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## PA-IV Assignment: 2025 26
## Class-XI Commerce
### DATE OF SUBMISSION: 02-01-2026

| 1. | ENGLISH |
|---|---|

**LEVEL 1**

1. What was Nick Middleton's purpose in undertaking the journey?
2. What was the author's physical condition during the journey?
3. What problem did Tsetan face while driving?
4. What difficulties did the author face due to weather conditions?
5. Describe the role of Tsetan in the journey.
6. Do you think Andrew was justified in taking a risk without seeking help? Give reasons.
7. What ethical values of the medical profession are highlighted in *Birth*?
8. How does the story emphasise compassion over clinical detachment?
9. What lessons about resilience and responsibility does the story convey?
10. If Andrew had followed textbook procedures strictly, would the outcome have been different? Analyse.

**LEVEL 2:**

1. Nick Middleton describes the Changtang as a "land of the past." Analyse this phrase in the context of modern civilisation.
2. Discuss how nature emerges as a dominant force overpowering human endurance in *Silk Road*.
3. Analyse the author's narrative technique in blending travel, history, and personal reflection.
4. "Survival on the Tibetan plateau depends more on adaptation than strength." Justify with reference to the text.
5. Evaluate the role of silence and isolation in shaping the author's experience of the journey.
6. How does Joe Morgan's reaction add emotional depth to the story?
7. Explain the significance of the doctor's exhaustion at the end of the story.
8. Why does the author describe the child as a "stillborn" initially?
9. How does Andrew's past experience influence his actions during the crisis?
10. What does the story reveal about the unpredictability of life and death?

**LEVEL 3:**

1. "The journey across the Tibetan plateau was both physically challenging and spiritually enriching." Explain.
2. Describe the harsh climatic conditions faced by the author and how he coped with them.
3. How does Nick Middleton bring out the contrast between modern life and traditional Tibetan culture?
4. The chapter Silk Road is not just a travelogue but a reflection on life and nature. Justify.
5. How does the author use vivid imagery to describe the landscape of Tibet?
6. "Dr Andrew Manson's greatest battle in *Birth* is not medical but moral." Analyse this statement.
7. How does A. J. Cronin use the childbirth episode to highlight the limitations and responsibilities of medical science?
8. Examine the role of perseverance and presence of mind in saving the child's life.
9. The story *Birth* explores the thin line between hope and despair. Discuss with reference to the text.
10. Analyse the irony in the title *Birth*.

| 2. | ACCOUNTANCY |
|---|---|

**LEVEL 1**

**Q1.** Radha's father was a Chartered Accountant and employed with an MNC. One day she noticed that her father was very busy with many files and papers and a little disturbed. She innocently went to him and asked him the reason for his worry. He informed her that he was trying to locate some errors in the books of accounts committed by accountant and trying to correct it. In Accounting sense, he was doing _____.

a. Analysing Books of Accounts        b. Preparing Books of Accounts

c. Rectification of Errors               d. Redefining Errors.

**Q2.** Errors committed due to wrong posting of transactions, wrong totalling or balancing of the accounts, wrong casting of the subsidiary books or wrong recording of amount in the books of original entry are known as_____.

a. Errors of Omission              b. Errors of Principle

c. Compensating Errors.          d. Errors of Commission.

**Q3.** When two or more errors are committed in such a way that the net effect of these errors on the debits and credits of accounts is nil, such errors are called _____.

a. Errors of Omission.              b. Errors of Principle.

c. Compensating Errors.          d. Errors of Commission.

**Q4.** Pass Rectification Entries for the following Errors of Commission:

a. A credit sale of Rs 1,700 to Ram was recorded as Rs 7,100.

b. A credit sale of Rs 1,700 to Mohan was recorded in the Purchases Book.

c. A credit sale of Rs 1,700 to Krishan was posted to Kishan's Account.

d. Return of goods of Rs 800 to Sohan was passed through Sales Return Book.

**Q5.** Pass rectification Entries for the following Compensating Errors:

a. Goods purchased from Kiran for Rs. 5,000 and from Karan for Rs. 6,000 recorded correctly in the Purchases Book. However, 6,000 was posted to Kiran and 5,000 to Karan.

b. Anil's Account was excess debited by 1,000 while Ankur's Account was short debited by 1,000.

c. Rekha's Account was short credited by Rs 700 while Ravi's Account was excess credited by Rs 700. d. Goods sold to Manish for Rs 1,000 and to Rakesh for Rs 1,800 recorded correctly in the Sales Book. However, Rs 1,800 was posted to Manish and 1,000

**Q6.** Define capital expenditure. Give six examples of capital expenditure.

**Q7.** Calculate Closing Stock from the following:

| Particulars | (₹) | Particulars | (₹) |
|---|---|---|---|
| Opening Stock | 38,000 | Sales | 3,60,000 |
| Purchases | 3,40,000 | Return Inwards | 5,000 |
| Return Outwards | 4,000 | Gross Loss | 20,000 |
| Freight Inwards | 26,000 | | |

**Q8.** Calculate the Missing Values in the following cases

| Case | Cost of Goods Sold (₹) | Gross Profit (%) | Sales (₹) |
|---|---|---|---|
| 1. | 1,50,000 | 20% of Sales | ? |
| 2. | ? | 25% of Cost of Goods Sold | 5,00,000 |
| 3. | 2,25,000 | 20% of Cost of Goods Sold | ? |
| 4. | ? | 30% | 2,50,000 |
| 5. | ? | 20% | 1,00,000 |

**Q9.** Difference between Trading Account and Profit & Loss Account (any three)

**Q10.** What is Grouping and Marshalling of Assets and Liabilities? Explain with Example.

**Q11.** Prepare trading and profit and loss account and balance sheet of Jagat as at 31$^{st}$ March 2024 From the following balances.

| | (₹) | | (₹) |
|---|---|---|---|
| Capital (Cr) | 3,60,000 | Salaries | 60,000 |
| Machinery | 70,000 | General expenses | 20,000 |
| Sales | 9,20,000 | Rent | 50,000 |
| Purchases | 5,00,000 | Purchases Return | 5,000 |
| Sales Return | 10,000 | Debtors | 3,00,000 |
| Stock (1$^{st}$ April, 23) | 1,00,000 | Cash | 40,000 |

| Drawings | 40,000 | Carriage Outwards | 20,000 |
| Wages | 1,00,000 | Advertising | 20,000 |
| Carriage Inwards | 5,000 | Creditors | 50,000 |

Closing Stock was Valued at ₹ 2,00,000.

## Level 2

**Q1.** While going through the books of accounts the accountant noticed that the total of sales book was written Rs 1,29,000 whereas the actual totalling was Rs 1,09,000. This is an example of _____.

    a. Double Casting        b. Overcasting        c. Undercasting        d. Recasting

**Q2.** Prepare Suspense Account.
   a. A motor car has been purchased for Rs.3,400. Cash has been correctly credited, but the Motor Car account has been debited with Rs.3,140.
   b. Interest on Deposits received Rs.600 had been correctly debited in the Cash account, but had not been credited to the Interest Account.
   c. The balance in the account of Mr. Manish Rs.275 had been written off as bad debt but no account had been debited.
   d. A debit balance of Rs.200 on the personal account of Mr. Vishal (correctly shown in the ledger) has been omitted while extracting a Trial Balance.

**Q3.** Pass rectification entries for following errors of principle:
   a. Old computer sold for Rs.7,500 was passed through the Sales Book.
   b. Purchase of an Office table for Rs.5,000 was passed through Purchases Book.
   c. Wages amounting to Rs.1000 paid for erection of new machinery was debited to Wages account.

**Q4.** Identify from the following errors of principle and pass rectification entries for those errors.
   a. Sales of Rs.25,000 to Bhushan was completely omitted from books.
   b. Rs.50,000 spent on extension of building debited to Repairs account.
   c. Repairs of Rs.500 for machinery charged to Machinery Account.
   d. Rs.10,000 paid by cheque for a printer was charged to Office equipment account.

**Q5.** On 31st March 2022, while balancing the books of accounts of Shri Gopal, they did not agree. The difference in Trial Balance amounting to Rs.2,233 was debited to Suspense Account. Later the following errors were noticed. Give the Journal Entries for rectification and prepare Suspense Account.
   a. The total of Purchases Book of March has been undercast by Rs.3,000.
   b. Rs.228 paid for repairing the Machinery has been debited to Machinery Account.
   c. The Purchase Return Book has been overcast by Rs.150.
   d. A sale of Rs.1,200 to Mr. Shankar has been passed through the Purchases Book.
   e. Cash received Rs.1,367 from Shri. Arvind though entered in the Cash Book has not been posted to Shri Arvind's account.
   f. Goods returned by Mr. Alex Rs.225 have been entered in the returns Outward Book. However, Mr. Alex's account is correctly posted.

**Q6.** The Trial Balance of **Aakash Enterprises** agreed on 31st March 2024, but later the following errors were found:
   1. Discount allowed ₹700 was debited to Discount Received Account.
   2. A purchase of goods from Rohan ₹4,800 was wrongly credited to Rohit's account.
   3. Returns inward book was overcast by ₹1,000.
   4. Rent paid ₹3,500 was debited to Rent Received Account.
   5. Cash received from Ankit ₹9,000 was posted to his account as ₹900.
   6. ₹12,000 received as commission was credited to Sales Account.
   7. Goods worth ₹6,000 sold to Mohan were omitted from books.
   **Required:**

(a) Pass the **Rectification Entries**.

(b) State whether Trial Balance would be affected or not for each error.

**Q7.** Calculate the Missing Values in the following cases

| Case | Cost of Goods Sold (₹) | Gross Profit (%) | Sales (₹) |
|---|---|---|---|
| 1. | 4,50,000 | 20% of Sales | ? |
| 2. | ? | 25% of Cost of Goods Sold | 20,00,000 |
| 3. | 4,50,000 | 20% of Cost of Goods Sold | ? |
| 4. | ? | 30% | 12,50,000 |
| 5. | ? | 20% | 10,00,000 |

**Q8.** M/s Krishna Traders prepares its final accounts on 31st March every year. From the following Trial Balance as on 31st March 2024, prepare:

1. Trading Account
2. Profit & Loss Account
3. Balance Sheet

**Trial Balance as on 31st March 2024**

| Particulars | Debit (₹) | Credit (₹) |
|---|---|---|
| Capital | — | 1,50,000 |
| Drawings | 12,000 | — |
| Cash in Hand | 6,500 | — |
| Cash at Bank | 18,500 | — |
| Purchases | 1,20,000 | — |
| Sales | — | 2,10,000 |
| Returns Inwards | 4,000 | — |
| Returns Outwards | — | 3,000 |
| Opening Stock | 35,000 | — |
| Carriage Inwards | 6,000 | — |
| Wages | 14,000 | — |
| Salaries | 18,000 | — |
| Rent | 9,000 | — |
| Debtors | 42,000 | — |
| Creditors | — | 28,000 |
| Furniture | 25,000 | — |
| Plant & Machinery | 60,000 | — |
| General Expenses | 5,000 | — |
| Discount Allowed | 2,000 | — |
| Discount Received | — | 1,500 |
| Bad Debts | 1,500 | — |
| **Total** | **3,78,000** | **3,78,000** |

**Additional Information:**

Closing Stock as on 31st March, 2024 was valued at ₹48,000.

**Level 3**

**Q1.** The Trial Balance of a firm shows excess credit of ₹3,000. Which of the following errors could be the reason?

(a) Sales Book overcast by ₹1,500

(b) Purchases Book undercast by ₹3,000

(c) Discount allowed credited instead of debited ₹3,000

(d) Cash paid to Ram posted twice on debit side

**Q2.** Which of the following errors will **not affect** the agreement of Trial Balance?
(a) Posting ₹4,200 received from A to B's account
(b) Purchases Book undercast by ₹2,000
(c) Rent paid debited to Rent Received Account
(d) Credit sale omitted completely from books

**Q3.** Goods worth ₹5,000 taken by the proprietor for personal use were recorded as purchases. This error will result in:
(a) Overstatement of Profit and Capital          (b) Understatement of Profit and Capital
(c) Overstatement of Purchases and Capital          (d) No effect on Profit

**Q4.** Which error will require the use of a **Suspense Account** for rectification?
(a) Cash paid to Mohan posted to his account correctly
(b) Sales Book overcast by ₹2,000
(c) Posting ₹1,200 as ₹210 in Ram's account
(d) Goods withdrawn by proprietor not recorded

**Q5.** Choose the correct option:
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation
(c) A is true, R is false
(d) A is false, R is true

**I. Assertion (A):** Errors of principle do not affect the agreement of Trial Balance.
   **Reason (R):** Such errors involve wrong classification of expenditure or income.
**II. Assertion (A):** Omission of a credit sale affects the Trial Balance.
   **Reason (R):** One aspect of the transaction remains unrecorded.
**III. Assertion (A):** Posting an amount on the correct side but with wrong amount is an error of commission.
   **Reason (R):** The mistake occurs while transferring entries from books of original entry.

**Q6.** The Trial Balance of M/s Arjun Traders as on 31st March 2024 showed a difference of ₹6,400 (Debit side excess). This difference was transferred to a Suspense Account. On further investigation, the following errors were discovered:
1. Sales Book was overcast by ₹3,000.
2. A credit purchase of goods from Ramesh ₹4,800 was posted to his account as ₹8,400.
3. ₹2,000 paid for repairs to machinery was debited to Machinery Account.
4. Goods worth ₹1,600 taken by the proprietor for personal use were not recorded in the books.
5. Cash received from Suresh ₹5,000 was posted to his account as ₹500.
6. Discount allowed ₹1,200 was credited to Discount Received Account.
7. Purchases Book was undercast by ₹2,500.

**Required:**
(a) Identify the type of each error.
(b) Pass Journal Entries to rectify all the above errors.
(c) Prepare the Suspense Account after rectification.

**Q7.** M/s Aryan Enterprises prepares its final accounts on 31st March every year. From the following Trial Balance as on 31st March 2024, you are required to prepare:
1. Trading Account
2. Profit & Loss Account
3. Balance Sheet

**Trial Balance as on 31st March 2024**

| Particulars | Debit (₹) | Credit (₹) |
| --- | --- | --- |
| Capital | — | 2,40,000 |
| Drawings | 22,000 | — |
| Cash in Hand | 9,500 | — |

| | | |
|---|---|---|
| Cash at Bank | 28,500 | — |
| Opening Stock | 55,000 | — |
| Purchases | 2,10,000 | — |
| Sales | — | 3,60,000 |
| Returns Inwards | 12,000 | — |
| Returns Outwards | — | 8,000 |
| Carriage Inwards | 11,000 | — |
| Wages | 32,000 | — |
| Salaries | 45,000 | — |
| Rent | 18,000 | — |
| Trade Expenses | 9,000 | — |
| Advertising | 14,000 | — |
| Discount Allowed | 6,500 | — |
| Discount Received | — | 4,000 |
| Bad Debts | 3,500 | — |
| Debtors | 78,000 | — |
| Creditors | — | 52,000 |
| Furniture | 48,000 | — |
| Plant & Machinery | 95,000 | — |
| Investments | 40,000 | — |
| Loan from Bank | — | 50,000 |
| Interest on Loan | 5,000 | — |
| Insurance | 7,000 | — |
| General Expenses | 8,500 | — |
| **Total** | **6,52,000** | **6,52,000** |

**Additional Information:**
Closing Stock as on 31st March 2024 was valued at ₹72,000.

| 3. | **BUSINESS STUDIES** |
|---|---|

### LEVEL 1
1. Define Internal Trade and state its two main types.
2. What do you understand by the term Entrepreneurship?
3. List any four characteristics of a Micro Enterprise as per the latest NCERT guidelines.
4. Who is an Itinerant Retailer? Give two examples.
5. Define a Wholesaler and mention their primary role in the distribution chain.
6. What is the full form of NSIC and DIC?
7. Mention any two features of Fixed Shop Small Retailers.
8. What is a Patent? How is it useful for an inventor?
9. Briefly explain the concept of "Startup India."
10. Name any four documents commonly used in Internal Trade.

### LEVEL 2
11. Explain the Composite Criteria (Investment and Turnover) used to classify MSMEs since 2020.
12. Distinguish between Departmental Stores and Chain Stores on the basis of: (a) Location, (b) Variety of goods, and (c) Pricing.

13. Describe any four services rendered by Wholesalers to Manufacturers.
14. Explain the role of Entrepreneurship in the economic development of a country.
15. Discuss the various types of Itinerant Retailers commonly found in India.
16. How do Retailers provide "Product Variety" and "Information" to the final consumers?
17. What are Intellectual Property Rights (IPR)? Explain the importance of Trademarks for a business.
18. "MSMEs are the backbone of the Indian economy." Justify this statement with three points.
19. Explain the process of Mail Order Houses. Mention one advantage and one limitation.
20. Describe the functions of District Industries Centres (DICs) in promoting small businesses.

## LEVEL 3
21. Analyze the Entrepreneurial Process. Explain the steps from "Discovery" to "Harvesting."
22. Compare and contrast Wholesalers and Retailers based on capital requirement, risk-bearing, and specialized knowledge.
23. Evaluate the impact of GST (Goods and Services Tax) on Internal Trade in India.
24. "Wholesalers are a non-essential link in the distribution channel and should be eliminated." Do you agree? Give reasons for your answer.
25. Discuss the Intellectual Property Rights landscape in India. How does a Copyright differ from a Geographical Indication (GI)?
26. Explain the various funding options available to an entrepreneur under the Startup India scheme.
27. Describe the Institutional Support provided by the National Small Industries Corporation (NSIC) to small-scale industries.
28. Analyze the Risk-bearing and Innovation functions of an entrepreneur. Why are these considered the "soul" of entrepreneurship?
29. Compare the operational structure of a Consumer Cooperative Store with that of a Supermarket.
30. Examine the Internal Trade Distribution Chain. How does a breakdown in any one link (e.g., the Retailer) affect the Manufacturer and the Consumer?

| 4. | **ECONOMICS** |
|---|---|

### PART A: EASY LEVEL (10 Questions)
1. Define Total Revenue (TR).
2. What is Average Revenue (AR)? How is it calculated?
3. State the relationship between AR and Demand Curve.
4. What happens to TR when demand is perfectly elastic?
   (Price Determination – 4 Questions)
5. Define market equilibrium.
6. What is meant by excess demand?
7. Name any two factors affecting demand.
8. What happens to price when supply exceeds demand?
   (Index Numbers – 2 Questions)
9. What is an Index Number?
10. Give any two uses of index numbers.

### PART B: MODERATE LEVEL (10 Questions)
11. Distinguish between Total Revenue and Marginal Revenue.
12. Explain why MR curve lies below AR curve under imperfect competition.
13. State the conditions when TR is maximum.
14. Draw and explain the relationship between AR and MR curves under monopoly.
    (Price Determination – 4 Questions)
15. Explain the concept of price ceiling with an example.
16. What is excess supply? Explain its impact on market price.
17. Explain any two causes of rightward shift of demand curve.
18. Explain how equilibrium price is determined with the help of a schedule.
    (Index Numbers – 2 Questions)
19. Explain the Consumer Price Index (CPI).
20. Why are index numbers called economic barometers?

**PART C: HARD LEVEL (10 Questions)**

**21.** Explain the relationship between TR, AR, and MR with the help of a table.

**22.** Why is MR negative when TR is falling? Explain logically.

**23.** Explain how price elasticity of demand affects total revenue.

**24.** Can AR fall without MR becoming negative? Justify your answer.

(Price Determination – 4 Questions)

**25.** Explain the effect of simultaneous increase in demand and supply on equilibrium price.

**26.** With the help of diagrams, explain changes in equilibrium due to change in demand.

**27.** Distinguish between movement along the demand curve and shift of demand curve.

**28.** Explain the role of government intervention in price determination.

(Index Numbers – 2 Questions)

**29.** Explain the steps involved in construction of index numbers.

**30.** Critically evaluate the limitations of index numbers.

| 5. | **INFORMATICS PRACTICES** |
|---|---|

**1.** Differentiate between CHAR and VARCHAR Datatypes.

**2.** What is a database system? What is its need?

**3.** What are the disadvantages of database systems?

**4.** What is SQL? What are different categories of commands available in SQL?

**5.** Differentiate between DDL and DML commands.

**6.** Write two usage of DESC in SQL

Consider the following Table named „empl" and Write SQL commands from (a) to (n)

| empno | ename | job | mgr | hiredate | sal | comm | deptno |
|---|---|---|---|---|---|---|---|
| 8369 | SMITH | CLERK | 8902 | 1990-12-18 | 800 | NULL | 20 |
| 8499 | ANYA | SALESMAN | 8698 | 1991-02-20 | 1600 | 300 | 30 |
| 8521 | SETH | SALESMAN | 8698 | 1991-02-22 | 1250 | 500 | 30 |
| 8566 | MAHADEVAN | MANAGER | 8839 | 1991-04-02 | 2985 | NULL | 20 |
| 8654 | MOMIN | SALESMAN | 8698 | 1991-09-28 | 1250 | 1400 | 30 |
| 8698 | BINA | MANAGER | 8839 | 1991-05-01 | 2850 | NULL | 30 |
| 8882 | SHIAVNSH | MANAGER | 8839 | 1991-06-09 | 2450 | NULL | 10 |
| 8888 | SCOTT | ANALYST | 8566 | 1992-12-09 | 3000 | NULL | 20 |
| 8839 | AMIR | PRESIDENT | NULL | 1991-11-18 | 5000 | NULL | 10 |
| 8844 | KULDEEP | SALESMAN | 8698 | 1991-09-08 | 1500 | 0 | 30 |
| 8886 | ANOOP | CLERK | 8888 | 1993-01-12 | 1100 | NULL | 20 |
| 8900 | JATIN | CLERK | 8698 | 1991-12-03 | 950 | NULL | 30 |
| 8902 | FAKIR | ANALYST | 8566 | 1991-12-03 | 3000 | NULL | 20 |
| 8934 | MITA | CLERK | 8882 | 1992-01-23 | 1300 | NULL | 10 |

a) Display all the records from table empl.

b) Display EmpNo and EName of all employees from the table empl.

c) Display employee name, salary, and department number who are not getting commission from table empl.

d) Display employee number, name, sal*12 as Annual salary whose commission is not NULL from table empl.

e) List all department numbers from table empl.

f) List all unique department numbers from table empl.

g) List the details of all clerks who have not been assigned department as yet.

h) Display the details of employees whose name have only four letters.

i) Display the details of all employee whose annual salary is between 25000 to 40000.

j) How many job types are offered to employees?

k) List the employees who earn more commission than their salaries.

l) Display name, job title and salary of employee who do not have manager.

| | |
|---|---|
| | m) Display the name of employee whose name contains "A" as third letter. |
| | n) Display the name of employee whose name contains "L" as any letter. |
| **6.** | **PHYSICAL EDUCATION** |

**EASY LEVEL QUESTION PAPER**

*(Fundamentals of Anatomy, Physiology & Sports Psychology)*

**Section A: MCQs (1 × 4 = 4 marks)**

1. Anatomy is the study of:
   a) Body movements     b) Body structure     c) Body functions     d) Body diseases
2. Which system protects vital organs?
   a) Muscular     b) Nervous     c) Skeletal     d) Respiratory
3. The heart is part of which system?
   a) Digestive     b) Respiratory     c) Circulatory     d) Nervous
4. Which gas is taken in during respiration?
   a) Carbon dioxide     b) Nitrogen     c) Oxygen     d) Hydrogen
5. **Assertion (A):** Muscles help in movement.
   **Reason (R):** Muscles contract and relax to produce movement.
6. Define Physiology.
7. Name any two functions of the skeletal system.
8. Explain the importance of Anatomy in sports.
9. Write any three functions of muscles.
10. What is Team Cohesion?
11. List any three adolescent problems.
12. Describe the structure and functions of the heart.
13. Explain the respiratory system and its functions.
14. Define Psychology and explain its importance in Physical Education and Sports.

## Moderate level

1. Which type of joint allows free movement?
   a) Fixed joint     b) Slightly movable     c) Ball and socket     d) Fibrous
2. Which muscle works without our control?
   a) Skeletal     b) Smooth     c) Voluntary     d) Striated
3. Oxygen is transported by:
   a) Platelets     b) Plasma     c) RBC     d) WBC
4. Mental Toughness mainly helps an athlete to:
   a) Increase height     b) Control emotions
   c) Improve digestion     d) Improve flexibility
5. **Assertion (A):** Adolescence is a critical stage of development.
   **Reason (R):** Rapid physical and emotional changes occur during this stage.
6. Name any two types of bones.
7. What is attention in sports psychology?
8. Explain the functions of the skeletal system.
9. Describe the properties of muscles.
10. Explain the structure of the circulatory system.
11. Discuss any two methods to manage adolescent problems.
12. Explain classification of bones with examples.
13. Describe the structure and functions of the respiratory system.
14. Explain Team Cohesion and its importance in sports performance.

**HARD LEVEL QUESTION PAPER**

1. Which bone protects the brain?
   a) Femur     b) Vertebra     c) Skull     d) Pelvis

2. Cardiac muscles are found in:
   a) Arms      b) Legs      c) Heart      d) Lungs
3. The main function of alveoli is:
   a) Air transport      b) Gas exchange
   c) Blood purification      d) Muscle contraction
4. Resilience in sports refers to:
   a) Physical strength      b) Ability to recover from setbacks
   c) Speed      d) Endurance
5. **Assertion (A):** Team cohesion improves sports performance.
   **Reason (R):** Cooperation and trust among players increase efficiency.
6. Define mental toughness.
7. What is a hinge joint?
8. Explain the importance of Physiology in sports training.
9. Describe different types of joints with examples.
10. Explain the functions of blood.
11. Discuss psychological problems during adolescence.
12. Explain attention and its role in sports.
13. Describe the functions of the circulatory system.
14. Explain in detail the structure and functions of the skeletal system.
15. Describe properties and functions of muscles in relation to sports.
16. Explain developmental characteristics at different stages of development.

| 7. | APPLIED MATHS |
|----|---------------|

Q1. Calculate the quartile deviation for the following frequency distribution.

| Class interval | 30–34 | 35–39 | 40–44 | 45–49 | 50–54 | 55–59 | 60–64 | 65–69 | 70–74 | 75–79 | 80–84 |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Frequency | 1 | 2 | 6 | 7 | 9 | 11 | 8 | 7 | 5 | 3 | 1 |

Q2. Find the Mean Deviation for the following.

| Marks obtained | 10–20 | 20–30 | 30–40 | 40–50 | 50–60 | 60–70 | 70–80 |
|----------------|-------|-------|-------|-------|-------|-------|-------|
| Number of students | 2 | 3 | 8 | 14 | 8 | 3 | 2 |

Q3. Find the mean deviation about the Median for the following data.

| Class interval | 0–6 | 6–12 | 12–18 | 18–24 | 24–30 |
|----------------|-----|------|-------|-------|-------|
| Frequency | 4 | 5 | 3 | 6 | 2 |

Q4. Find the mean, variance, and standard deviation of the following marks scored by 10

students: 45, 70, 62, 60, 50, 48, 67, 34, 65, 58.

Q5. Find the mean, variance, and standard deviation for the following frequency distribution:

| Classes | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
|---------|------|-------|-------|-------|-------|
| Frequency | 5 | 8 | 15 | 16 | 6 |

Q6. 20 students are taking an exam. A and B are two students among these 20 students and both have ranking 10. Find the percentage rank of A.

Q7. Calculate the covariance of observations (3, 5), (6, 7), (9, 9), (12, 11), (15, 13), (18, 15), (21, 17), (24, 19) using assumed means $A = 13$ and $B = 12$.

**Q8.** The following data relate to the number of vehicles owned and road deaths for the populations of 12 countries:

| Vehicles per 100 population | 30 | 31 | 32 | 30 | 46 | 30 | 19 | 35 | 40 | 46 | 57 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Road deaths per 100,000 population | 30 | 14 | 30 | 23 | 32 | 26 | 20 | 21 | 23 | 30 | 35 | 26 |

Calculate Spearman's rank correlation coefficient and comment on the result.

**Q9.** Mr. Jain lives in Dehradun, Uttarakhand. He has an electricity connection of 4 kW. He consumed 329 units of electricity in January 2019. Calculate his electricity bill for the month of January 2019 according to the tariff plan given below.

**Q10.** A can hit a target 4 times out of 5 times, B can hit the target 3 times out of 4 times and C can hit 2 times out of 3 times. They fire simultaneously. Find the probability that (i) any two out of A, B, C will hit the target. (ii) none of them will hit the target.

| 8. | **MARKETING** |
|---|---|

1. Explain the meaning and importance of entrepreneurship.
2. Discuss the key characteristics of a successful entrepreneur.
3. Describe the major functions performed by an entrepreneur.
4. Explain various entrepreneurial skills required to start a business.
5. "Entrepreneurs are creators of employment." Justify the statement.
6. Explain the consumer buying decision process with suitable examples.
7. Discuss the factors influencing consumer behaviour in detail.
8. Why is the study of consumer behaviour important for marketers?
9. Explain psychological factors influencing consumer behaviour.
10. Describe cultural, social, and personal factors affecting consumer behaviour.
11. A customer prefers a particular brand of mobile phone even though cheaper options are available.
    o Identify the factor affecting consumer behaviour.
12. Ramesh bought a chocolate without planning while standing near the billing counter.
    o What type of buying behaviour is this?
13. A family purchases products based on traditions and customs.
    o Which factor influences their buying decision?