

10) Explain the Coriolis force and how it influences wind direction.

11) Explain how latitude affects the amount of insolation received at a place.

12) Define albedo and explain its role in the Earth's heat budget.

13) Identify the major global pressure belts with the help of a detailed diagram.

14) Describe the formation and characteristics of a front.

15) Discuss the causes and consequences of desertification.

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SUBJECT : POLITICAL SCIENCE

PROJECT - INDIAN JUDICIAL SYSTEM

1. Evaluate the role and powers of the Election Commission of India in ensuring free and fair elections.

2. Is "Equality of Opportunity" enough to achieve social justice?

3. Mention any two functions of a Constitution.

4. Why is it said that the Indian Constitution was "not a product of a revolution," but a consensus of a diverse nation?

5. "The Indian Constitution is a 'Living Document'." Justify this statement by discussing the amendment process and the role of the Judiciary.

6. Does the 10th Schedule (Anti-Defection Law) strengthen democracy by ensuring stability, or does it weaken it by preventing legislators from voting according to their conscience on the floor of the House?

7. Is the Rajya Sabha merely a "clog in the wheel" of progress, or is it a necessary secondary chamber for federal representation?

8. Mention any three important aspects of the Objective Resolution.

9. Write a short note on Constituent Assembly.

10. Why is Constitution considered as the fundamental law of the land ?

11. Explain the significance of the Right to Constitutional Remedies (Article 32). Why did Dr. B.R. Ambedkar

    call it the "Heart and Soul" of the Constitution?

12. Discuss how the Right to Privacy has evolved as a fundamental right in recent years.

13. Analyze the significance of the Seventh Schedule. Why is the 'Concurrent List' often a source of conflict between the Centre and the States?

14. Does the traditional model of development inherently clash with the rights of nature and indigenous communities? Discuss the concept of Sustainable Development.

15. On an outline map of India mark the states having bicameral legislature.

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SUBJECT : INFORMATICS PRACTICES

SECTION – A

(KNOWLEDGE BASED QUESTIONS)

1. What are the advantages of Python over other programming languages like C,C++ and Java?
2. What are tokens in Python? List various tokens.
3. Write rules for identifiers. Which of the following are invalid identifiers? Write reason for invalidity.
   a) Roll No b) My filec) 1num d) Marks-Maths e) Dept$Num
4. Write about various logical operators.
5. What are literals in Python? Write example of each of different literals.
6. What are keywords? Write code to see list of keywords.
7. Write about various data types in Python?
8. Briefly explain different types of errors in Python.
9. What are functions? What are the two broad categories of functions in Python? Write about the parts of a function.
10. What are different parts of loop? Write code to illustrate different parts of a loop.

SECTION – B

(PROGRAM BASED QUESTIONS)

1. Write program in Python to:
   i) Accept two numbers from the user, perform different arithmetic operations and display the result.
   ii) Accept radius of sphere, calculate its surface area and volume and display the result.
   iii) Accept a positive integer from the user, find sum of digits and display original number and sum of digits.
   iv) Display Fibonacci Series containing first twenty members.
   v) Accept a positive integer from the user and generate its table in proper format.

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