STEPHENS

INTERNATIONAL PUBLIC SCHOOL

WINTER BREAK

Holidays' Homework

Session – 2025-26

Class : 11th

Subject : English

Task 1
Dialogue with Literature
Objective: To develop interpretation skills and engage deeply with literature.
Instructions:
Select any ONE character from your Class XI English textbook.
Imagine that this character appears before you in today's world.
Write a conversation (dialogue form) between:
- You (as a Class XI student)
- The literary character
Word Limit: 180–200 words
- Your dialogue must include:
- At least two questions asked by you
The character's views on modern society / youth / education / values
A concluding thought showing what you learned from this interaction.
Focus on originality, relevance to the text, and clarity of expression.

Task 2
Text-to-Text Connection
Objective: To develop comparative and analytical skills.
Instructions:
Select ANY TWO texts (prose/poem/story) from Hornbill and/or Snapshots.
Write a comparative paragraph (180–200 words) focusing on ONE common aspect, such as:
- Human values
- Conflict and resolution
- Role of nature
- Growth and transformation
- Social injustice

Your response should:
Mention both texts clearly

Compare similarities or contrasts

Conclude with a relevant life lesson.

Clarity, coherence, and textual reference will be assessed.

Subject : Physics

Chapters: Kinetic Theory, Oscillations & Waves

Section A: Very Short Answer Type Questions

Q1.   Define ideal gas.

Q2.   What is meant by degrees of freedom of a gas molecule?

Q3.   Write the relation between pressure and mean square speed of gas molecules.

Q4.   Define simple harmonic motion (SHM).

Q5.   What is angular frequency?

Q6.   Define wavelength.

Q7.   What type of wave is a sound wave?

Q8.   Write the SI unit of rms speed.

Q9.   What is meant by amplitude of oscillation?

Q10. Write the relation between wave speed, frequency and wavelength.

Section B: Short Answer Type Questions

Q1.   State any two assumptions of kinetic theory of gases.

Q2.   Define rms speed of gas molecules.

Q3.   Write the expression for average kinetic energy of a gas molecule.

Q4.   What are the necessary conditions for SHM?

Q5.   Define time period and frequency of oscillation.

Q6.   Why sound cannot travel in vacuum?

Q7.   What is meant by compression and rarefaction?

Q8.   Distinguish between transverse and longitudinal waves.

Section C: Long Answer Type Questions

Q1.   Derive the expression for pressure exerted by an ideal gas using kinetic theory.

Q2.   Explain degrees of freedom and write their values for monoatomic gas.

Q3.   Obtain the expression for time period of a mass–spring system.

Q4.   Explain displacement, velocity and acceleration in SHM.

Q5.   What are mechanical waves? Explain with examples.

Q6.   Write three differences between transverse and longitudinal waves.

MULTIPLE CHOICE QUESTIONS

Q1. A system in which no exchange of matter, but exchange of energy possible between system and the surroundings is called ………….
a) Open system
b) closed system
c) Isolated system
d) None of these

Q2. Which of the following is a state variable?
a) temperature
b) pressure
c) volume
d) All of them are state variables

Q3. Identify the correct statement from the following.
a) w_{ad} is negative when work is done on the system and the internal energy of system increases. Also, when work is done by the system, w_{ad} is positive and internal energy of the system decreases.
b) wad is negative when work is done on the system and the internal energy of system decreases. Also, when work is done by the system, w_{ad} is positive and internal energy of the system increases.
c) w_{ad} is positive when work is done on the system and the internal energy of system increases. Also, when work is done by the system, w_{ad} is negative and internal energy of the system decreases.
d) w_{ad} is positive when work is done on the system and the internal energy of system decreases. Also, when work is done by the system, w_{ad} is negative and internal energy of the system increases.

Q4. Which of the following is not an extensive property?
a) density
b) mass
c) volume
d) internal energy

Q5. Identify the correct statement about free expansion.
a) $p_{ex} = 0$
b) No work is done during free expansion of an ideal gas if the process is reversible.
c) No work is done during free expansion of an ideal gas if the process is irreversible.
d) All are correct.

Q6. The enthalpies of all elements in their standard states are:
a) unity   b) zero   c) < 0   d) different for each element

Q7. For the reaction, $Br_{2(l)} \rightarrow 2Br_{(g)}$, what are the signs of ΔH and ΔS_{system}?
a) Both ΔH and ΔS_{system} are positive
b) Both ΔH and ΔS_{system} are negative
c) ΔH is negative and ΔS_{system} is positive
d) ΔH is positive and ΔS_{system} is negative

Q8. Which equation shows the standard enthalpy change of formation of sodium chloride?

a) $Na(s) + \frac{1}{2}Cl_2(g) \rightarrow NaCl(s)$

b) $2Na(s) + Cl_2(g) \rightarrow 2NaCl(s)$

c) $Na(g) + Cl(g) \rightarrow NaCl(s)$

d) $Na^+ (g) + Cl^- (g) \rightarrow NaCl(s)$

ASSERTION REASON TYPE

Q9. **Assertion (A):** If both ΔH and ΔS_{sys} are positive, then the reaction will be spontaneous at high temperature.

Reason (R): All processes with positive entropy change of system are spontaneous.

a) Both Assertion and Reason are correct statements, and Reason is the correct explanation of the Assertion.

b) Both Assertion and Reason are correct statements, but Reason is not the correct explanation of the Assertion.

c) Assertion is correct but Reason is wrong statement.

d) Assertion is wrong but Reason is correct statement.

Q10. **Assertion (A):** The process of atomization is always exothermic.

Reason (R): Energy is absorbed during atomisation.

a) Both Assertion and Reason are correct statements, and Reason is the correct explanation of the Assertion.

b) Both Assertion and Reason are correct statements, but Reason is not the correct explanation of the Assertion.

c) Assertion is correct but Reason is wrong statement.

d) Assertion is wrong but Reason is correct statement.

Q11. **Assertion (A):** For melting of ice, ΔS_{sys} is positive.

Reason (R): During the process of melting of ice, disorder of particles increases.

a) Both Assertion and Reason are correct statements, and Reason is the correct explanation of the Assertion.

b) Both Assertion and Reason are correct statements, but Reason is not the correct explanation of the Assertion.

c) Assertion is correct but Reason is wrong statement.

d) Assertion is wrong but Reason is correct statement.

Read the given passage and answer the questions that follow:

In a chemical reaction, reactants are converted into products. The enthalpy change accompanying a reaction is called the reaction enthalpy. Enthalpy change is a very useful quantity. Knowledge of this quantity is required when one needs to plan the heating or cooling required to maintain an industrial chemical reaction at constant temperature. Enthalpy of a reaction depends on the conditions under which a reaction is carried out.

Q12. Define Standard enthalpy of formation.

Q13. Write an equation for the Standard enthalpy of formation of water.

Q14. Calculate the standard enthalpy change of combustion of 2-Methylpropan-2-ol using the data given in the table.

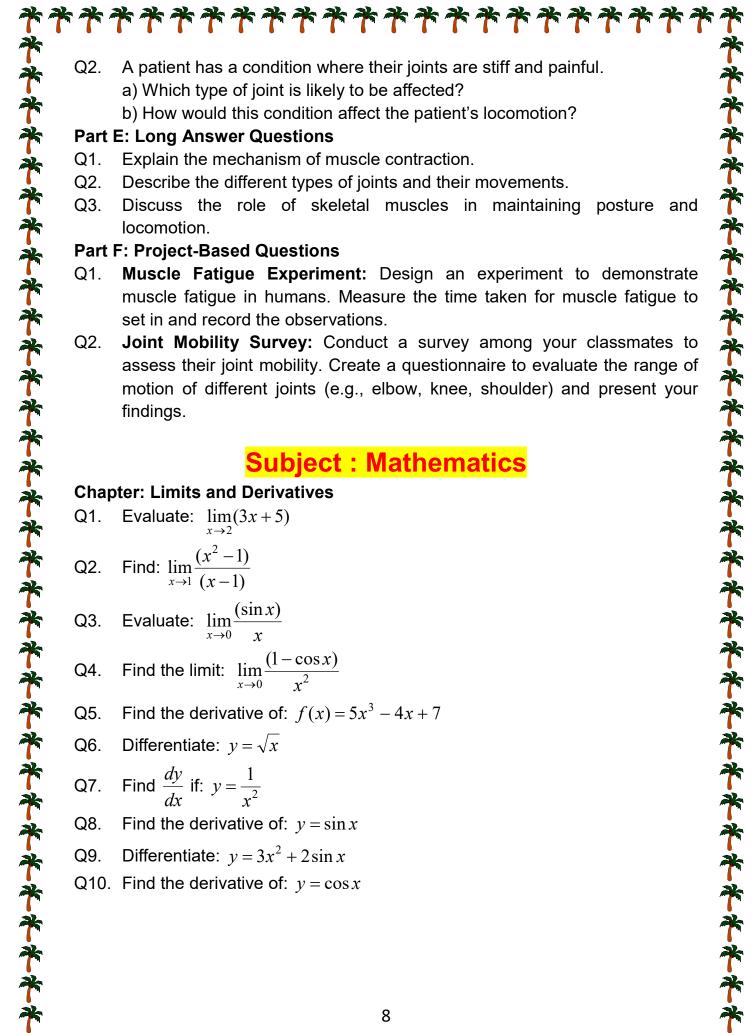| Compound	$\Delta_f H^\theta$ (kJmol^{-1})
2-Methylpropan-2-ol	−359
carbon dioxide	−394
water	−286

Question – Answer Type:

Q15. In a process 700 J of heat is absorbed by a system and 390 J of work is done by the system. Find ΔU.

Q16. State first law of thermodynamics. Write the mathematical expression.

Q17. Calculate the Enthalpy of solution of NaCl using the following data: (Lattice enthalpy of NaCl = + 788 kJ mol^{-1}, Enthalpy of hydration for sodium and chloride ions are −406 and −378 kJ mol^{-1} respectively).

Q18. The enthalpy change for a reaction $N_2(g) + 3H_2(g) \rightarrow 2NH_3(g)$ is −4.0 kJ mol^{-1} at 300K. Calculate the value of ΔU. (R = 8.314 J K^{-1} mol^{-1})

Q19. Give two examples each of the groups exhibiting −I and +I effect when attached to a chain of carbon atoms.

Q20. A tertiary butyl carbocation is more stable than isobutyl carbocation. Justify.

Q21. Write resonance structures of CH_2=CH–CHO. Indicate relative stability of the contributing structures.

Q22. Inductive effect is of permanent nature while electromeric effect is only temporary. Explain.

Q23. Find the error and write the correct IUPAC names of
a)   1,6-Hexadiene
b)   2-Ethyl-2-pentene

Q24. What do you understand by +R and −R effect?

Subject : Biology

Locomotion and Movement Worksheet

Part A: Multiple Choice Questions

Q1.   Which of the following is the primary function of skeletal muscles?
a) Digestion   b) Respiration
c) Locomotion   d) Circulation

Q2.   What is the term for the movement of bones around a joint?
a) Gliding   b) Rotation
c) Flexion   d) Extension

Q3.   Which type of muscle is responsible for involuntary movements?
a) Skeletal muscle   b) Smooth muscle
c) Cardiac muscle   d) Both b and c

Part B: Assertion and Reason Questions

Q1.   **Assertion (A):** Locomotion is possible due to the coordinated movement of bones and muscles.
Reason (R): Skeletal muscles are attached to bones via tendons.
a) Both assertion and reason are true, and reason is the correct explanation.
b) Both assertion and reason are true, but reason is not the correct explanation.
c) Assertion is true, but reason is false.
d) Both assertion and reason are false.

Q2.   **Assertion (A):** Smooth muscles are responsible for peristalsis.
Reason (R): Smooth muscles are involuntary muscles.
a) Both assertion and reason are true, and reason is the correct explanation.
b) Both assertion and reason are true, but reason is not the correct explanation.
c) Assertion is true, but reason is false.
d) Both assertion and reason are false.

Part C: Short Answer Questions

Q1.   What is the difference between locomotion and movement?

Q2.   Describe the structure of a skeletal muscle.

Q3.   What is the role of joints in locomotion?

Part D: Case-Based Study Questions

Q1.   A person is unable to move their arm after a fall. The doctor suspects a muscle injury.
a) Which type of muscle is likely to be injured?
b) How would the injury affect the person's movement?

Q2. A patient has a condition where their joints are stiff and painful.
a) Which type of joint is likely to be affected?
b) How would this condition affect the patient's locomotion?

Part E: Long Answer Questions

Q1. Explain the mechanism of muscle contraction.

Q2. Describe the different types of joints and their movements.

Q3. Discuss the role of skeletal muscles in maintaining posture and locomotion.
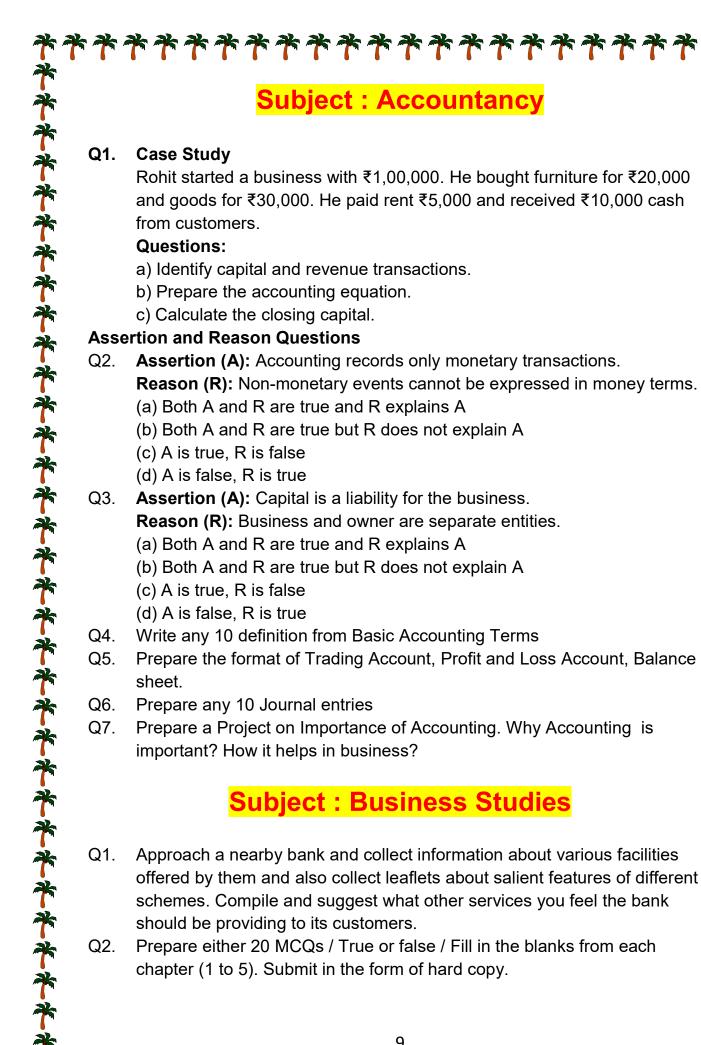
Part F: Project-Based Questions

Q1. **Muscle Fatigue Experiment:** Design an experiment to demonstrate muscle fatigue in humans. Measure the time taken for muscle fatigue to set in and record the observations.

Q2. **Joint Mobility Survey:** Conduct a survey among your classmates to assess their joint mobility. Create a questionnaire to evaluate the range of motion of different joints (e.g., elbow, knee, shoulder) and present your findings.

Subject : Mathematics

Chapter: Limits and Derivatives

Q1. Evaluate: $\lim_{x \to 2}(3x + 5)$

Q2. Find: $\lim_{x \to 1} \dfrac{(x^2 - 1)}{(x - 1)}$

Q3. Evaluate: $\lim_{x \to 0} \dfrac{(\sin x)}{x}$

Q4. Find the limit: $\lim_{x \to 0} \dfrac{(1 - \cos x)}{x^2}$

Q5. Find the derivative of: $f(x) = 5x^3 - 4x + 7$

Q6. Differentiate: $y = \sqrt{x}$

Q7. Find $\dfrac{dy}{dx}$ if: $y = \dfrac{1}{x^2}$

Q8. Find the derivative of: $y = \sin x$

Q9. Differentiate: $y = 3x^2 + 2\sin x$

Q10. Find the derivative of: $y = \cos x$

Subject : Accountancy

Q1. Case Study

Rohit started a business with ₹1,00,000. He bought furniture for ₹20,000 and goods for ₹30,000. He paid rent ₹5,000 and received ₹10,000 cash from customers.

Questions:

a) Identify capital and revenue transactions.

b) Prepare the accounting equation.

c) Calculate the closing capital.

Assertion and Reason Questions

Q2. **Assertion (A):** Accounting records only monetary transactions.

Reason (R): Non-monetary events cannot be expressed in money terms.

(a) Both A and R are true and R explains A

(b) Both A and R are true but R does not explain A

(c) A is true, R is false

(d) A is false, R is true

Q3. **Assertion (A):** Capital is a liability for the business.

Reason (R): Business and owner are separate entities.

(a) Both A and R are true and R explains A

(b) Both A and R are true but R does not explain A

(c) A is true, R is false

(d) A is false, R is true

Q4. Write any 10 definition from Basic Accounting Terms

Q5. Prepare the format of Trading Account, Profit and Loss Account, Balance sheet.

Q6. Prepare any 10 Journal entries

Q7. Prepare a Project on Importance of Accounting. Why Accounting is important? How it helps in business?

Subject : Business Studies

Q1. Approach a nearby bank and collect information about various facilities offered by them and also collect leaflets about salient features of different schemes. Compile and suggest what other services you feel the bank should be providing to its customers.

Q2. Prepare either 20 MCQs / True or false / Fill in the blanks from each chapter (1 to 5). Submit in the form of hard copy.

Subject : Economics

Q1. A producer is said to be in equilibrium when:
a) MC = MR   b) TC = TR
c) AC = AR   d) MP = AP

Q2. Under perfect competition, marginal revenue is:
a) greater than price   b) less than price
c) equal to price   d) zero

Q3. The condition for producer's equilibrium under MR–MC approach is:
a) MC = AC   b) MR = AR
c) MR = MC   d) TR = TC

Q4. Producer's equilibrium can be achieved at:
a) maximum cost   b) minimum revenue
c) maximum profit   d) zero output

Q5. In the case of perfect competition, the demand curve of a firm is:
a) downward sloping   b) upward sloping
c) vertical   d) horizontal

Q6. Explain producer's equilibrium with the help of the MR–MC approach.

Q7. Distinguish between marginal revenue and average revenue.

Q8. State the condition for producer's equilibrium.

Subject : History

Q1. Why were Italian towns the first experience the ideas of humanism?

Q2. Describe the progress of sculpture in the 15th Century in Europe.

Q3. Why were Tribals not greedy to control their land?

Q4. Write short note on expansion of Australia's economy.

Q5. Write a short note on shogun period.

Q6. What was the most important accomplishment of the Meiji dynasty?

Q7. Prepare a critical report on first noble of Japan written by 'Fujiwara no Kamatari' mention point on political system, Social System and cultural System of Japan.

Q8. Visit to nearby museum or gallery study a indigenous culture and prepare report on the life style of indigenous peoples.

Q9. Ready your project and prepare a viva.

Q10. On the political map of the world mark these countries:
Italy, Britain, Japan, China, Australia and New Zealand.

Q11. Paste a picture of different food eat in China and Japan, write on it also.

Note- write this home work on separate file.

Subject : Political Science

Instructions:

1. All students must complete the following three activities and compile them neatly in a project file.
2. This work is mandatory for the internal assessment.

Submission Guidelines:

Medium: Handwritten on A4 size sheets.

Resource: Use your NCERT textbook as the primary reference.

Deadline: To be submitted on the day the school reopens.

Activity 1: The Legislature

Task: "The Law-Making Journey"

A. **Flowchart:** Draw a detailed, step-by-step flowchart showing how a Bill becomes an Act in the Indian Parliament (from the First Reading to the President's Assent).
B. **Formal Letter:** Write a 150-word letter to the Speaker of the Lok Sabha proposing one new law you believe is essential for modern India. Explain your reasons clearly.

Activity 2: The Judiciary

Task: "Structure and Protection"

A. **The Court Pyramid:** Draw a pyramid representing the hierarchy of the Indian Courts. Label the Supreme Court, High Courts, and Subordinate Courts.
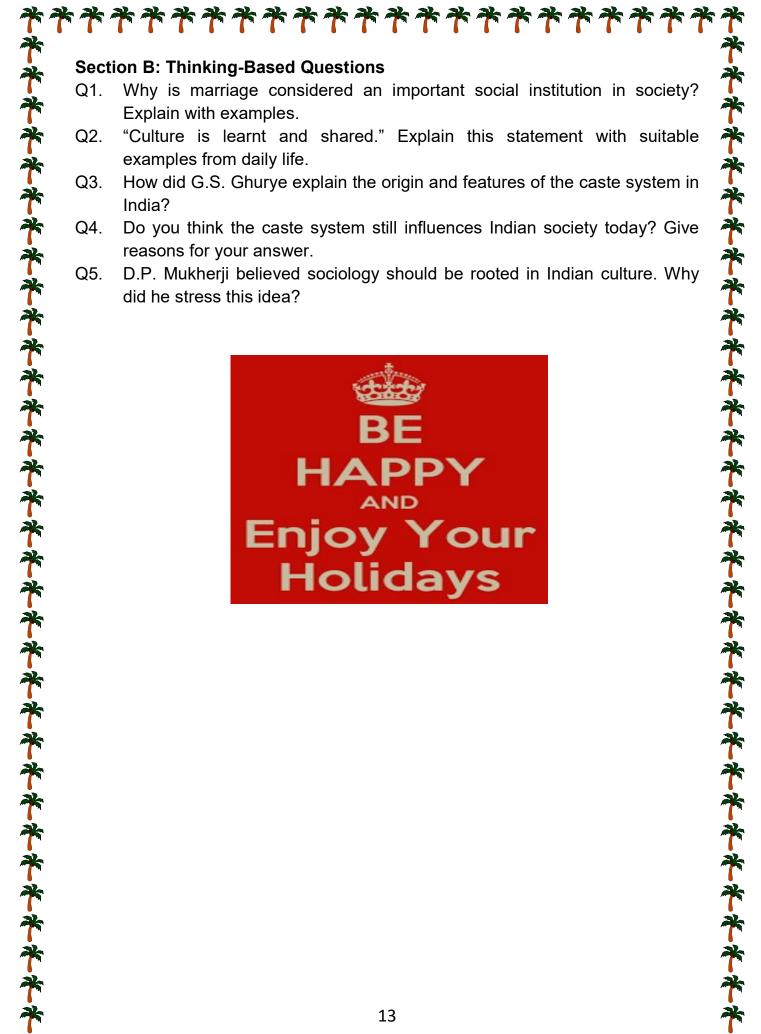B. **PIL Analysis:** Write a short note (100 words) on the importance of Public Interest Litigation (PIL). List two ways in which a PIL helps the common citizen get justice.

Activity 3: Federalism

Task: "Division of Powers"

A. **The Three-List Diagram:** Create a Venn Diagram representing the Constitutional division of subjects. Correctly categorize 5 subjects each for the Union List, State List, and Concurrent List.
B. **Conceptual Note:** Explain the term "Residuary Powers" and state which level of government holds these powers in India. Provide one example of a modern subject (like Information Technology) that falls under this category.

Subject : Sociology

Instructions:
- **Read the chapters carefully from NCERT.**
- **Answer all questions neatly in your class notebook.**
- **MCQs to be written with correct option only.**
- **Thinking-based questions to be answered in 80–120 words.**

Section A: Multiple Choice Questions (MCQs)

Q1. Marriage is best defined as a
    a) Social contract   b) Biological relationship
    c) Social institution   d) Legal agreement

Q2. Which of the following is NOT a type of marriage?
    a) Monogamy   b) Polygamy
    c) Polyandry   d) Endogamy

Q3. Culture includes
    a) Only traditions
    b) Only religion
    c) Material and non-material elements
    d) Only customs

Q4. Which one is a non-material aspect of culture?
    a) Tools   b) Clothing
    c) Values   d) Technology

Q5. G.S. Ghurye is associated with the study of
    a) Economy   b) Religion
    c) Caste system   d) Family

Q6. According to G.S. Ghurye, caste is closely linked with
    a) Education   b) Occupation
    c) Politics   d) Industry

Q7. D.P. Mukherji emphasized the importance of
    a) Western sociology   b) Indian tradition and culture
    c) Industrial growth   d) Political institutions

Q8. Which feature is central to the caste system?
    a) Equality   b) Social mobility
    c) Hierarchy   d) Democracy

Q9. Endogamy means
    a) Marriage outside one's group   b) Marriage within one's group
    c) Only a   d) Inter-caste marriage

Q10. Culture is
    a) Inherited biologically   b) Learnt socially
    c) Fixed forever   d) Same everywhere

Section B: Thinking-Based Questions

Q1. Why is marriage considered an important social institution in society? Explain with examples.

Q2. "Culture is learnt and shared." Explain this statement with suitable examples from daily life.

Q3. How did G.S. Ghurye explain the origin and features of the caste system in India?

Q4. Do you think the caste system still influences Indian society today? Give reasons for your answer.

Q5. D.P. Mukherji believed sociology should be rooted in Indian culture. Why did he stress this idea?

BE HAPPY AND Enjoy Your Holidays