DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class – XI

Time – 3 Hours

Subject – Accountancy

Maximum Marks- 80

General Instructions:
1. This paper contains 34 questions. All questions Compulsory.
2. There is no overall choice, however, there is an internal choice of 7 questions of 1 mark, 2 questions of 3 marks, 1 question of 4 marks and 2 questions of 6 marks.
3. Attempt all parts of a question together and show the working notes where applicable.

1. The term sales is used only for the sale of _____ and is never used for the sale of _____.
   (a) Assets, Investments
   (b) Assets, Goods
   (c) Goods, Assets
   (d) None of these   [1]

2. Which qualitative characteristic of accounting information is reflected when `accounting information is clearly presented?
   (a) Relevance
   (b) Comparability
   (c) Reliability
   (d) Understandability   [1]

   (OR)

   Use of common unit of measurement and common format of reporting promotes ___
   (a) Relevance
   (b) Understandability
   (c) Reliability
   (d) Comparability

3. Purchased goods from Rohit of the list price of Rs. 50,000 for cash at 20% Trade discount and received 3% cash discount. Amount credited to Discount Account will be_____
   (a) Rs. 10,000   (b) Rs. 1,500   (c) Rs. 1,200   (d) Rs. 11,500   [1]

4. Due to which of the following, Contingent Liabilities are shown in the Balance Sheet?
   (a) Dual aspect Concept
   (b) Full Disclosure Concept
   (c) Materiality Concept
   (d) Going Concern Concept   [1]

   (OR)

   The cost of a small calculator is accounted as an expense and not shown as an asset in the financial statements of a business entity, though it is used for long number of years, due to_____
   (a) Matching Concept
   (b) Materiality Concept
   (c) Conservatism Concept
   (d) Going Concern Concept

5. Voucher is prepared for ____
   (a) Cash received and paid
   (b) Cash/Credit sales
   (c) Cash/Credit purchases
   (d) All the above   [1]

6. As a result of the following transactions, the total of accounting equation will be ___-
   (i)   Started business with cash Rs. 2,00,000
   (ii) Purchased furniture Rs. 25,000
   (iii) Purchased goods on credit Rs. 60,000
   (a) Rs. 2,85,000
   (b) Rs. 2,25,000
   (c) Rs. 2,35,000
   (d) Rs. 2,60,000   [1]

7. Radha has returned goods worth Rs. 20,000 to Rama as she found them defective. Which of the following document will be prepared by Rama?
   (a) Invoice/Bill
   (b) Debit Note
   (c) Credit Voucher
   (d) Credit Note   [1]

(OR)

When the number of accounts to be debited or credited is more than one, entry made for recording the transaction is called _____ Journal entry.
(a) Single   (b) Compound   (c) Normal   (d) Multiple

8. A Trial Balance is prepared ____
   (a) After preparation of Journal.
   (b) After recording transactions in subsidiary books.
   (c) After postings to ledger is complete and accounts have been balanced.
   (d) After preparation of financial statements.   [1]

9. A Bank Reconciliation Statement is prepared with the balance of _____
   (a) Cash Book
   (b) Pass Book
   (c) Either Cash Book or Pass Book
   (d) Neither Cash Book nor Pass Book   [1]

10. Single Entry System of Book Keeping is _____
    (a) Inaccurate   (b) Unsystematic   (c) Unscientific   (d) All of these   [1]

(OR)

Which of the following accounts are maintained under Single Entry system?
(a) Personal   (b) Impersonal   (c) Nominal   (d) None of these

11. As per Revenue Recognition Concept, Revenue is deemed to be realized _____
    (a) When Purchase Order is received from the purchaser.
    (b) When goods are delivered to the purchaser.
    (c) When the title of the goods has been transferred to the purchaser.
    (d) When cash is received from the purchaser.   [1]

12. **Given below are two statements:**
    One labeled as Assertion (A) and the Other labeled as Reason (R):
    Assertion (A): Trial Balance is an account, prepared with debit and credit balances of ledger accounts.
    Reason (R): Trial Balance is prepared to test the arithmetical accuracy of the ledger accounts.
        Which one of the following Codes is correct?
    (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 of (A)
    (c) (A) is true, but (R) is false
    (d) (A) is false, but (R) is true   [1]

13. Find the ODD ONE OUT from the following:
    (a) Income received in advance
    (b) Bank Loan
    (c) Prepaid Insurance Premium
    (d) Creditors for Goods   [1]

(OR)

When goods are lost by fire then Loss of Goods by Fire Account is debited with ____
(a) Cost of Goods Sold
(b) Cost of Goods Sold plus Gross Profit
(c) Cost of Goods Sold less Gross Profit
(d) Cost of Goods Purchased

14. The main object of preparing Ledger is _____
    (a) To ascertain the profit and loss of business
    (b) To ascertain he financial position of the business
    (c) To ascertain the net result of all transactions of one nature
    (d) None of these   [1]

15. Which of the following statements is false?
    (a) Installation Expenses of Machinery paid in cash should be credited to Cash account.
    (b) Installation Expenses of Machinery should be debited to Installation Expenses account.
    (c) Installation Expenses of Machinery should be debited to Machinery account.
    (d) Both (a) and (c) above   [1]

16. Which of the following is not a sub-field of accounting?
    (a) Book Keeping   (b) Financial Accounting
    (c) Management Accounting   (d) Cost Accounting   [1]

                                    (OR)
    Any expenditure, the full benefit of which is received during an accounting period of one year
    is termed as _____
    (a) Revenue Expenditure   (b) Capital Expenditure
    (c) Both (a) and (b), above   (d) Neither (a) nor (b)

17. Which of the following is levied when the goods are purchased/sold within the state?
    (a) Only SGST   (b) Only CGST   (c) SGST and CGST   (d) None of these   [1]

18. Balance of Petty Cash book is _____
    (a) An Expense   (b) A Profit   (c) An Asset   (d) A Liability   [1]

19. _____ is created to meet the unforeseen losses.
    (a) Provisions   (b) Reserves
    (c) Both (a) and (b)   (d) None of these   [1]

                                    (OR)
    Which of the following is created by undervaluation of closing stock?
    (a) General Reserve   (b) Secret Reserve
    (c) Capital reserve   (d) None of these

20. Which of the following statements are correct about a provision?
    (i)   Provision is a charge against the profits of an enterprise
    (ii) Provisions are created after calculation of net profit
    (iii) Creation of provision is not necessary for a business
    (iv) Provisions are created to meet a known liability
    (a) (i), (ii) and (iii)   (b) (ii) and (iv)
    (c) (i), (iii) and (iv)   (d) (i) and (iv)   [1]

21. Explain the following. (Give two examples each)
    (i) Capital Reserve   (ii) Revenue Reserve   [3]
                                    (OR)
    Explain any three causes of depreciation. (Give one example each)

22. Enter the following transactions in the Purchases Book of M/S Khanna Garments :

2023

Sept. 5   Purchased from Gupta Bros. as per Invoice No. 171

               120 White Shirts @ Rs. 95 each

               60 School Ties @ Rs. 40 each

Sept. 19   Purchased a Computer for office use from M/s Hari. Tech for Rs. 30,000 as

               per Invoice No. 207

Sept. 20   Purchased from Jain Bros. as per Invoice No. 180

               70 pairs Socks @ Rs. 18 each

               90 Skirts @ Rs. 130 each

               Less: Trade Discount 10%

Sept. 22   Purchased from Verma & Co. as per Invoice No. 261

               65 T-Shirts @ Rs. 115 each

               80 Trousers @ Rs. 180 each

               Less: Trade Discount 20%   [3]

23. Find out gross profit from the following details: (Show working notes)
Sales Rs. 1,02,000, Sales return Rs. 2,000 and Gross Profit 25% on cost.   [3]

(OR)

Calculate Operating Profit from the following details: (Show working notes)
Net Profit Rs.1,00,000; Rent Received Rs. 10,000; Gain on sale of machine Rs. 15,000;
Interest on Loan Rs. 20,000; Donation Rs. 2,000.

24. The following balances appeared in the books of Krishna on 1st April 2021.
Draw an Opening Entry for the same.
Assets: Cash Rs. 8,000; Bank Rs. 20,000; Stock Rs. 54,000; Debtors Rs. 47,000; Machinery
Rs. 60,000;
Liabilities: Creditors Rs. 20,000; Capital Rs. 2,00,000   [3]

25. On 1st April, 2019, a limited company purchased a Machine for Rs. 1,90,000 and spent
Rs. 10,000 on its installation. At the date of purchase, it was estimated that the scrap value of
the Machine would be Rs. 50,000 at the end of sixth year.
(i) Find out the Rate % of Depreciation.
(ii) What would be the Balance of Machinery at the end of fourth year when depreciation is
charged under straight line method? (The books are closed on 31st March every year)
            [3]

26. Enter the following transactions in the Journal of Kumar Bros.
2022
May 10 Sold goods to Kashi of the list price of Rs. 1,00,000 at trade discount of 15%
May 13 Kashi returned goods of the list price of Rs. 4,000
May 18 Received from Kashi the amount due from him, under a cash discount of 5%.   [3]

27. On 1st April, 2023, Raghu started a business with Rs. 80,000 as his capital.
On 31st March, 2024, his position was as follows:

	Rs.
Creditors	80,000
Bank	20,000
Debtors	1,00,000
Stock	80,000
Machinery	1,36,000
Furniture	24,000

During the year 2023-'24, Raghu withdrew Rs. 48,000 for his personal expenses.
On 1st October, 2023, he introduced further capital amounting to Rs. 60,000.
Adjustments:
(i) Machinery is to be depreciated @ 10%.
(ii) A provision of 5% is to be made against debtors.
Prepare the Statement of Affairs as on 31st March, 2024 (Before adjustments) and Statement of profit and loss for the year ending 31st March, 2024, including the adjustments given above. [4]

28. The Trial Balance of Kohli did not agree and showed an excess debit of Rs. 16,300. He posted the difference to a suspense account and discovered the following errors:
   (i) Cash received from Rajat Rs. 5,000 was posted to the debit of Kamal as Rs. 6,000.
   (ii) Salaries paid to an employee Rs. 2,000 was debited to his personal account as Rs. 1,200.
   (iii) Goods withdrawn by the proprietor for his personal use Rs. 1,000 was credited to sales account as Rs. 1,600.
   (iv) Depreciation provided on machinery Rs. 3,000 was posted to Machinery account as Rs. 300.
   (v) Sale of old furniture for Rs. 10,000 was credited to sales account as Rs. 6,000.
   Prepare suspense account. [4]

29. Name the books of original entry where the following transactions will be recorded.
   (Give any two reasons in support of your answer)
   (i) Goods sold to Ramavatar for Rs 50,000 on credit.
   (ii) Provision for doubtful debts created @ 5% on debtors with book value of Rs. 10,000.
   (iii) Defective goods sold to Beena on credit worth Rs. 40,000 were returned by her.
   (iv) Purchased Machinery on credit from Mr. Mahendra Singh for Rs. 1,50,000. [4]

(OR)

What do you mean by Personal Accounts in context with Double Entry System?
Explain the different types of personal accounts with suitable examples.

30. On 1/04/2022, the following balances appeared in the books of M/S Balaji and Company.
   Machinery A/C   Rs. 45,000
   Provision for Depreciation A/C   Rs. 18,000
On 1/10/2022 a part of Machinery purchased for Rs. 7,500 on 1/4/2020 was sold for Rs. 2,800. On the same date, a new Machinery costing Rs. 22,000 was purchased. The depreciation was provided @ 10% p.a. on Original Cost of asset.
Prepare Machinery A/C, Machinery Disposal A/C and Provision for Depreciation A/C for the year ending 31/3/2023. [6]

(OR)

A company purchased a machine for Rs. 1,00,000 on 1st October, 2021. Another machine costing Rs. 20,000 was purchased on 1st December, 2022. On 31st March, 2024, the machine purchased in 2021 was sold at a loss of Rs. 10,000. The company charges depreciation @ 15% p.a. on Diminishing Balance Method. Accounts are closed on 31st March every year. Prepare the Machinery Account for 3 years.

31. Prepare Bank Reconciliation Statement of Mr. Madan on 30th June 2022 from the following particulars.
    (i)   Pass Book showed an Overdraft of Rs. 15,000 on 30th June 2022.
    (ii)   A cheque of Rs. 200 was deposited in bank but not recorded in Cash Book.
    (iii)   Cheques of Rs. 17,000 were issued but cheques worth only Rs. 10,000 were presented for payment up to 30th June, 2022.
    (iv)   Cheques of Rs. 2,000 were received and recorded in Cash Book but not sent to bank for collection.
    (v)   Cheques of Rs. 10,000 were sent to bank for collection. Out of which, cheques of Rs. 2,000 and of Rs. 1,000 were credited respectively on 8th and 10th July and the remaining cheques were credited before 30th June, 2022.
    (vi)   Bank paid Rs. 300, fees of Chamber of Commerce on behalf of Mr. Madan, which was not recorded in Cash Book.
    (vii)   Bank charged interest on Overdraft Rs. 800 which was not recorded in Cash Book.

[6]

32. From the following Trial Balance of M/S Sai Ram & Sons as on 31st March, 2023, prepare Trading and Profit & Loss Account and Balance Sheet.

Particulars	Dr. (Rs.)	Cr. (Rs.)
Drawings	18,000	-------
Capital	-------	80,000
Purchases	82,600	-------
Sales	------	1,55,000
Stock (1/4/22)	42,000	-------
Returns Outward	------	1,600
Carriage Inward	1,200	------
Wages	4,000	------
Power and Fuel	6,000	------
Machinery	50,000	------
Furniture	14,000	------
Rent	22,000	------
Salary	15,000	------
Insurance	3,600	------
8% Bank Loan	-------	25,000
Debtors	20,600	-------
Creditors	-------	18,900
Cash in Hand	1,500	-------
	2,80,500	2,80,500

ADJUSTMENTS:
(a) Closing Stock Rs. 64,000.
(b) Wages Outstanding Rs. 2,400.
(c) Bad Debts Rs. 600 and make Provision for Bad and Doubtful Debts to be 5%.
(d) Rent is paid for 11 months.
(e) Loan from the Bank was taken on 1st October, 2022.
(f) Provide Depreciation on Machinery @ 10% and on Furniture @ 5%.
(g) Prepaid insurance Rs.600.

[6]

33. Prepare a double column cash book of Ms. Sony with cash and bank columns. [6]

		Rs.
2022		
June 1	Cash in hand	70,000
	Bank Overdraft	50,000
June 4	Sold goods for cash	50,000
June 5	Cash deposited in bank	80,000
June 6	Purchased goods from Mamta	30,000
June 7	Cheque issued to Mamta in full settlement	28,800
June 8	Withdrawn from bank for personal use	5,000
June 12	Sold goods to Aman.	25,000
June 15	Cheque received from Aman and deposited in bank	25,000
June 20	Bank charges	500
June 22	Interest charged by bank	2,500
June 23	Received cash from Roma	28,000
June 28	Paid Sony's life insurance premium by cheque	15,000
June 30	Deposited into bank the entire balance after retaining Rs. 5,000 cash in business.	

34. Pass Journal Entries to rectify the following errors: [6]
   (i)   Rs. 10,000 paid by cheque for a Printer was charged to the Office Expenses Account.
   (ii)   Goods costing Rs. 7,800 (selling price Rs. 10,000) given as charity, not recorded in the books.
   (iii) Gods sold to Ramesh for Rs. 1,000 and to Suresh for Rs. 1,800 recorded correctly in the sales book. However, Rs. 1,800 was posted to Ramesh and Rs. 1,000 was posted to Suresh.
   (iv)   A credit sale of Rs. 4,230 to Krishan recorded as credit purchase from Kishan.
   (v)   An amount of Rs. 500 due from Rupa which had been written off as bad in previous year was recovered and posted to the personal account of Rupa.
   (vi)   A cheque for Rs.5,000 received from Mohan was dishonoured and had been posted to the debit of sales returns account.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI
Time – 3 Hours

Subject – Mathematics (Applied)
Maximum Marks - 80

General Instructions:
1. This Question paper contains - **five sections A, B, C, D and E.** Each section is compulsory. However, there are internal choices in some questions.
2. **Section A** has 18 MCQ's and 02 Assertion-Reason based questions of 1 mark each.
3. **Section B** has 5 Very Short Answer (VSA)-type questions of 2 marks each.
4. **Section C** has 6 Short Answer (SA)-type questions of 3 marks each.
5. **Section D** has 4 Long Answer (LA)-type questions of 5 marks each.
6. **Section E** has 3 source based/case based/passage based/integrated units of assessment (4 marks each) with sub parts.

SECTION-A (1X20=20 Marks)

1. The decimal number of the binary number $(100010001)_2$ is
   (a) 273
   (b) 283
   (c) 263
   (d) 333

2. If $\log_{0.5} 64 = x$, then the value of x is
   (a) -4
   (b) -6
   (c) 4
   (d) 6

3. The average of 100 numbers is 50. If one of the number which was 50 is replaced by 150, the new average will be
   (a) 50.5
   (b) 51
   (c) 51.5
   (d) 52

4. What was the day on 15th August 1947?
   (a) Friday
   (b) Saturday
   (c) Sunday
   (d) Monday

5. If a sphere and a cube have equal surface areas, then the ratio of the diameter of the sphere to the edge of the circle is
   (a) 1:2
   (b) 2:1
   (c) $\sqrt{\pi}:\sqrt{6}$
   (d) $\sqrt{6}:\sqrt{\pi}$

6. Let a,b,c be in A.P. If p is the A.M. between a & b and q is the A.M. between b & c, then b is equal to
   (a) $\frac{p+q}{2}$
   (b) $\frac{p-q}{2}$
   (c) $\frac{q-p}{2}$
   (d) $\frac{pq}{2}$

7. The sum of an infinite G.P. 10, -8, 6.4, ------------- is
   (a) $\frac{50}{9}$
   (b) $\frac{48}{9}$
   (c) $\frac{42}{9}$
   (d) $\frac{40}{9}$

8. In a certain language, if "DPT" is coded as "EQU" then how will "TRY" be coded?
   (a) SQX
   (b) SUZ
   (c) USZ
   (d) QSX

1

9. Let A be a finite set containing 3 elements, then the number of functions from A to A is
   (a) 512 (b) 511 (c) 27 (d) 26

10. $Lt_{x \to a} \frac{x^9 - a^9}{x-a} = Lt_{x \to 5} (x+4)$ then all possible value of a are
    (a) 2,3 (b) −2,2 (c) −3,3 (d) −1,1

11. If $x > 0$, then the derivative of $\log_{10} x$ is
    (a) $\frac{1}{x \log 10}$ (b) $x \log 10$ (c) $\frac{\log 10}{x}$ (d) $\frac{x}{\log 10}$

12. If $P(A) = \frac{3}{10}$, $P(B) = \frac{2}{5}$ and $P(A \cup B) = \frac{3}{5}$, then $P\left(\frac{B}{A}\right) + P\left(\frac{A}{B}\right) =$
    (a) $\frac{1}{4}$ (b) $\frac{1}{3}$ (c) $\frac{5}{12}$ (d) $\frac{7}{12}$

13. A set of n variates $x_1, x_2, ---- x_n$ has mean $\bar{x}$ and standard deviation σ. The mean and standard deviaton of n values $\frac{x_1}{K}, \frac{x_2}{K}, \ldots, \frac{x_n}{K}$ ($k \neq 0$) respectively are
    (a) $k\bar{x}, \frac{\sigma}{k}$ (b) $\frac{\bar{x}}{k}, \frac{\sigma}{k}$ (c) $k\bar{x}, k\sigma$ (d) $\frac{\bar{x}}{k}, k\sigma$.

14. At what rate percent per annum will a sum of Rs.12000 become Rs.13230 in 2 years?
    (a) 5.5% (b) 6% (c) 5% (d) 6.5%

15. IGST goes to which government?
    (a) State (b) Foreign (c) Central (d) Local

16. Billing pattern of gas bill, gas consumption is measured in
    (a) SCM (b) CCM (c) CMS (d) SMC

17. If the line $\frac{x}{a} + \frac{y}{b} = 1$ passes through the points (2,−3) and (4,−5) then (a,b) is
    (a) (1,1) (b) (−1,1) (c) (1, −1) (d) (−1, −1)

18. The equation of a circle with origin as centre and passing through the vertices of an equilateral triangle where median is of length 3a is
    (a) $x^2 + y^2 = 4a^2$
    (b) $x^2 + y^2 = 9a^2$
    (c) $x^2 + y^2 = 16a^2$
    (d) $x^2 + y^2 = a^2$

ASSERTION – REASONING TYPE QUESTIONS

Statement I is called Assertion (A) and Statement II is called Reason (R). Read the given statements carefully and choose the correct answer from the options given below:
a) Both the Statements are true and Statement II is the correct explanation of Statement I.
b) Both the Statements are true and Statement II is not the correct explanation of Statement I.
c) Statement I is true , Statement II is false.
d) Statement I is false ,Statement II is true.

19. Let A and B be two finite sets.
    Statement I: n $(A \cup B) = n(A - B) + n(B - A) + n(A \cap B)$
    Statement II: n $(A \cup B) = n(A) + n(B) + n(A \cap B)$

20. **Statement I:** If $n_{c_2} : n_{c_4} = 2:5$ then n = 8
    Statement II: $n_{c_r} = \frac{n!}{(n-r)!}, 1 \leq r \leq n, r, n \in N$

SECTION B (2 X 5 =10 Marks)

21. If abc = 1, show that
$$\frac{1}{1+a+b^{-1}} + \frac{1}{1+b+c^{-1}} + \frac{1}{1+c+a^{-1}} = 1$$

22. A and B together can build a wall in 30 days. If A is twice as good a workman as B, in how many days will A alone finish the work?

OR

Two trains 110 m and 90 m long are running in opposite directions at 40 km/hr and 50 km/hr respectively. In what time will they cross each other completely from the moment they meet?

23. A rope by which a mare is tied at a centre of the circular field is decreased from 23 m to 11 m. Find the percentage decrease in area grazed, due to decreased length of rope.

OR

From a point in the interior of an equilateral triangle, perpendiculars are drawn on the three sides. If the lengths of the perpendiculars are 14 cm., 10 cm. and 6 cm., find the area of the triangle.

24. Find the domain and range of the function: $f(x) = \sqrt{x^2 - 4}$.

25. Two student Anil and Ashima appeared in an examination. The probability that Anil will qualify the examination is 0.05 and that Ashima will qualify is 0.10. The probability that both will qualify is 0.02. Find the probability that
(i) both Anil and Ashima will not qualify the exam.
(ii) only one of them will qualify the exam.

SECTION -C (3 X 6 = 18 Marks)

26. In a certain town 25% of the families own a phone, 15% own a car and 65% families own neither a phone nor a car. 2000 families own both a car and a phone. Find how much percentage of families own either a car or a phone. Also, find how many families live in the town?

27. Evaluate the limit: $\underset{x \to a}{\text{Lt.}} \dfrac{\sqrt{a+2x}-\sqrt{3x}}{\sqrt{3a+x}-2\sqrt{x}}$

OR

If the function $f(x) = \begin{cases} 3ax + b, & x > 1 \\ 11, & x = 1 \\ 5ax - 2b, & x < 1 \end{cases}$ is continuous at $x = 1$, find the values of a & b.

28. If $y = \left(x + \sqrt{x^2 - 1}\right)^m$, prove that $(x^2 - 1)\left(\frac{dy}{dx}\right)^2 = m^2 y^2$.

OR

Find the derivative of the function
$$y = \log\left[\frac{\sqrt{x+1} + \sqrt{x-1}}{\sqrt{x+1} - \sqrt{x-1}}\right]$$

3

29. The mean and variance of 7 observations are 8 and 16 respectively. If five of the observations are 2,4,10,12 and 14, find the remaining two observations.

OR

Calculate the karl pearson's coefficient of skewness for the following data: -

x_i	92	93	97	98	102	104	109
f_i	3	2	3	2	6	3	3

30. Two lines passing through the point (2,3) intersect each other at an angle of 60^0. If the slope of one line is 2, find the equation of the other line.

31. Find the equation of the circle circumscribing the triangle formed by the straight lines $x + y = 6$, $2x + y = 4$ and $x + 2y = 5$

OR

The cable of a uniformly loaded bridge hangs in the form of a parabola. The roadway which is horizontal and 100 m long is supported by vertical wires attached to the cable, the longest wire being 30 m and the shortest being 6 m. Find the length of the supporting wire attached to the roadway 18 m from the middle.

SECTION -D (5 x 4 = 20 Marks)

32. The sum of three numbers in G.P. is 56. If we subtract 1,7,21 from these number in that order, we obtain an A.P. Find the numbers.

OR

If S be the sum, P the product and R the sum of reciprocals of n terms of a G.P., prove that $P^2R^n = S^n$.

33. A card from a pack of 50 cards is lost. From the remaining cards of the pack, two cards are drawn and are found to be both clubs. Find the probability of the lost card being a club.

34. A man borrowed a sum of money and agrees to pay off by paying Rs. 3150 at the end of the first year and Rs.4410 at the end of the second year. If the rate of compound interest is 5% per annum, find the sum borrowed.

35. A shopkeeper buys an article whose list price is Rs.4500 at some rate of discount from the wholesaler. He sells the article to a consumer at the list price and charges GST at the rate of 12%. If the sales are intra – state and the shopkeeper has to pay tax (under GST) of Rs.27, to the state Government, find the rate of discount at which he bought the article from the wholesaler.

OR

Mr. ABC has reading of electric meter of his house is found to be 5504 units. If the previous months reading was 4629 units and connection load is 4kw, calculate his electricity bill for that month .

Tariff plan is given below:-

Energy charges:-

Number of units	0-150	151-300	301-500	>500
Price per unit (in Rs.)	5.5	6.0	6.5	7.0

Fixed charges Rs. 110 per kw/month

Energy tax is 5% of tariff rates.

Surcharge is Rs.0.26 per unit.

36. Six person P,Q,R,S,T and U are sitting in a circle with their faces towards the centre. S is on the immediate left of T, P is on the immediate left S and U is immediate neighbour of T,R is sitting second to the right of U.

    (i) Write the seating arrangement.   [2]

    (ii) Name the immediate neighbours of Q.   [1]

    (iii) Who is between S and R?   [1]

37. A well is an excavation or structure created in the ground by digging, driving or drilling to access liquid resources usually water. The oldest and most common kind of well is a water well . A well of diameter 4m and depth 14 m is digged out.
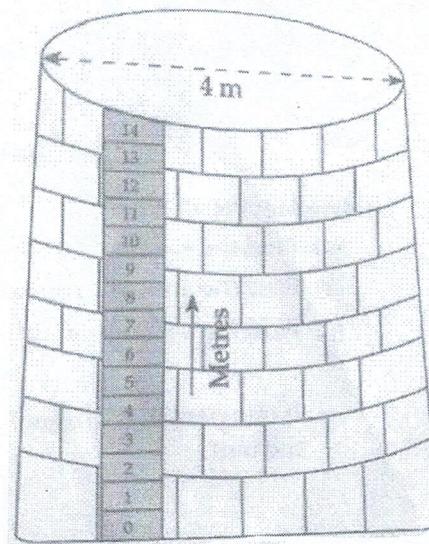
Based on the above information, answer the following questions: -

(i)   If the earth taken out is used to build a rectangular platform 11 m long and 8 m wide. what will be the height of the platform.   [2]

                              OR

        If the earth taken out is spread evenly all around the well in the shape of a circular ring of width 4 m to form an embankment , what will be the height of the embankment?   [2]

(ii)   Find the cost of painting the embankment at the rate of Rs.10 per square metre.   [1]

(iii)   Find the cost of cementing the inner curved surface of the well at the rate of Rs.12 per sq.m.   [1]

38. A group consist of 7 boys and 4 girls. In how many ways can a team of 5 members be selected if the team has

    (i) no boys?   [1]

    (ii) no girls?   [1]

    (iii) at least one boys and one girl?   [2]

                              OR

    at least 3 girls?   [2]

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI
Time – 3 Hours

Subject – Biology
Maximum Marks- 70

INSTRUCTIONS:
- All questions are compulsory.
- The question paper has five sections and 33 questions. All questions are compulsory.
- Section–A has 16 questions of 1 mark each; Section–B has 5 questions of 2 marks each; Section–C has 7 questions of 3 marks each; Section– D has 2 case-based questions of 4 marks each; and Section–E has 3 questions of 5 marks each.
- There is no overall choice. However, internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.
- Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION- A

1. Respiratory process is regulated by certain specialized centers in the brain. One of the following centres can reduce the inspiratory duration upon stimulation:
   (a) Medullary inspiratory centre
   (b) Pneumotaxic centre
   (c) Apneustic centre
   (d) Chemosensitive centre

2. Which of the following suffixes used for units of classification in plants indicates a taxonomic category of family?   1
   (a) Ales
   (b) Onae
   (c) Aceae
   (d) Ae

3. Identify the different types of placentations shown in figure and select the correct option: 1
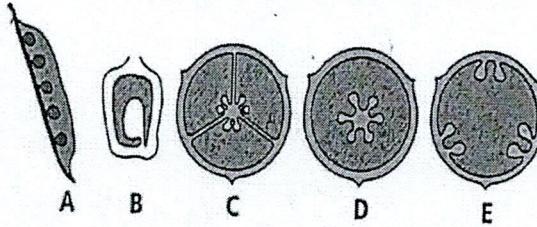
A	B	C	D	E
a- Axile.	Marginal.	Free central.	Parietal.	Basal
b- Marginal	Basal.	Axile.	Free central	Parietal
c- Marginal	Axile	Parietal	Free Central	Basal
d-Marginal	Parietal	Axile	Basal	Free –central

4. Arrangement of microtubule in a flagellum and a centriole is respectively   1
   (a) 9+2 and 9+1
   (b) 9+0 and 9+2
   (c) 9+1 and 9+0
   (d) 9+2 and 9+0

1

5. Consider the following statements and choose the correct ones. 1
   I. A damaged cell exits G_2 stage and enters G_0 stage or quiescent stage.
   II. Cells in G_0 stage do not divide, but are metabolically active.
   III. In male honeybees, haploid cells divide by mitosis.
   IV. The plants can show mitotic division in the diploid cells only.
   Choose the correct answer from the options given below.
   (a) I and IV   (b) II and III   (c) I and III   (d) II and IV

6. Enzyme catalyze the biochemical reactions by...............the activation energy: 1
   (a) Lowering   (b) Increasing   (c) Unaltering   (d) Either a or b

7. Adenosine, guanosine, thymidine, uridine, cytidine, are all .... but adenylic 1
   acid, uridylic acid, Cytidylic acid are.....................
   (a) Nucleotides, nucleosides   (b) Nucleosides, nucleotides
   (c) Nucleotides, nucleic acids   (d) Nucleosides, nucleic acids

8. How many mitotic divisions are required to produce 128 cells from a single cell? 1
   (a) 7   (b) 14   (c) 64   (d) 32

9. Identify the step in tricarboxylic acid cycle, which does not involve oxidation of substrate. 1
   (a) Malic acid → Oxalo acetic acid
   (b) Succinic acid→Malic acid
   (c) Succinyl Co-A→ Succinic acid
   (d) Isocitrate→ α ketoglutaric acid

10. Match the column I with column II and select the correct answer by choosing an 1
    appropriate option.

Column I (Disorder)	Column II (Causes)
P. Glycosuria	1. Excessive amount of urea in blood
Q. Renal calculi	2. Inflammation of glomeruli
R. Glomerulonephritis	3. Mass of crystallised salts formed within the kidney
S. Uremia	4. Presence of glucose in urine

   (a) P-4, Q-3, R-1, S-2
   (b) P-4, Q-1, R-3, S-2
   (c) P-4, Q-3, R-2, S-1
   (d) P-2, Q-3, R-4, S-1

11. Select the mismatched pair: 1
    (a) Insulin- gluconeogenesis
    (b) Glucagon- glycogenolysis
    (c) Oxytocin- contraction of uterine muscles
    (d) Prolactin- milk production in mammary glands

12. Which of the following structure is found in diencephalon? 1
    (a) Pons   (b) Basal ganglia
    (c) Corpora quadrigemina   (d) Hypothalamus

Question no. 13 to 16 consist of two statements – Assertion (A) and Reason (R) . Answer these questions by selecting the appropriate option given below:
(a) Both A and B are true, and R is the correct explanation of A
(b) Both A and R are true, and R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

2

13. **Assertion (A):** Cell wall of *Chrysophytes* are indestructible.   1
    Reason (R): Cell wall of *Chrysophytes* have layer of magnesium pectate embedded in it.

14. **Assertion (A):** Small disc shaped structures at the surface of the centromeres are called   1
    kinetochores.
    Reason (R): Kinetochores serve as the sites of attachment of spindle fibers to the
    centromere.

15. **Assertion (A):** Decapitation is widely used in tea plantation and hedge making.   1
    Reason(R): Removal of shoot tips usually results in the growth of lateral buds.

16. **Assertion (A):** Sino- atrial node (SAN) is called the pacemaker.   1
    Reason(R): SAN generates the maximum number of action potentials and is responsible
    for initiating and maintaining the rhythmic contractions of the heart.

SECTION-B

17. **Attempt either option A or B**   2
    (A) In classification of animals cats and dogs are kept in separate families. Name family
    and genus of following animals:
    (i) Cats   (ii) Dogs

    OR

    (B) (i) What is the scope of systematics as of today?
    (ii) What forms the basis of modern taxonomy?

18. **Attempt either option A or B**
    (A)   2
    (i) Differentiate between pedicel and peduncle.
    (ii) Mango and coconut are drupe type of fruits. In mango, the fleshy mesocarp is edible. What
    is the edible part of coconut? What does milk of tender coconut represent?
    OR
    (B)
    (i) Sunflower is not flower. Explain.
    (ii) The scutellum observed in a grain of wheat or maize is comparable to which part of seed in
    other monocots

19. The genomic content of the nucleus is constant for a given species whereas, the   2
    extrachromosomal DNA is found to be variable among the members of a population.
    Explain.

20. Suppose *Euphorbia* and maize are grown in tropical area.   2
    (i) Which one of them do you think will be able to survive under such conditions?
    (ii) Which one of them is more efficient in terms of photosynthetic activity?
    (iii) What differences do you think are there in their leaf anatomy?

21. **Attempt either option A or B**   2
    (A)
    (i) Explain the different segments in a standard ECG.
    (ii) With the help of ECG, how can you determine the heartbeat of an individual?

    OR

    (B)
    (i) Due to developmental abnormality, the wall of the left ventricle of an infant's heart is as thin as
    that of the right ventricle. What would be its specific effect in circulation of blood?
   (ii) What physiological circumstances lead to erythroblastosis fetalis?

3

22. Name the phylum having largest number of animals. Name the major category of animals   3
it has. Write any two special morphological features of this phylum.

23. Write the name of plant growth regulator for the following: 3
(a) Bolt a rosette plant
(b) Quickly ripen a fruit
(c) Induce rooting in a twig

24. Study the floral formula given below and answer the questions that follow: 3

$$\oplus \, \male\female \, K_{(5)} \, \widehat{C_{(5)} \, A_5} \, \underline{G}_{(2)}$$

(a) Whether the flower is actinomorphic or zygomorphic
(b) What are the number of petals and pistil in the flower?
(c) What kind of relationship is shown between petals and stamens?

25. Recognize the figure of the given pteridophyte and answer the questions that follows: 3
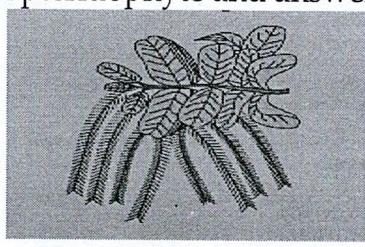
(i) Identify the pteridophyte and name the kind of spores formed in them.
(ii) Name the leaf like appendages in the sporophyte of this plant that bear sporangia.
(iii) Heterosporous pteridophyte shows characteristics that are considered as precursor to
seed habit. Comment

26. Succinic Dehydrogenase is an enzyme that causes the substrate, Succinate, to breakdown   3
into Fumarate .
Malonate is a substance that resembles Succinate and inhibits the activity of Succinic
Dehydrogenase
Study the above passage and answer the following questions.
(i) State the type of inhibition of Succinic Dehydrogenase by Malonate.
(ii) Explain how this type of inhibition affects the activity of the enzyme.

27. Explain oxygen dissociation curve. Write any reason for its sigmoidal pattern.   3

28. Give a brief account of the counter current mechanism in nephron.   3

SECTION-D

29. Study the equation given below and answer the following questions: 4
Pyruvic acid+CoA+NAD$^+$ $\xrightarrow[\text{(A)}]{Mg^{2+}}$ AcetylCoA+CO$_2$+NADH+H$^+$

(a) Name the type of reaction and where does it take place?   (1)
(b) Calculate the total gain of ATP molecules in aerobic respiration.   (2)
    Attempt either subpart (c) or (d)
(c) Why this process does not take place in the cytoplasm of eukaryotes?   (1)
                OR
(d) Name the enzyme (A) involved in the reaction. What is the fate of Acetyl-coA
    formed?   (1)

30. Frogs can live both on land and in freshwater and belong to class Amphibia of phylum   4

4

Chordata. The most common species of frog found in India is *Ranatigrina*. Frog is poikilotherm, so cannot withstand very cold weather and high temperature. They use camouflage and mimicry to mask the identity, location and movement. Frogs have two transparent eyelids and thumb pads on the first digit of the forelimbs. They exhibit sexual dimorphism. The skin of frog is smooth and slippery.

Answer the following questions: -

(a) What are the reasons that makes frog suitable in both land and water? (1)

(b) What is meant by sexual dimorphism? How do frogs exhibit sexual dimorphism? (2)

Attempt either subpart (c) or (d)

(c) As we know frogs are poikilothermic animals. What are the adaptations that frogs have to maintain its body temperature? (1)

OR

(d) What is meant by camouflage? (1)

SECTION-E

31. **Attempt either option (A) or (B)** 5

(A)

(i) Write any two differences between *Phycomycetes* and *Ascomycetes*.

(ii) Bacteria are species with both harm and benefits. Comment.

(iii) Polluted water bodies have usually high abundance of *Nostoc* and *Oscillatoria*. Give reasons

OR

(B)

(i) Give a comparative account of the nature of cell wall and the characteristic of flagella among three classes of algae.

(ii) Differentiate between *Thallophytes* and *Bryophytes*.

32. **Attempt either option (A) or (B)** 5

(A)

Explain various stages of Meiosis-I with the help of well labelled diagram.

OR

(B)

(i) Both lysosomes and vacuoles are membranous structures, yet they differ in terms of their functions. Explain

(ii) Draw the diagram of cilia and flagella. Discuss its ultrastructure.

33. **Attempt either option (A) or (B)** 5

(A)

(i) In old age people suffer from stiffness and inflammation in joints. What is this condition called? What is the cause of osteoporosis?

(ii) Explain the sliding filament theory of the mechanism of muscle contraction.

OR

(B)

(i) Give a diagrammatic representation of the mechanism of action of protein hormone (eg. FSH) action

(ii) Illustrate the differences between the mechanism of action of a protein and a steroid hormone.

5

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI   Subject – Business Studies
Time – 3 Hours   Maximum Marks - 80

General Instructions:-
- This question paper contains 34 questions.
- Marks are indicated against each question.
- Answers should be brief and to the point.
- Answers to the questions carrying 3 marks may be from 50 to 75 words.
- Answers to the questions carrying 4 marks may be about 150 words.
- Answers to the questions carrying 6 marks may be about 200 words.

1. Parishram Ltd. has started a venture in partnership with the state government. The purpose of this venture is to provide digital education to the underprivileged children. The state government's contribution is in the form of capital for investment and transfer of assets that support partnership and this educational program.
   Identify the type of partnership.
   a. Secret partnership
   b. Public Private partnership
   c. Joint Venture
   d. None of the above   [1]

2. Bill of Lading is issued by
   a. Captain of the ship
   b. Shipping Company
   c. Export council
   d. Chamber of commerce   [1]

3. Preference shareholders get preference over equity shares for –
   a. Payment of dividend
   b. Voting
   c. Participation in management
   d. None of these   [1]

4. After paying the full compensation, the insurer stands in the place of insured. This is related to…….
   a. Principle of indemnity
   b. Principle of subrogation
   c. Principle of contribution
   d. Principle of good faith   [1]

5. When your brand gets legal protection and no one else is allowed to use it, it is called as………
   a. Copy right
   b. Patent
   c. Trademark
   d. Brand mark   [1]

1

6. GAIL is
   a. Departmental undertaking
   b. Pvt. Ltd company
   c. Public corporation
   d. Government company   [1]

7. A manufacturing enterprise having capital investment in plant and machinery up to
   Rs.5 crores is called as......
   a. Micro enterprise
   b. Small enterprise
   c. Medium enterprise
   d. Large enterprise   [1]

8. Maritime routes linked from East to West by sea and were used for trade of spices known as
   a. Silk route
   b. Spice route
   c. Sea route
   d. None of the above   [1]

9. A proposed name of companies considered and undesirable if....
   a. It is identical with the name of an existing company
   b. It resembles closely with the name of an existing company
   c. It is an emblem of Government of India, United Nations etc.
   d. In case of any of the above   [1]

10. ONGC is
    a. Departmental undertaking
    b. Statutory corporation
    c. Government company
    d. Public Ltd company   [1]

11. Which capital is used for buying current assets?
    a. Fixed capital
    b. Working capital
    c. Both a & b
    d. None of the above   [1]

12. _____ is process of setting up one's own business as distinct from pursuing any other
    economic activity.
    a. Entrepreneur
    b. Enterprise
    c. Entrepreneurship
    d. Business   [1]

13. Timber industry is what type of industry?
    a. Primary
    b. Secondary
    c. Tertiary
    d. Manufacturing   [1]

14. Under the start-up scheme Government of India offers:
    a. Easy registration
    b. Tax exemption
    c. No inspection
    d. All of the above   [1]

2

15. Provision of residential accommodation to the members at reasonable rates are the objective of...
    a. Producer's cooperative
    b. Consumer's cooperative
    c. Housing cooperative
    d. Credit cooperative   [1]

16. Which form of enterprise is "METRO"?
    a. Public Ltd company
    b. Private Ltd company
    c. Government company
    d. PPP   [1]

17. Hundi payable on expiry of a fixed period to any person is called
    a. Dhani Jog Muddati Hundi
    b. Firman Jog Muddati Hundi
    c. Sah Jog Hundi
    d. Jokhmi Muddati Hundi   [1]

18. Stages in the formation of a public company are in the following order...
    a. Promotion, Commencement of Business, Capital Subscription, Incorporation
    b. Incorporation, Capital Subscription, Commencement of Business, Promotion
    c. Promotion, Incorporation, Capital Subscription, Commencement of Business
    d. Capital Subscription, Promotion, Incorporation, Commencement of Business   [1]

19. A Government Company is any company in which the paid-up capital held by the government is not less than
    a. 49%
    b. 51%
    c. 50%
    d. 25%   [1]

20. Centralised control in MNCs implies control exercised by
    a. Branches
    b. Subsidiaries
    c. Headquarters
    d. Parliament   [1]

21. Harsh, Dinesh and Kunal were partners in a financing firm. Harsh and Kunal had gone for a meeting in London for analysing business prospects in that country. Meanwhile, Dinesh invested a huge amount in buying shares of a new company by borrowing money from Rajesh. This turned out to be a bad deal as the share prices soon fell. When Harsh and Kunal returned from London, they said they were not liable to pay Rajesh as they did not take the money. On the basis of the given information answer the following questions:-
    a. Were Harsh and Kunal correct in doing so?
    b. Under which aspect of partnership are they bound? Explain.   [3]

OR

'A', 'B', 'C', 'D' and 'E' are partners in a partnership firm. The firm has different types of partners.

Mr. 'A' has contributed capital and participates in the management of firm. He shares profits and losses and is liable to an unlimited extent to the creditors of firm.

3

Mr. 'B' has contributed capital and shares its profits and loses. He also has unlimited liability but he does not take part in day to day activities of business.

Association of Mr. 'C' with firm is unknown to general public but in all other respects he is like an active partner.

Mr. 'D' has allowed the firm to use his name as he enjoys good reputation among clients but he does not either contribute capital or take part in the management.

Master 'E', 15 years of age is entitled to the benefits of partnership with mutual consent of all other members. He is not eligible to take part in management of firm and shares only profits and not losses.

(a) Who is working as a secret partner and what is the nature of his liability?

(b) Who is working as a sleeping partner and what is the nature of his liability?

(c) Who is working as a nominal partner? Can he be held liable for the losses of the business? What is the nature of his liability?

22. Life Insurance Corporation of India is an autonomous corporate body. It has been established by the enactment of Company's Act, 1956. The Act prescribes its powers, duties and functions. Being a body corporate, it has separate legal entity perpetual succession and common seal. It can sue and be sued, can enter into contracts, acquire or hold property in its own name. It is wholly owned by government. It has an independent financial policy and can raise funds by borrowing from public and government. Moreover, LIC is not subject to any budgetary accounting and audit controls as applicable to other government departments however it is fully accountable to government. Its annual report is laid on the table of parliament every year.

a. Name & explain the statutory body which is being mentioned in the above case.

b. Mention and explain any two merits and demerits of the identified form of organisation. [3]

OR

Engineers India Ltd., being a government company provides engineering and related technical services for petroleum refineries and other industrial projects. Majority of the shares are held by the government. It was set up in the year 1965 and registered under the Companies Act, 1956 and thus possesses all characteristics of a company like separate legal entity, perpetual succession and a common seal. It can sue and be sued enter into contracts and acquire property in its own name. The board is appointed by the government and its shareholders and is responsible for its efficient management. The company prepares its annual report and submits it to the appropriate authorities.

a. Engineers India Ltd., established by enactment of an Act. Name that Act.

b. Engineers India Ltd. is a government company in which majority of shares are held by the government. What does 'majority of shares' stand for?

c. The government company prepares annual report and submits it to the appropriate authorities. In this sentence the term appropriate authorities refer to….?

23. Elite Tele Ltd., is a well known company in telecom sector. The company is committed to treat everyone fairly with respect and dignity regardless of difference in age, caste, creed, gender, etc. It not only abides by all the laws and pays taxes on time, but also provides service and participates in all the social service projects. It prefers to give fair advertisement without any exaggeration, and charges fairly from its customers and provides quality services. Its managers work effectively and efficiently and minimise wastes to maximise the return to their shares. The company is running a charitable hospital to provide medical facility to the people of that area. In the context of the above case…

By **quoting** the appropriate lines from the paragraph, identify any three different interest groups towards which company is fulfilling its social responsibilities.　　　　[3]

4

24. Sarthak is dealing in goods on a large scale. He buys the goods directly from the manufacturing industries in bulk and supplies the same to the shops in the local areas. He is not dealing with the customers directly. He even provides financial support to manufacturer by providing advances while placing order. Sarthak maintains huge quantity of stock, due to which he must maintain large amount of capital. On the basis of the given information, answer the following questions
    a. Which type of business Sarthak is engaged in? Explain briefly.
    b. Discuss any two services each, rendered by Sarthak to both the parties involved in the transaction.

    [3]

25. Post & Telegraph department is a part of government ministry. It is fully managed controlled and financed by the concerned ministry. The annual budget of the ministry makes provision for the funds needed by the department. The ministry is answerable to the Parliament for its functioning.
    a. Name the sector under which the Post and Telegraph department comes.
    b. Name and explain the kind of organization it is and also the concerned ministry.
    c. How is the kind of organization to which the department belongs is different from the other organization in the same sector? Give any 3 differences between all the organizations in the sector.

    [4]

26. "Insurance is a social device meant to protect the insured as per certain set of principles which define their rules of action."

    In the light of the above statement given, explain the following principles of insurance with suitable examples:
    a. Proximate Cause
    b. Insurable Interest
    c. Subrogation
    d. Contribution

    [4]

OR

Mr. Nandlal is the owner of Star Constructions. He has invested huge capital resources in the real estate business. For the expansion of the business, he has entered into agreements with foreign company for collaboration. He has insured his office building against fire for Rs.25,00,000. Portion of it got burnt. It was estimated that an expenditure of Rs.10,00,000 would restore the building to its original condition. Mr. Nandlal made a claim of Rs.25,00,000 from the insurance company. The insurance company accepted the claim to the extent of Rs.10,00,000. Mr Nandlal was not allowed to make any profit on the happening of the event.
    a. Which principle of insurance is being referred above?
    b. What does the principle of insurance identified in question (a), state?
    c. Why did insurance company not accept Mr. Nandlal's claim in full?
    d. What was Mr. Nandlal trying to do?

27. Identify, the sources of finance in the following cases and also state one feature for each of the identified source:-
    a. It is a permanent source of capital.
    b. It facilitates purchase of goods without making immediate payment.
    c. This source puts permanent obligation on the company to pay interest irrespective of profits.
    d. Shareholders do not enjoy voting rights though they have the status of owners.

    [4]

28. Harmeet Singh owns a large-scale retail outlet in Chandigarh. He deals with various kinds of products in his shop like textiles, footwear, cosmetics, stationery, grocery etc. He sells them in different divisions in his big shop.

In the context of the above case:

a. Identify and explain the type of retail outlet being described in the above lines.

b. State and explain any two distinct features of that outlet. [4]

OR

PQR Ltd., is a well-known company dealing with all kinds of organic products. The company sells its products through a chain of outlets located in well populated area, which is in the vicinity of residential areas for the convenience of customers across the country. The company sells its products at uniform price at all its outlets and follow the same interior and exterior look of the outlets.

a. Identify & explain briefly the type of retail outlet being described in the above lines.

b. Explain any two features of the mentioned outlet.

29. India, known as the home of spices, boasts along history of trading with the ancient civilization of Rome & China. Today Indian spices are the most sought after globally, given their exquisite aroma, texture, taste and medicinal value. The top spices produced in the country include pepper, cardamom, chilli, ginger, turmeric, coriander, cumin, celery, fennel, garlic, tamarind, clove and nutmeg among others.

Major importers of Indian spices are USA, China, Vietnam, UAE, Indonesia, Malaysia, UK, Sri Lanka, Saudi Arabia and Germany.

On the basis of the aforesaid information about spices answer the following questions: -

a. Enumerate and explain any two benefits available to the Indian business firms who are engaged in spice export.

b. Explain any two points as to how do the different nations engaged in trade of spices stand to gain? [4]

30. Explain the following terms related to the international business:-

With reference to Import Procedure:-

a. Obtaining foreign exchange

b. Obtaining letter of credit

With reference to Export Procedure:-

c. Obtaining export licence

d. Obtaining pre shipment finance [4]

31. Pankaj is a sole proprietor. Over the past years his business has grown from operating from a neighbourhood corner shop to retail chain with five branches in the country. Although he looks after the varied functions in all branches, he is wondering whether he should form a company to better manage the business plan to open branches in all the states of the country.

a. Explain two benefits of remaining a sole proprietor.

b. Explain two benefits of converting it, to a joint stock company.

c. What should he do to convert his company to be at the national level?

d. Very briefly explain the legal formalities which are required to operate business as a company. [6]

32. There are two types of funds on the basis of ownership. Distinguish between them on the basis of......
    a. Meaning
    b. Time period
    c. Returns
    d. Participation in the management
    e. Risk factor   [6]

<div align="center">**OR**</div>

Write short notes on the following with reference to sources of business finance:-
    a. Loans from financial institutions
    b. Intercorporate deposits
    c. Public deposits

33. Mention and explain in detail about any six funding options for startups to help raise capital for their ventures.   [6]

34. Mention and explain with suitable examples about the most common types of itinerant retailers operating in India.   [6]

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI   **Subject – Chemistry**
Time –3 Hours   **Maximum Marks- 70**

General Instructions:

(i)   This Question Paper contains 33 questions. All questions are compulsory.
(ii)   Question paper is divided into FIVE sections – Section A, B, C, D and E.
(iii) Section A – question number 01 to 16, are multiple choice type questions. Each question carries 01 mark.
(iv)   Section B – question number 17 to 21, is very short answer type questions. Each question carries 02 marks.
(v)   Section C – question number 22 to 28, is short answer type questions. Each question carries 03 marks.
(vi)   Section D – question number 29 and 30, are case-based questions. Each question carries 04 marks.
(vii) Section E – question number 31 to 33, is long answer type questions. Each question carries 05 marks.
(viii) There is no overall choice given in the question paper. However, an internal choice has been provided in few questions in all the sections except Section – A.
(ix)   Use of calculator is NOT allowed.

SECTION: A

1. 200 mL of water is added to 500 mL of 0.2 M solution. What is the molarity of the diluted solution ?
   (a) 0.5010 M
   (b) 0.2897 M
   (c) 0.7093 M
   (d) 0.1428 M

2. The electronic configuration of an atom/ion can be defined by:
   (a) Aufbau principle
   (b) Hund's rule
   (c) Pauli's Exclusion principle
   (d) All the above.

3. Which of the compounds with molecular formula C_5H_{10} yields acetone on ozonolysis
   (a) 2 – Methyl – 1 – butene
   (b) 2 – Methyl – 2 – butene
   (c) 3 – Methyl – 1 – butene
   (d) Cyclopentane

4. Which of the following contains maximum number of unpaired electrons ?
   (a) Fe^{2+} (b) Co^{3+} (c) Co^{2+} (d) Fe^{3+}

1

5. According to the periodic law of elements, the variation in properties of elements is related to their
   (a) atomic numbers
   (b) nuclear neutron-proton number ratios
   (c) atomic masses
   (d) nuclear masses.

6. The alkene that will give the same product with HBr in the absence as well as in the presence of peroxides is
   (a) 2-Butene
   (b) 1-Butene
   (c) Propene
   (d) 1-Hexane

7. The bond between Boron and Carbon will be
   (a) Ionic
   (b) Covalent
   (c) Hydrogen
   (d) Co-ordinate

8. A thermodynamic state function is a quantity
   (a) used to determine heat changes
   (b) whose value is independent of path
   (c) used to determine pressure volume work.
   (d) whose value depends on temperature only.

9. In the redox reaction,
   $MnO_4^- + 8\,H^+ + 5\,Br^- \rightarrow Mn^{2+} + 4\,H_2O + 5/2\,Br_2$
   Which one is the reducing agent?
   (a) H^+
   (b) MnO_4^-
   (c) Br^-
   (d) Mn^{2+}

10. Identify disproportionation reaction
    (a) $CH_4 + 2\,O_2 \rightarrow CO_2 + 2H_2O$
    (b) $CH_4 + 4\,Cl_2 \rightarrow CCl_4 + 4\,HCI$
    (c) $2\,F_2 + 2\,OH^- \rightarrow 2\,F^- + OF_2 + H_2O$
    (d) $2\,NO_2 + 2\,OH^- \rightarrow NO_2^- + NO_3^- + H_2O$

11. The product formed by heating sodium propionate with sodalime is :
    (a) Acetone
    (b) Propyl amine
    (c) Ethane
    (d) Acetaldehyde

12. Alkyl halides have higher boiling points than alkanes (having same number of carbon atoms) because of:
    (a) Dipole-dipole interactions.
    (b) Decreased surface area.
    (c) Packing of molecules.
    (d) All of these.

In the following questions, a statement of assertion (A) followed by a statement of reason (R) is given.
Choose the correct option out of the choices given below :
(a) Both A and R are correct and R is the correct explanation of A.
(b) Both A and R are correct but R is not the correct explanation of A
(c) Both A and R are not correct.
(d) A is correct but R is not correct.

13. **Assertion (A):** Among isomeric Pentanes 2, 2-dimethylpentane has the highest boiling point.
    Reason (R): Branching does not affect the boiling point.

14. **Assertion (A):** Ionisation enthalpy decreases on moving down the group.
    Reason (R): Force of attraction between nucleus and electrons decreases on moving down the group.

15. **Assertion (A):** Among halogens fluorine is the best oxidant.
    Reason (R): Fluorine is the most electronegative atom.

16. Assertion **(A):** Number of radial and angular nodes for 3p-orbitals are 1,1 respectively.
    Reason **(R):** Number of radial and angular nodes depend upon the principal quantum number alone.

SECTION: B

17. Define atomicity with the help of an example.

18. Neon gas is generally used in sign boards. If it emits strongly at 616nm, when
    $h = 6.626 \times 10^{-34}$ Js Calculate:
    (a) frequency of emission
    (b) energy of quantum.

19. (a) What will happen to the internal energy if work is done by the system ?
    (b) Change in internal energy is a state function while work is not, why?
    OR
    (a) State the thermodynamic conditions for the process to occur spontaneously in terms of ΔG & ΔH.
    (b) What is the difference between an isothermal and an adiabatic process?

20. Assign oxidation number to the underlined elements in each of the following species:
    (a) $H_4\underline{P}_2O_7$
    (b) $H_2\underline{S}_2O_7$

21. Draw the cis and trans structure of Hex – 2 – ene. Which isomer will have higher boiling point and why.

3

22. (a) How much copper can be obtained from 100 g of copper sulphate ($CuSO_4$) ?
    (Given is the atomic mass of Cu =63.5,S=32 O=16).
   (b) Identify the limiting reactant if any in the following reaction mixtures ?
    $A + B_2 \rightarrow AB_2$
    300 atoms of A +200 molecules of B_2
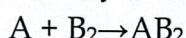
23. Define Quantum numbers and explain it type.
<center>**OR**</center>
    Define (n+1) rule. Write the electronics configuration of Fe^{3+} and Cr

24. (i) Why is Δ_iH_2 value of an element more than its Δ_iH_1 value ?
    (ii) The element 119 has not been discovered. What would be the 1UPAC name of and the symbol for this element ?
    (iii) Why is fluorine (F_2) more reactive than chlorine(Cl_2) ?

25. Using VSEPR theory draw the shapes of PCl_5, BrF_5 and ClF_3 .

26. 3.00 mol of PCl_5 kept in 1 L closed reaction vessel was allowed to attain equilibrium at 380 K. Calculate the composition of the mixture at equilibrium. Kc = 1. 80 for the reaction
    $PCl_5 \rightleftharpoons PCl_3(g) + Cl_2(g)$
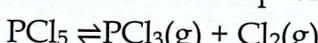
27. (a) Write the balanced net ionic equation for the reaction of potassium dichromate (VI)with sodium sulphite in acid solution to give chromium (III) ion and sulphate ion.
    $Cr_2O_7^{2-}$ (aq) + SO_3^{2-}(aq) $\rightarrow$ Cr^{3+}(aq) + SO_4^{2-}(aq)
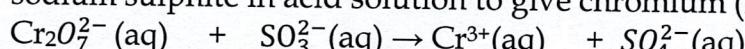
   (b) Permanganate ion reacts with bromide ion to basic medium to give manganese dioxide and bromate ion. Write the balanced chemical equation for the reaction.

    MnO_4^- (aq) + Br^- (aq) $\rightarrow$ MnO_2(s) + BrO_3^- (aq)
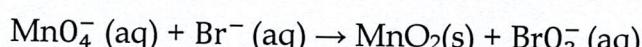
28. Draw the resonance structures for Phenol and Nitrobenzene. Show the electron shift using curved-arrow notation.

<center>**SECTION: D**</center>

29. **Read the following passage given below and answer the following questions:** [2+1+1]

    The concept of hybridization was introduced by Pauling to explain the geometrical shapes of polyatomic molecules. According to him unlike pure orbitals hybrid orbitals are involved in bond formation. Mixing of atomic orbitals belonging to the same atoms having slightly different energies to produce a set of hybrid orbitals having equivalent energies is called hybridization. The type of hybridization depends on the number and nature of orbitals involved in hybridization.
    (a) Show the orbital overlap diagram for ethene molecule.
    (b) What is the hybridization of each carbon in CH_3CHO.
    (c) Predict the shape and hybridization of S in SF_4.
<center>**OR**</center>
    Predict the shape and hybridization of Xe in XeF_2.

<center>4</center>

30. Read the following passage given below and answer the following questions: **[2+1+1]**

The free rotation about C-C bond results into different spatial arrangements of atoms in space which can change into one another by rotation around a C-C single bond These spatial arrangements are called conformers or rotamers. However the rotation around a C-C single bond is not completely free. It is hindered by a small energy barrier of 1-20 kJ/mole due to weak repulsive interaction between the adjacent bonds. Such type of repulsive interaction is called torsional strain.

(a) Compare the extent of stability of eclipse and staggered form and give reason.

(b) How conformational isomers are obtained.

(c) Rotation by what angle is required for inter conversion of staggered and eclipsed form?

OR

Draw Newmann projections for ethane.

SECTION: E

31. (a) Calculate the enthalpy of formation of C_6H_6 (l) given that the enthalpy of combustion of benzene -3267.7 kj and the enthalpies of formation of $CO_2(g)$ and $H_2O(l)$ are-393.3 kj and -286.6kj respectively .

(b) State and explain first law of thermodynamics. Write its mathematical formula. **[3+2]**

OR

(a) The reaction of cyanamide with oxygen was affected in a bomb calorimeter and ΔU was found to be - 742 . 7kJ/mol of cyanamide at 298 K. Calculate the enthalpy change for the reaction at 298K.

$NH_2 CN(s)+3/2O_2 (g) \rightarrow N_2(g) + CO_2(g) + H_2O(l)$
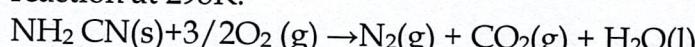
(b) Define Hess's law with example.

32. (a) The species HCO_3^- and NH_3 can act both as Bronsted acid and base.For each case, give the corresponding conjugate acid and base.

(b) BF_3 does not have proton but still acts as an acid and reacts with NH_3 Why is it so ?

(c) How can you predict the following stages of a reaction by comparing the value of Kc and Qc ?

(i) Net reaction proceeds in the forward direction .

(ii) Net reaction proceeds in the backward direction. **[2+1+2]**

OR

(a) Classify the following species into Lewis acids and Lewis bases and show how these can act as Lewis acid/Lewis base

(1) OH^- ions

(2) BCl_3

(b) Define ionic product of water.

(c) Differentiate between solubility product and ionic product.

33. (a) Wurtz reaction is a good method for the preparation of alkane containing even number of carbon atoms but not for alkanes containing odd number of carbonatoms. Comment with the help of an example.

(b) Discuss briefly the mechanism of Friedel Craft Alkylation by electrophilic substitution reactions in benzene.

(c) Convert ethanoic acid to methane **[2+2+1]**

OR

(a) What are the three necessary conditions for any system to be aromatic ? **[3+1+1]**

(b) What effect does branching of an alkane chain has on its boiling point ?

(c) How will you convert ethyne into benzene ?

5

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI
Time – 3 hours

Subject – Core Mathematics
Maximum Marks- 80

General Instructions:

1. This Question paper contains - **five sections A, B, C, D and E**. Each section is compulsory. However, there are internal choices in some questions.
2. **Section A** has **18 MCQ's** and **02 Assertion-Reason based questions of 1 mark each.**
3. **Section B** has **5 Very Short Answer (VSA)-** type questions of 2 marks each.
4. **Section C** has **6 Short Answer (SA)-type questions of 3 marks each.**
5. **Section D** has **4 Long Answer (LA)-type questions of 5 marks each.**
6. **Section E** has **3** source based/case based/passage based/integrated units of assessment (4 marks each) with sub parts.

<div align="center"><u>SECTION – A</u></div>

[1 Mark × 20 = 20]

1. If $A \cup B = A \cap B$, Then the number of elements in $A - B$ is
   a) 2
   b) 1
   c) 0
   d) 3

2. Let R be a relation on N defined by $2x + y = 10$. Then the domain of R is
   a) {2,3,4}
   b) {1,2,3,4}
   c) ∅
   d) {1,2,3}

3. The function 't' which maps temperature in Celsius into temperature in Fahrenheit is defined by $t(c) = \left(\frac{9c}{5} + 32\right)^0 F$ .The value of Celsius 'c' when $t(c) = 212^0 F$.
   a) 132
   b) 324
   c) 100
   d) None of these

4. The minute hand of a watch is 35 cm long .How far does its tip move in 18 minutes? (Use $\pi = \frac{22}{7}$).
   a) 66 cm
   b) 55 cm
   c) c)32 cm
   d) 65 cm

5. If $iz^3 + z^2 - z + i = 0$ then the value of $|z|$ is
   a) 3
   b) 1
   c) 2
   d) 4

1

6. The solution set of the in equation $\frac{x+8}{x+2} > 1$ is
   a) (2,3)
   b) (-2,∞)
   c) (3,∞)
   d) (-∞, ∞)

7. In how many distinct ways can the product xy^2z^2 be obtained by multiplying x. y and z without using exponents?
   a) 12
   b) 20
   c) 30
   d) 40

8. There are ten points in a plane. Of these ten points four points are in a straight line and with the exception of these four points, no three points are in the same straight line. Then the number of straight lines formed are
   a) 30
   b) 40
   c) 116
   d) 120

9. The coefficient of x^4 in the expansion of $(1-x+x^2)^4$ is
   a) 10
   b) −4
   c) −16
   d) none of these

10. If third term of a G.P, is 3, then the product of its first five terms is
    a) 343
    b) 81
    c) 243
    d) 27

11. If A and G are A.M. and G.M. and $x^2 -2Ax+G^2=0$, then
    a) $A = G$
    b) $A \geq G$
    c) $A \leq G$
    d) $A = -G$

12. The equation of the line which cuts off an intercept -5 on Y-axis and has slope $\frac{1}{2}$ is
    a) $x - 2y - 10 = 0$
    b) $2x - y + 8 = 0$
    c) $x + y - 5 = 0$
    d) $2x - y - 10 = 0$

13. The equation of the straight line which passes through the point (3,4) and whose intercept on Y-axis is twice that on X-axis is
    a) $x + y = 10$
    b) $2x + y = 10$
    c) $x + y = 5$
    d) $3x + 4y = 5$

2

14. If a parabolic reflector is 20 cm in diameter and 5 cm deep, then the focus is
    a) (0,3)
    b) (5,0)
    c) (10,0)
    d) (0,20)

15. If the latus rectum of an ellipse is half of its minor axis ,its eccentricity is
    a) 3/4
    b) 1/4
    c) 1/2
    d) 3/2

16. Find all possible values of $'a'$, if $\lim_{x \to a} \frac{(x^9 - a^9)}{(x-a)} = \lim_{x \to 5}(x + 4)$
    a) $a = \pm 3$
    b) $a = \pm 2$
    c) $a = \pm 1$
    d) $a = 5$

17. If $f(x) = 1 + x + x^2 + x^3 + \cdots x^{50}$ then the value of $f'(1)$ is
    a) 1275
    b) 1075
    c) 2520
    d) none of these

18. There are 4 envelopes corresponding to 4 letters .If the letters are placed in the envelopes at random, what is the probability that all the letters are not placed in the right envelope?
    a) 1/24
    b) 2/25
    c) 23/24
    d) 24/25

ASSERTION – REASONING TYPE QUESTIONS
Statement I is called Assertion (A) and Statement II is called Reason (R). Read the given statements carefully and choose the correct answer from the options given below:
a) Both the Statements are true and Statement II is the correct explanation of Statement I.
b) Both the Statements are true and Statement II is not the correct explanation of Statement I.
c) Statement I is true, Statement II is false.
d) Statement I is false, Statement II is true.

19. **Assertion (A):** The mean deviation of the data 2, 9, 9, 3, 6, 9, 4 from the mean is 2.57.
    Reason (R): For individual observation,
    $$\text{Mean deviation MD} = \frac{(\Sigma|x_i - \bar{x}|)}{n}$$

20. **Assertion (A):** The probability of winning a game is 0.4, then the probability of losing it, is 0.6.
    Reason (R): P (E) + P (not E) =1

<div align="center">SECTION – B</div>   [2 Marks × 5 = 10 *Marks*]

21. If $A + B = \frac{\pi}{4}$, Show that :- (1 + tan A)(1 + tan B) = 2.
            OR
    Find the value of $\tan\frac{\pi}{8}$.

3

22. A man wants to cut three lengths from a single piece of board of length 91 cm. The second length is to be 3 cm longer than the shortest and the third length is to be twice as long as the shortest. What are the possible lengths for the shortest board if the third piece is to be at least 5 cm longer than the second?

23. A polygon has 44 diagonals. Find the number of its sides.

24. Find the equation of the circle of radius 5 units whose centre lie on X- axis and passes through the point (2, 3).

25. Find the equation of the perpendicular bisector of the line segment joining the points (1, 1) and (2, 3).

OR

The perpendicular from the origin to the line $y = mx + c$ meets it at the point (-1, 2). Find the values of 'm' and 'c'.

SECTION – C   [3 Marks× 6 = 18 *Marks*]

26. Prove that: $\tan \alpha . \tan \left(\frac{\pi}{3} - \alpha\right) . \tan \left(\frac{\pi}{3} + \alpha\right) = \tan 3\alpha$.

27. If $|z| = 1$, prove that $\frac{z-1}{z+1}$ $(z \neq -1)$ is a pure imaginary number.

What will you conclude if z = 1?

28. Find $(a + b)^4 - (a-b)^4$ .Hence, evaluate $(\sqrt{3} + \sqrt{2})^4 - (\sqrt{3} - \sqrt{2})^4$.

29. Find the lengths of the transverse axis, conjugate axis , eccentricity ,vertices and foci of the hyperbola $9x^2 -16y^2 = 144$.

30. Find the image of the point $(-8, \ 12)$ with respect to the line mirror $4x + 7y + 13 = 0$.

OR

Find the equations of the lines through the point (3, 2) which make an angle of 45^0 with the line $x - 2y = 3$.

31. Find the domain and range of the function $\left\{\left(x,\frac{1}{1-x^2}\right):x \in R, x \neq \pm 1\right\}$.

OR

Find the linear relation between the components of the ordered pairs of the relation R , where R = { (2, 1) , (4, 7),(1,−2),……}.

SECTION-D   [5 Marks × 4 = 20 *Marks*]

32. If the pth , q^{th} ,r^{th} and s^{th} terms of an A.P. are in G.P, Prove that $p - q, q - r \ and \ r - s$ are in G.P.

OR

The A.M . between two positive numbers 'a' and 'b' ,where $a > b$, is twice their G.M. Prove that $a:b = \left(2 + \sqrt{3}\right):\left(2 + \sqrt{3}\right)$.

33. Differentiate $\frac{\sin x}{x}$ using first principle.

34. Calculate the mean, variance and standard deviation of the first 'n' natural numbers.

35. Let $A = \{x:x \in N\}, B = \{x:x = 2n, n \in N\}, C = \{x:x = 2n - 1, n \in N\}$ and $D = \{x:x$ is a prime natural number $\}$ .Find
   a) $A \cap B$
   b) $A \cap C$
   c) $A \cap D$
   d) $B \cap C$
   e) $B \cap D$

4

OR

Given that E = {2, 4, 6, 8, 10}. If n represents any member of E, then, write the following sets containing all numbers represented by

i) $n + 1$

ii) n^2

iii) $n^3 + 2$

iv) $\dfrac{n}{n+1}$

v) $n!$

SECTION-E

[4 Marks × 3 = 12 *Marks*]

(Case/ Source /Passage based Questions)

36. On her vacations, Veena visits four cities A,B,C and D in a random order. What is the probability that she visits:

   a) A before B?

   b) A before B and B before C?

   c) A first and B last?

37. A dentist conducts a team to take surveys of people in his locality about using toothpaste. A survey team has some persons and the survey team owner makes a team out of total persons available at that time. If he has a group of 9 persons available at that time, out of which 5 are men and 4 are women.

   (i) In the committee, if it is required to sit, 5 men and 4 women in a row, so that the women occupy the even places, how many such arrangements are possible?

   (ii) If $P(2n - 1, n) : P(2n + 1, n - 1) = 22 : 7$, find n.

   (iii) From a team of 6 students, in how many ways can we choose a Captain and a Vice Captain assuming one person cannot hold more than one position?

5

38. Villages of Shanu and Arun are 50 km apart and our situated on Delhi - Agra Highway as shown in the following picture.
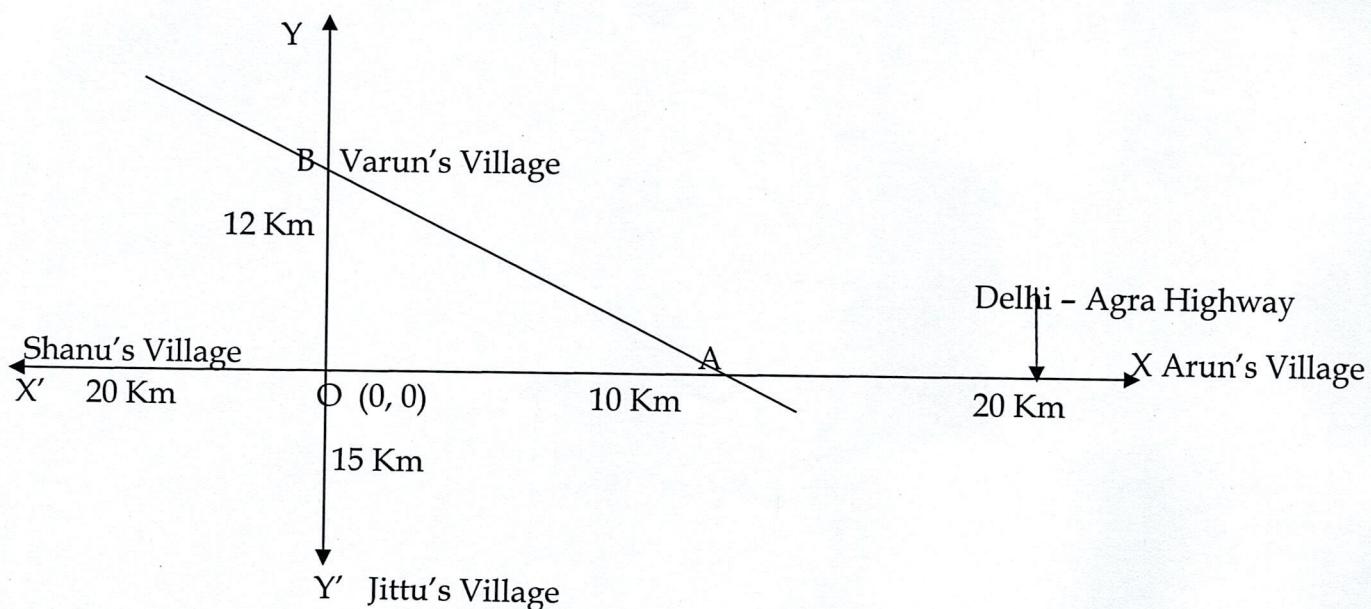
Another highway YY' crosses Agra - Delhi Highway at O (0, 0). A small local road PQ crosses both the highways at points A and B such that OA= 10 km and OB=12 km. Also, the villages of Varun and Jittu are on the smaller Highway, YY' Varun's Village B is 12 km from O and that of Jittu is 15 km from O.

Now answer the following questions:

a) What are the coordinates of A?
   i)   (10, 0)
   ii)   (10, 12)
   iii) (0, 10)
   iv)   (0, 15)

b) What is the equation of line AB?
   i) $5x + 6y = 60$
   ii) $6x + 5y = 60$
   iii) $x = 10$
   iv) $y = 12$

c) What is the distance of AB from O(0,0)
   i)   60 km
   ii) $60/\sqrt{61}$ km
   iii) $\sqrt{61}$ km
   iv)   61 km

d) What is the slope of line AB?
   i) $\frac{6}{5}$
   ii) $\frac{5}{6}$
   iii) $-\frac{6}{5}$
   iv) $\frac{10}{12}$

6

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class – XI
Time – 3 Hours

Subject – English Core (301)
Maximum Marks - 80

GENERAL INSTRUCTIONS

- This paper is divided into three sections A, B and C. All the sections are compulsory.
- Separate instructions are given with each section and question, wherever necessary. Read the instructions very carefully and follow them faithfully.
- Do not exceed the prescribed word-limit while answering the questions.

<u>SECTION – A (Reading)</u>   (26 Marks)

1. Read the passage

I was lucky; I found what I loved to do early in life. Woz and I started Apple in my parent's garage when I was 20. We worked hard and in 10 years Apple had grown into a $ 2 billion company with over 4000 employees. We had just released our finest creation - the Macintosh - a year earlier and I had just turned30.And then I got fired. How can you get fired from a company you started? Well, as Apple grew, we hired someone, who I thought was very talented, to run the company and for the first year or so things went well. But then eventually we had a falling out. When we did, our Board of Directors sided with him. So at 30 I was out. What had been the focus of my entire adult life was gone and it was devastating

I really didn't know what to do for a few months. I felt that I had let the previous generation of entrepreneurs down - that I had dropped the baton as it was being passed to me. But something slowly began to dawn on me: I still loved what I did. The turn of events at Apple had not changed that one bit. I had been rejected, but I was still in love. And so I decided to start over.

I didn't see it then, but it turned out that getting fired from Apple was the best thing that could have happened to me. It freed me to enter one of the most creative periods of my life. During the next 5 years I started a company named NeXT and another company named Pixar. Pixar went on to create the world's first computer Animated Feature Film, Toy Story and is now the most successful animation studio in the world. In a remarkable turn of events, Apple bought NeXT, I returned to Apple and the technology developed at NeXT is at the heart of Apple's current renaissance.

I'm pretty sure none of this would have happened if I hadn't been fired from Apple. It was awful tasting medicine, but I guess the patient needed it. Sometimes life hits you in the head with a brick. Don't lose faith. I'm convinced that the only thing that kept me going was that I loved what I did. You've got to find what you love.

On the basis of your reading of the passage, answer the following questions.   (1X10=10)

(i) What can be inferred from the line "But something slowly began to dawn on me"?
   (a) He realised he still loved what he did.
   (b) He thought he was a public failure.
   (c) He felt that he had let down the other entrepreneurs.
   (d) He wanted to return to Apple.

1

(ii) Complete the sentence by choosing an appropriate option.

Getting fired from Apple was.............
(a) the worst thing that ever happened to the author
(b) a planned decision
(c) helpful to make him successful again
(d) the best part of his life

(iii) Pixar is credited for
(a) being the first animation studio
(b) creating the world's first computer animated movie
(c) being a bigger company than Apple
(d) buying NeXT

(iv) Mention the only thing that kept the author going after getting fired.

(v) How did the author return to Apple?

(vi) What is the meaning of the phrase 'dropped the baton'?
(a) Dropped the rod
(b) Feeling of depression
(c) Not sure of future
(d) Not living up to expectations.

(vii) Pick the option showing the CORRECT use of 'falling out' as used in the passage.
(a) The passengers came falling out when the bus went down the hill.
(b) After falling out with her husband, she started living downstairs.
(c) Many rocks and lava were falling out from the volcano.
(d) Did you see people falling out from the pedestal?

(viii) Which word in the passage is the synonym of 'innovative'?

(ix) What does this passage try to convey?

(x) Why does the author call getting fired from Apple, the best thing that could ever happen to him?

2. Read the Passage

Over the last four decades, the number and proportion of couples in which both parents work, especially full-time, have increased considerably. Recent studies show that approximately 69% of couple families with at least one child were dual-earner families, up from 36% in last 19th century.

In this context of evolving professional and family roles, concerns about work-life balance have also grown. This is especially true for women. Despite men's increased involvement in raising children and doing household chores, women continue to devote an average more time to both. They are also more likely to be caregivers, which can have an impact on their time use and possibly on their ability to balance work and family life. This data examines the satisfaction with work-life balance of mothers and fathers of children aged 17 and under who work full-time (i.e. 30 hours or more per week).

Overall, most parents who work full-time are satisfied with their work-life balance. In the study, 3 out of 4 parents said they were satisfied or very satisfied with this balance (75%). The others were 'neither satisfied nor dissatisfied' (15%), 'dissatisfied' (8%) or 'very dissatisfied' (1%).

per cent
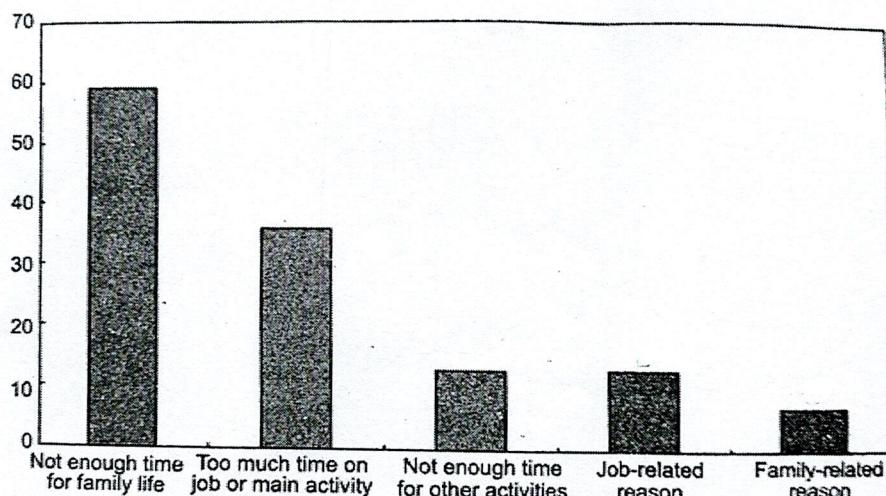
MAIN REASON FOR DISSATISFACTION

Of the parents who said that they were not satisfied, the most frequently mentioned reason for the dissatisfaction was not having enough time for family life. This was followed by spending too much time on their job or main activity, and not having enough time for other activities. Of the respondents, it was found that lone parents who work full-time obviously assume more responsibilities; they must prepare meals, transport children, help with homework, etc. This pressure may be even greater when the children are very young and the parents have little or no social support.

Only 67% of lone parents reported that they were satisfied or very satisfied with their work-life balance, compared with 76% of couple parents. Among individuals in couples, women were less satisfied than men, perhaps in part because they assume more family responsibilities than men. Furthermore, parents with at least one child of 4 years were less likely to report being satisfied with the balance between their job and home life (72%) than those whose children were all between 5 and 17 years of age (77%). Among parents with at least one young child, 75% of fathers reported that they were nonetheless satisfied with their work-life balance, compared with 68% of women.

On the basis of your reading of the passage, answer the following questions.　　　　(1X8=8)

(i) What is the data about?
　　1. Unemployed people with children
　　2. Work-life balance of working parents
　　3. Satisfaction level of working parents
　　4. How do working parents divide their time
　　(a) Only 1　　　　(b) Both 2 and 3　　　　(c) Only 3　　　　(d) Only 4

(ii) Why is there an increased focus on work level balance?
　　(a) Evolving professional and family roles
　　(b) Changing lifestyle
　　(c) Study the trend of nuclear families
　　(d) Study the reason behind the behavioural issues of children

(iii) Why is the issue of work life balance central to women?
　　1. They devote on average more time to family.
　　2. They are also more likely to be caregivers.
　　3. They are the primary person responsible for children.
　　4. They are the secondary person responsible for children.
　　(a) Both 1 and 2　　　　(b) Only 1　　　　(c) Both 2 and 3　　　　(d) Only 4

3

(iv) Parents who were surveyed
    (a) had children under the age of 17.   (b) had infant and toddler.
    (c) worked for 17 hours a day.   (d) were on top level position.

(v) Pick the statement that is TRUE as per the data given in the passage.
    (a) Maximum number of parents were dissatisfied.
    (b) Fathers were not very satisfied with the balance.
    (c) Lone parents were equally satisfied as couple parents.
    (d) Most parents believed that they did not give much time to family.

(vi) Why is there a pressure on lone parents?
    (a) They alone take the responsibility.
    (b) The children are very young.
    (c) They have little or no social support.
    (d) All of the above

(vii) Among individuals in couples, women were less satisfied than men. Why?

(viii) Which **part of speech** is 'nonetheless' ? (last paragraph)

3. Read the Passage

India is surrounded by water bodies on three sides, yet we face water shortage every year! Consider this - the per capita water availability in India was 3450 cu m in 1951. By 2025, the annual per capita availability of water is the expected to fall drastically from the current 1800 cu m per person to between 1200 and 1500 cu m.

Mumbai's demand for water was 7950 MLD (million litres per day) in 2011. The supply was only around 3100 MID-a substantial shortfall, but the city receives only 2500 do, the balance being lost on account of leakage and pilferage. Delhi Jal Board is able to supply only around 650 million gallons of water per day against the demand of 750 million gallons. According to a World Bank study of 27 Asian cities with population of over one million. Kolkata is the fourth worst performing metro in terms of hour of water availability per day.

The quality of available water is also fast deteriorating. In 1982 it was reported that 70 percent of all available water in India was polluted. The situation is much worse today. Over-extraction of ground water has led to salt water intrusion into coastal aquifers. It has also resulted in problems of excessive fluoride, iron, arsenic, and salinity in water, which is currently affecting about 44 million people in India. Ground water is facing an equally serious threat from contamination by industrial effluents and faecal matter, as well as pesticides and fertilisers from farm run-offs.

Unless priority is given quickly to creating an infrastructure to assure availability of water, there may soon be no water to meet the agricultural, domestic and industrial needs of a population that will has tripled in 50 years to one and a quarter billion.

Water management is therefore a major challenge for town planners, builders and architects today, not just in terms of availability of water, but most importantly its quality.

As water shortage increases, alternate sources of water supply are gaining importance. These include sewage recycling, rainwater harvesting, generating water from humidity in the atmosphere etc. Water recycling is a simple effective and economical solution to conserve water so that more fresh water is available for uses such as drinking, bathing, cooking and laundry.

Rajesh Sharma, Managing Director, Ion Exchange (India) Ltd, opines, "Population, industrialisation and pollution are putting pressure on our limited fresh water resources. There is

a limit to increasing water supply because we are running out of sources and the cost of additional facilities is prohibitive. More over as industry, which pays heavily for the water it uses, recycles more and more of it, it will be increasingly difficult for municipalities to find money for subsidy. Sewage recycle would help reduce infrastructural costs on public water supply systems as well as avoid heavy losses of water through leakages during distribution through public supply pipelines. The best way to solve water scarcity, therefore, is by conserving water and recycling it wherever possible. Recycling must be made mandatory for all new projects - industrial or domestic. It should be promoted for existing buildings also. Apart from priority to watershed development, rainwater harvesting and water recycling, another area we need to address is optimising use of water in agriculture (which uses 70% of the fresh water available) through drip irrigation etc."

(a) On the basis of your reading of the above passage, make notes on it using headings and sub-headings and sub sub headings. Use recognisable abbreviations wherever necessary. (Only four) Supply an appropriate title to it. (5)

(b) Write a summary of the above passage in 80 words. (3)

SECTION B-23 Marks

Grammar and Creative Writing Skills

In questions 4 and 5 total seven questions to be done out of eight given questions. (1x7=7)

4. **Do as directed**

   a. I had a fight with my friend. (Change it to Present Perfect Continuous tense.)

   b. My father............ his destination before I.......... him. (fill in the blanks with correct form of verb' reach' and 'call')

   c. The British East India Company has won the battle of Plassey on June 23,1757.(Grammatically correct the sentence)

   d. I / the/ market/ go/ to/ why/ did/ ?(Rearrange the words to form a meaningful sentence).

5. Vipul and Mahesh are discussing their plans for the summer vacation. Complete their dialogue with appropriate clauses.

   Vipul: How are you going to spend your summer vacation?

   Mahesh: I haven't thought about it yet.

   Vipul: How do you like the idea (a).............Shimla.

   Mahesh: That's nice, but I (b).............want my father's permission.

   Vipul: I'll come to your house (c) ....

   Mahesh: Oh! That'll be a fine idea(d) ....

6. **Answer any one out of the two given in not more than 50 words** (3)

   A. Your company, Sarvan Constructions Ltd, requires large flats on rent in Metro cities to serve as guest houses for your touring staffs. The flats should preferably be furnished. As Administrative Manager of your company, draft a suitable classified advertisement in 50 words to be published in newspapers in Metro cities.

   OR

B. Your institution is running coaching classes for candidates attempting the NEET, JEE MAINS, CUET, CLAT examination. Draft an advertisement in 50 words to be published in the classified advertisement section of newspaper giving the details of the courses offered in your institution.

7. Answer any one out of the two given in not more than 50 words. (3)

A. Prepare a thought-provoking poster in not more than 50 words on the topic "Stop Child Abuse'. Use catchy slogans and visuals.

OR

B. Design a poster in not more than 50 words urging people to adopt the three Rs - Reduce, Reuse, Recycle.

8. Write a speech in about 120-150 words on any one out of the two given in 120 to 150 words (5)

A. New Education Policy, the need of the hour

Key features
* Holistic development

Focuses on overall development of students

* Interdisciplinary education
Encourages students to choose subjects across disciplines

* Age-appropriate structure

Replaces 10+2 structure with a 5+3+3+4 structure more developmentally aligned.

* Academic Bank of Credits

Allows students to accumulate and transfer credits earned from various institutions.
* Research and innovation

Promotes strong research culture and innovation across all disciplines.

* 21st-century skills
Focuses on equipping students with skills like communication, collaboration, critical thinking, and problem solving.

OR

B. Consumerism is increasing day-by-day. Luxuries of yesterday have become necessities of today. The result is that the more we want the more miserable we become. Write a speech in 120-150 words on "The only way to minimise human suffering and pain is to control our needs'. You are Navtej/Navita.

9. Draft a debate in 120 to 150 words on ANY ONE out of the two topics. (5)

A. Migration from villages to cities has led to the spread of urban slums. People living in these slums lead a miserable life. Economic disparity leads to the problems of law and order. Write a debate either in favour or against the motion in 120-150 words on 'Solution to the problem of misery in the urban slums lies in creating jobs in the villages'. You are Navtej/Navita.

OR

B. You are Riya/Reyansh studying in Don Bosco School, Hyderabad. You are going to represent your school in the State level Debate Competition. Write a debate either in favour or against the motion in 120-150 words on, "All Schools in India should follow the vernacular medium of instruction in order to develop a sense of pride towards our roots."

SECTION C-31 Marks
Literature Text Book and Supplementary Reading Text

10. Answer questions from one poetry extract out of the two.   (1X3=3)

A. Read the extract given below and answer the questions that follow

> I do not understand this child
>
> Though we have lived together now
>
> In the same house for years. I know
>
> Nothing of him, so try to build
>
> Up a relationship from how
>
> He was when small.

(i) The problem highlighted in the given lines is

1. communication gap

2. generation gap

3. amusement

4. enmity

Choose the appropriate option.

(a) Only 1   (b) 2 and 3   (c) 1 and 2   (d) 3 and 4

(ii) Complete the sentence

'I' in the above extract wants to build up a relationship from how 'he' was when small because...............

(iii) On the basis of the extract, choose the correct option with reference to the two statements given below.

1. The poet wants to try to build up a relationship with his son.

2. The poet doesn't know his son well.

(a) 1 can be inferred from the extract but 2 cannot
(b) 2 can be inferred from the extract but 1 cannot
(c) both 1 and 2 cannot be inferred from the extract
(d) 2 is the reason for 1

<div align="center">OR</div>

B. Read the extracts given below and answer the questions that follow.

> When did my childhood go?
>
> Was it the day I ceased to be eleven,
>
> Was it the time I realised that Hell and Heaven,
>
> Could not be found in Geography,
>
> And therefore, could not be,
>
> Was that the day!

·(i) Where did the poet use Antithesis in the above lines?

(ii) What does the number 'eleven' signify?

(iii) According to the given extract, ... quality appropriately describes adults.
(Answer in a word)

11. Answer questions from any one of the prose passages out of two. (1X3=3)

A. Read the passage and answer the questions that follow

They remain the richest royal collection ever found and have become part of the pharaoh's legend. Stunning artefacts in gold, their eternal brilliance meant to guarantee resurrection, caused a sensation at the time of the discovery - and still get the most attention. But Tut was also buried with everyday things he'd want in the afterlife: board games, a bronze razor, linen undergarments, cases of food and wine.

(i) Select the suitable word from the extract to complete the following

Beautiful: Attractive :: Rebirth:

(ii) Complete the sentence

King Tut was buried with everyday things because.................................

(iii) Identify the remnants mentioned in the extract which were buried with King Tut's body that can be categorised as everyday things.

OR

B. Read the passage and answer the following questions.

Rajendra motioned him to silence and started pacing the room, obviously under great mental strain. Finally, he turned around and said, "Professor Gaitonde, I will try to rationalise your experience on the basis of two scientific theories as known today. Whether I succeed or not in convincing you of the facts, only you can judge – for you have indeed passed through a fantastic experience: or, more correctly, a catastrophic experience!"

(i) Which of the following act/acts did Rajendra not try to do?
(a) To convince Professor Gaitonde
(b) To judge Professor Gaitonde
(c) To rationalise Gaitonde's experiences
(d) Both (a) and (b)

(ii) What is the 'catastrophic experience' mentioned in the above extract?

(iii) Name the two scientific theories on which Rajendra tried to rationalise Gaitonde's experience.

12. Answer questions from any one of the prose passages out of two. (1X4=4)

A. Read the passage and answer the questions that follow

CYRIL: moving to the table; annoyed) Why not?
MRS. PEARSON: [coolly] I couldn't bother.
CYRIL: Feeling off-colour or something?
Mrs. PEARSON: Never felt better in my life.

CYRIL: [aggressively] What's the idea then?

MRS. PEARSON: Just a change.

CYRIL: [briskly] Well, snap out of it, Ma-and get cracking. Haven't too much time.

(i) What can you say about Cyril from the given lines?
   (a) He is dumb.
   (b) He is an important member of the union
   (c) He always respects his mother
   (d) He takes his mother for granted.

(ii) The phrase 'feeling off colour' means............

(iii) What is the 'change' as referred to in the extract?

(iv) In the last line Cyril claims that he does not have much time. , Mrs. Pearson thinks differently regarding this. What did she think.

OR

B. Read the passage and answer the questions that follow

It was a conclusion which, in his present state made him wince. He wished to consider marriage as an idyllic state; yes, he could not otherwise consider it with the image of Christine before him. Her eyes, shining towards him, admitted no other conclusion. It was the conflict between his level, doubting mind and his overflowing heart which left him resentful and confused. He let his chin sink upon his chest, stretched out his legs, stared broodingly into the fire.

(i) What is the 'conclusion' mentioned in the extract?
   (a) Failure of marriage
   (b) His unsuccessful career
   (c) How to save the child as well as the mother
   (d) His broken relationship with Christine

(ii) The word _____ in the extract is an antonym of 'pleased'.

(iii) Select the correct option on the basis of your reading of 'Birth.'
   (1) Dr. Andrews did not really want to marry Christine.
   (2) Dr.Andrews was sure he wanted to spend his life with Christine.
   (a) Both (1) and (2) are correct
   (b) Both (1) and (2) are incorrect
   (c) (1) is correct but (2) is incorrect
   (d) (1) is incorrect but (2) is correct

(iv) As per the extract what dilemma did Dr. Andrew face?

13. **Answer any two short answer type questions in 40 to 50 words (one from prose and one from poetry)**

(3X2=6)

   i. Why does grandmother appear like the 'winter landscape in the mountains'?

   ii. Mention the irony in the description of Ile Amsterdam as the most beautiful island in the world.

   iii. How does the Laburnum ensure security for the nestlings?

   iv. Why are the last two lines of the poem, 'The Voice of the Rain' put within brackets?

14. Answer any one short answer type question in 40 to 50 words (3X1=3)

i. " Positive family traits pass from one generation to another." Did the two boys in 'The Summer of the Beautiful White Horse' return the white horse because of their family traits or for any other reason? Justify your answer in 40-50 words.

ii. Satire can be an effective tool for social reform. Keeping the chapter 'The Tale of Melon City' in mind, write a short paragraph in 40-50 words to express your views on the above statement.

15. Answer any one question in 120 to 150 words (1X6=6)

A. On returning home Nick Middleton writes a diary reflecting on how his experience of Hor was stark contrast to the accounts he had read of the earlier travellers and the difficulties he faced in Darchen. Write the diary in 120-150 words as Nick Middleton.

OR

B. Happy moments are short-lived but provide a lifetime memory. They provide a cushion to bear the difficulties which the future has in store for you. Comment in the light of the poem 'A Photograph' by Shirley Toulson.

16. Answer any one question in 120 to 150 words (1X6=6)

A. "Betrayal of trust is an evil which may afflict people of any time or any age." Discuss this statement in the context of the chapter 'The Address'.

OR

B. "For doctors the duty towards the patients is foremost, irrespective of their own personal affairs."

Discuss with reference to the chapter ,'Birth'.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI   Subject – Economics
Time – 3 Hours   Maximum Marks - 80

General instructions:
i)   All question in both section are compulsory.

ii) Question no. 1-10 and 18-27 are multiple choice questions carrying 1 marks each.

iii) Question no. 11-12 and 28-29 are short-answer questions carrying 3 marks each. Answer to them should normally not exceed 60 words each.

iv) Question no.13-15 and 30-32are also short-answer questions carrying 4 marks each. Answer to them should normally not exceed 70 words each.

v)   Question no. 16-17 and 33-34 are long-answer questions carrying 6 marks each. Answer to them should normally not exceed 100 words each.

vi) Answer should be brief and to the point and the above word limits should be adhered to as far as possible.

SECTION -A STATISTICS

1. **Read the following statements carefully:**
   Statement 1: Census method is generally used when the size of population is limited.
   Statement 2: Sampling method is suitable when items of universe are homogeneous in nature.
   In the light of the given statements choose the correct alternative from the following:
   Alternatives:
   (a) Statement 1 is true and statement 2 is false.
   (b) Statement 1 is false and statement 2 is true.
   (c) Both the statements are true.
   (d) Both the statements are false.
   [1]

2. An open end series is that series in which
   (a) Lower limit of the first class interval is missing.
   (b) Upper limit of the last class interval is missing.
   (c) Both (a) and (b).
   (d) None of the above
   [1]

3. Consumer price index can be constructed by the average of
   (a) Stable price   (b) Price relative
   (c) Increasing price   (d) Decreasing price
   [1]

1

4. Read the following statements: Assertion (A) and Reason (R). Choose one of the correct alternatives:

Assertion (A): Captions refer to the headings of horizontal rows.

Reason (R): Source note refers to the source from which information has been taken.

Alternatives.

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 and 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.   [1]

5. Match the statements given under column I with the correct options given under column II.   [1]

Column I	Column II
(i)Smoothed Frequency Curve	A. Values of a variable are recorded with respect to the time of its occurrence
(ii)Time Series Graphs	B. Ogive
(iii) Cumulative Frequency Curve	C. It is used to reduce the distance between 'zero' and 'minimum value' on the X-axis
(iv) Kinked Line	D. Frequency Curve

Alternatives

(a) i (D),ii (A),iii (B),iv (C)

(b) i (B),ii (C),iii (D),iv (A)

(c) i (C),ii (B),iii(C),iv (D)

(d) i (A),ii (D),iii (C),iv (B)

6. The mean of 12 numbers is 24.If 5 is added in every number, the new mean is :   [1]

(a) 25   (b) 84   (c) 29   (d) None of these.

7. Calculate the median from the following information and choose the correct alternative given below:

[1]

Marks	10	70	50	20	95	55	42	60	48	80

(a) 52.5   (b) 20   (c) 50   (d) 70

8. Read the statements carefully and choose the correct alternative from the following:

Statement 1: Arithmetic average is not affected by extreme values.

Statement 2: Arithmetic mean can be easily calculated in case of open end classes without making any assumption.

Alternatives: [1]

(a) Statement 1 is true and statement 2 is false.

(b) Statement 1 is false and statement 2 is true.

(c) Both the statements are true.

(d) Both the statements are false.

2

9. Figures : 2, 4, 6, 7, 5, 3, 7, 6, 7, 8, 7, 5, 6, 7, 3, 1.

   Mode of the series will be

   (a) 4   (b) 7   (c) 6   (d) 8   [1]

10. When r = 1, all the points in a scatter diagram would lie :
    (a) On a straight line directed from lower left to upper right.
    (b) On a kinked line.
    (c) On a straight line directed from upper left to lower right.
    (d) Both (a) and (b).   [1]

11. "Now a days Statistics has become very popular in various fields, but it comes with its own limitations" :Justify the given statement with valid reasons.   [3]

OR

Marks obtained by 50 boys of a class are as follows :

33	52	10	25	53	55	11	42	47	34	47	21	39	25	32	19	10
16	41	36	15	30	27	59	30	14	6	17	40	49	52	54	40	31
45	24	30	34	52	36	12	16	19	40	42	3	6	44	26	45	

   (i) Construct a frequency table with class intervals 0-9, 10-19 ,20-29 and so on .   [2]
   (ii) Find number of students securing marks more than 30.   [1]

12. From the following data compute coefficient of correlation and comment: [3]

	X-Series	Y-Series
Number of Items.	7	7
Arithmetic mean	4	8
Sum of squares of deviations from arithmetic mean	28	76

Summation of product of deviations of X and Y series from their respective means is 46.

13. (a) Represent the following data with the help of a pie diagram.   [4]

Items	Rent	Food	Clothing	Transportation	Recreation	Savings	Others
Expenditure (in percent)	20%	25%	22%	15%	8%	6%	4%

OR

(b) From the following age distribution of workers of a factory, construct a histogram and convert it into a frequency polygon.

Age (in years)	0-10	10-20	20-30	30-40	40-50	50-60
No of workers	5	8	15	11	6	4

3

14. Calculate average marks from the following data by step deviation method : [4]

Marks	Below 20	20-50	50-90	90-140	Above 140
No of students	20	30	10	15	10

15. Compute the Consumer Price Index number by using any of the methods, for the year 2022-23 with 2011-12 as the base year, from the data given below and comment on the change in price level: [4]

Article	Quantity (2011-12)	Price (2011-12)	Price(2022-23)
A	10	20	30
B	7	21	28
C	5	20	25
D	2	10	12
E	2	6	8

16. From the following data determine mode. [6]

Wages (less than)	200	300	400	500	600	700	800	900
No of workers	5	18	38	70	90	95	98	100

17. (a) **Read the following case study and answer the questions given below:**

Coefficient of correlation is an important statistical tool which is used to measure the relationship between two variables. This is not only useful in the field of statistics but also used in other disciplines like Economics, Geography and Psychology in the present time. Due to the outbreak of COVID-19 Coronavirus, demand has gradually come down in almost all areas. As per the latest estimates, demand for car has decreased after the nationwide lockdown is lifted in phased manner.

(i) What will be the coefficient of correlation between demand for car and varied level of income due to nationwide lockdown?

[1]

(ii) What is the use of scatter diagram?

[1]

(b) Calculate the coefficient of correlation of the following data by the Spearman's Rank Correlation method.

[4]

Marks by judge X	48	33	40	9	16	65	26	15	57
Marks by judge Y	13	13	22	6	14	20	9	6	16

OR

4

(c) From the following information find out the coefficient of correlation between height of fathers and height of sons. [6]

Height of fathers. [Inches]	66	68	69	72	65	59	62	67	61	71
Height of sons. [Inches]	65	64	67	69	67	60	59	68	60	64

SECTION-B MICROECONOMICS

18. Read the following statements, Assertion (A) and Reason (R). Choose one of the correct alternatives given below:

Assertion (A): Production possibility frontier is a concave shaped curve.

Reason (R): PPF shows all the maximum possible combination of 2 goods, which can be produced with the available resources and technology.

(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 is true, Reason is false.

(d) Assertion is false , Reason is true. [1]

19. After reaching the point of satiety, due to consumption of additional units of the commodity

(a) TU falls and MU increases.

(b) Both TU and MU increase.

(c) TU falls and MU falls and becomes negative.

(d) TU becomes negative and MU falls. [1]

20. A farm is currently selling 10,000 units of its product per month. The firm plans to reduce the retail price from Rs. Rs.1to Rs0.90 .From the previous experience the firm knows that price elasticity of demand for the product is (−)1.5 .Assuming no other changes, the firm can now expect the sale to [1]

(a) Rise (b) Fall

(c) Remain constant (d) Remain undecided

21. Which of the following is correct statement showing the relationship between AP and MP?
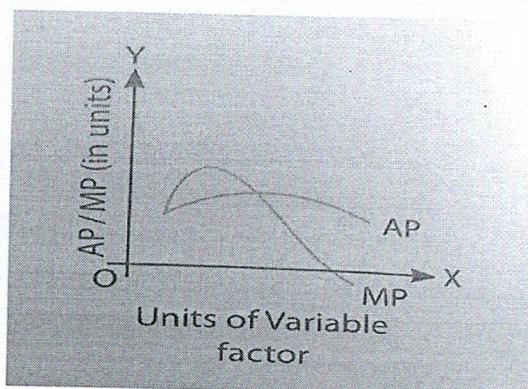
(a) When MP>AP, AP increases . (b) When MP=AP, AP is constant .

(c) When MP<AP , AP falls. (d) All of these. [1]

5

22. **Read the following statements carefully and choose the correct alternative from the following:** [1]

Statement 1: Bundles which cost more than consumers money income lie outside the budget line.

Statement 2: Budget set is a narrower concept as compared to budget line.

Alternatives:

(a) Statement 1 is true and statement 2 is false.
(b) Statement 1 is false and statement 2 is true.
(c) Both the statements are true.
(d) Both the statements are false.

23. Madiha, Aman and Akshita are 3 friends. They are talking about the relationship between (MC) marginal cost and (AC)average cost curve.

Madiha says: MC curve intersects AC curve from its highest point.

Aman says :MC curve does not intersect AC curve at all.

Akshita says :MC curve intersect AC curve from its lowest point.

Out of the three who is correct?

(a) Madiha   (b) Akshita   (c) Aman   (d) None of them

[1]

24. Which of the following is the true statement?

(a) AR indicates Price.
(b) AR curve and Demand curve are the same.
(c) TR is maximum when MR=0.
(d) All of the above.

[1]

25. More sellers entered into the mobile handset market. What will happen to the total number of mobile handset supplied?

(a) The supply will decrease (curve shifts left).
(b) The supply will increase (curve shifts right).
(c) The supply will remain the same (the curve will remain the same).
(d) Both (a) and (b).

[1]

26. Match the statements given under column I with the correct options given under column II. [1]

Column I	Column II
(i) Excess supply	A. Price at Quantity Demanded=Quantity Supplied
(ii) Decrease in demand	B. Supply curve and demand curve intersect each other in positive axes.
(iii) Equilibrium price	C. Both equilibrium price and quantity falls.
(iv) Viable industry	D. Situation when Quantity Demanded<Quantity Supplied at the prevailing market price.

Alternatives

(a) i (C),ii (D),iii (B),iv (A)
(b) i (D),ii (C),iii (A),iv (B)
(c) i (A),ii (B),iii(D),iv (C)
(d) i (B),ii (A),iii(C),iv (D)

6

27. How does cost saving technology affect the equilibrium price and equilibrium quantity?

    (a) Equilibrium price will rise and equilibrium quantity will fall.
    (b) Equilibrium price will fall and equilibrium quantity will rise.
    (c) Both equilibrium price and quantity will fall.
    (d) Both equilibrium price and quantity will rise.   [1]

28. 'Production in an economy is below its potential due to unemployment. Government starts employment generation schemes.' Explain its effect using Production possibility Frontier.   [3]

29. (a) In certain cases positive relationship between supply and prices may not hold true-Defend or refute.   [3]

<center>OR</center>

(b) Given the following schedule state at which level of output will the firm be at equilibrium and why.(use MR and MC approach).

Quantity (in units.)	Price (Rs)	Total cost(Rs)
0	20	10
1	20	50
2	20	80
3	20	100
4	20	105
5	20	125
6	20	150

30. Indifference curves are always downward sloping and convex to the origin- Do you agree? Give reasons in support of your answer.   [4]

31. (a) Suppose a consumer has to spend Rs 24 on two commodities X and Y. Further assume that the price of each unit of X is 2 and that of Y is 3.His marginal utility schedule is given below.

Determine how many units of both the commodities should be purchased by the person to maximize his total utility? What is the total amount of utility received by the consumer at the point of equilibrium?   [4]

No of units consumed	MUx in utils	MUy in utils
1	20	24
2	18	21
3	16	18
4	14	15
5	12	12
6	10	09

<center>OR</center>

(b) Identify the types of goods in the following picture and comment on its demand elasticity?
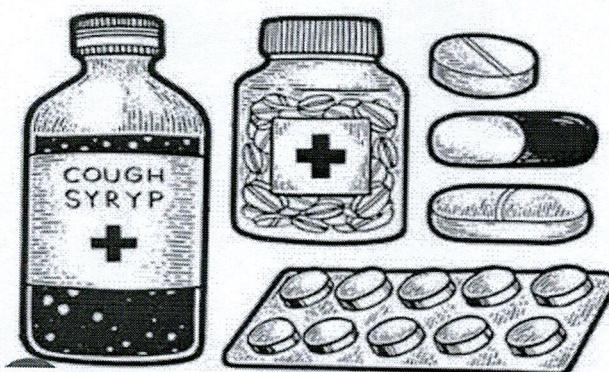
[1]

(c) A consumer spends Rs80 on a commodity when it's price is Rs 1 per unit and spends Rs 96 when its price is Rs 2 per unit .Calculate price elasticity of demand for the commodity. [3]

32. Suppose that a firm's total fixed cost is Rs.100 and the marginal cost schedule of the farm is the following :

Output(units)	Marginal Cost(Rs)
1	10
2	20
3	30
4	40
5	50
6	60
7	70

(a) Is the MC curve U-shaped? [1]

(b) Derive the AVC schedule. Will the AVC curve be U-shaped? Discuss why or why not. [3]

33. (a) From the information given in the table identify different stages of production and state the related law. [4]

Units of labor	0	1	2	3	4	5	6	7	8	9
Units of total product	0	4	12	24	32	36	36	28	16	2

(b) State with reason whether the following statement is true or false: [2]
Total product must increase no matter there are increasing or diminishing returns to factor.

8

34. (a) Identify the type of market structure depicted in the following picture.   [1]

(b) Explain the implication of freedom of entry and exit in the above market structure.   [3]
(c) Under which condition a firm becomes a price taker not a price maker?   [2]

OR

(d) Black marketing is the direct consequence of price ceiling .Comment.   [3]
(e) Suppose the demand and supply curves of a commodity X is given by the following two
equations simultaneously:

Qd=200-p

Qs=50+2p

Find the equilibrium price and quantity.

[3]

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class – XI
Time – 1 Hours

Subject – General Studies
Maximum Marks- 50

SECTION I: MULTIPLE CHOICE QUESTIONS

Select the best option for each question.   (1x10=10 Marks)

1. The phrase "Tryst with Destiny" is associated with which historical event?
   a) Independence Day speech by Jawaharlal Nehru
   b) Gandhi's Dandi March
   c) The signing of the Indian Constitution
   d) The Quit India Movement

2. Which Indian scientist is known as the "Missile Man of India"?
   a) Vikram Sarabhai
   b) A.P.J. Abdul Kalam
   c) C.V. Raman
   d) Homi Bhabha

3. Who is credited with discovering the theory of relativity?
   a) Albert Einstein
   b) Isaac Newton
   c) Galileo Galilei
   d) Nikola Tesla

4. The famous "Chipko Movement" in India is associated with:
   a) Forest conservation
   b) River cleaning
   c) Wildlife protection
   d) Anti-pollution drive

5. Which country hosted the first-ever FIFA World Cup in 1930?
   a) Brazil
   b) Uruguay
   c) Italy
   d) England

6. The Nobel Peace Prize 2023 was awarded to:
   a) Maria Ressa and Dmitry Muratov
   b) NargesMohammadi
   c) Abiy Ahmed Ali
   d) ICAN (International Campaign to Abolish Nuclear Weapons)

1

7. What does the term "Gross Domestic Product (GDP)" represent?
   a) Total imports and exports of a country
   b) Total value of goods and services produced within a country
   c) Total financial reserves of a country
   d) Total population growth in a country

8. What is India's rank in the Human Development Index (HDI) for 2023?
   a) 128
   b) 132
   c) 139
   d) 144

9. The UNESCO World Heritage Site Ajanta Caves are located in which Indian state?
   a) Maharashtra
   b) Madhya Pradesh
   c) Rajasthan
   d) Karnataka

10. Who among the following authored the book "Wings of Fire"?
    a) R.K. Narayan
    b) A.P.J. Abdul Kalam
    c) Amartya Sen
    d) Rabindranath Tagore

SECTION II: SHORT ANSWER QUESTIONS

Answer the following questions in 150-200 words.(Attempt any 4)   (4x8=32 Marks)

1. Explain the significance of India hosting the G20 Summit in 2023. Highlight its role in global geopolitics and its impact on India's image.

2. Discuss the major achievements of ISRO in the 21st century, including the Chandrayaan and Mangalyaan missions.

3. Why is the Bay of Bengal more prone to cyclones compared to the Arabian Sea? Discuss this phenomenon with reference to recent cyclones in India.

4. Describe the contributions of women leaders like Rani Lakshmibai, Sarojini Naidu, and Kalpana Chawla in shaping Indian history.

5. Discuss the advantages and ethical dilemmas of using Artificial Intelligence in everyday life.

SECTION III: CASE STUDY

Analyze the following case study in 150-200 words.   (1x8=8 Marks)

Case Study:
India is facing a severe water crisis, with groundwater depletion and river pollution becoming critical concerns. A recent report states that 21 major cities will run out of groundwater by 2030. The government has launched initiatives like Jal Shakti Abhiyan to address the crisis.

As a policymaker, propose a detailed strategy to combat the water crisis, focusing on sustainable solutions like rainwater harvesting, water recycling, and public awareness campaigns.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI
Time – 3 Hours

Subject – Geography
Maximum Marks - 70

General Instructions:
Read the following instructions carefully and follow them:
(i) This question paper contains 30 questions. All questions are compulsory.
(ii) Question paper is divided into five sections A, B, C, D and E.
(iii) Section A Question Nos. 1 to 17 are Multiple Choice type questions. Each question carries 1 mark.
(iv) Section B Question Nos. 18 and 19 are Source-based questions. Each question carries 3 marks.
(v) Section C Question Nos. 20 to 23 are Short Answer type questions. Each question carries 3 marks. Answer to these questions shall be written in 80 to 100 words.
(vi) Section D Question Nos. 24 to 28 are Long Answer type questions. Each question carries 5 marks. Answer to these questions shall be written in 120 to 150 words.
(vii) Section E Question Nos. 29 and 30 are Map-based questions. Each question carries 5 marks.
(viii) There is no overall choice given in the question paper. However, an internal choice has been provided in few questions in all sections other than Sections A and B.

SECTION A
Question numbers 1 to 17 are Multiple Choice Type Questions.   [1x17=17]

1. Which one of the following questions is related to the explanation or the causal relationships between features and the process and phenomena?   [1]
   (A) Where
   (B) What
   (C) Why
   (D) When

2. Which one of the following figures represents the age of the earth?   [1]
   (A) 4.6 million years
   (B) 4.6 billion years
   (C) 13.7 billion years
   (D) 13.7 trillion years

3. Match the Column I with Column II and choose the correct option.   [1]

Column I	Column II
I. Insolation	1. The earth is farthest from the sun
II. Isotherm	2. The earth is nearest to the sun
III. Perihelion	3. The incoming solar radiation
IV. Aphelion	4. The lines joining the places of equal temperature

Options:

|	I	II	III	IV
(A)	3	4	2	1
(B)	3	4	1	2
(C)	2	4	3	1
(D)	3	1	4	2

1

4. Which of the following is an erosional landform of glacier? [1]
   (A) Cirque
   (B) Moraine
   (C) Esker
   (D) Outwash Plain

5. Consider the following statements and choose the correct answer with the help of given options. [1]
   I. Between the latitudes 35° and 40° N and S of the equator, the rain is heavier on the eastern coasts and goes on decreasing towards the west.
   II. Between 45° and 65° N and S of equator, due to the easterlies, the rainfall is first received on the western margins of the continents and it goes on decreasing towards the east.
   Options:
   (A) Only statement I is correct.
   (B) Both the statements are correct.
   (C) Only statement II is correct.
   (D) Both the statements are incorrect.

6. Which one of the following longitudes is the standard meridian for India? [1]
   (A) 69°30'E
   (B) 75°30'E
   (C) 90°30'E
   (D) 82°30'E

7. There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below. [1]
   Assertion (A): The western coastal plain is a narrow belt and provides natural conditions for the development of ports and harbours.
   Reason (R): The western coastal plain is an example of submerged coastal plain.
   Options:
   (A) Both (A) and (R) are true but (R) is not the correct explanation of (A).
   (B) Both (A) and (R) are true and (R) is the correct explanation of (A).
   (C) Both (A) and (R) are incorrect.
   (D) (A) is correct but (R) is incorrect.

8. Choose the correctly matched pair from the following. [1]

RIVER		ORIGIN
(A) Brahmaputra	–	Mapchachungo Glacier
(B) Ghaghara	–	Chemyungdung Glacier
(C) Gandak	–	Nepal Himalayas
(D) Narmada	–	Mahabaleshwar

9. There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below. [1]
   Assertion (A): The people of Mumbai and the Konkan coast have hardly any ideas of extremes of temperature and the seasonal rhythm of weather.
   Reason (R): With along coastline, large coastal areas have an equable climate.
   Options:
   (A) Both (A) and (R) are true but (R) is not the correct explanation of (A).
   (B) Both (A) and (R) are true and (R) is the correct explanation of (A).
   (C) Both (A) and (R) are incorrect.
   (D) (A) is correct but (R) is incorrect.

2

10. Which months are known for retreating monsoons in India? [1]
   (A) January and February
   (B) October and November
   (C) November and December
   (D) September and October

11. What is the average annual rainfall in India? [1]
   (A) About 100 cm
   (B) About 50 cm
   (C) About 200 cm
   (D) About 125 cm

12. Mahogony is an example of [1]
   (A) Tropical Deciduous Forest
   (B) Montane Forest
   (C) Tropical Evergreen Forest
   (D) Tropical Thorn Forest

13. Tropical deciduous forest spread over regions which receive rainfall between [1]
   (A) 200-300 cm
   (B) 70-200 cm
   (C) 100-150 cm
   (D) 70-150 cm

14. Consider the following statements and choose the correct option from the given options [1]
   I. The main objective of the Project Tiger is to ensure maintenance of viable population of tigers in India for scientific, aesthetic, cultural and ecological values.
   II. Initially, the Project Tiger was launched in nine tiger reserves, covering an area of 16,339 sq. km.

   Options:
   (A) Only statement I is correct
   (B) Both the statements are correct
   (C) Only Statement II is correct
   (D) Both the statements I and II are incorrect

Study the given figure and answer the following question nos. 15 - 17
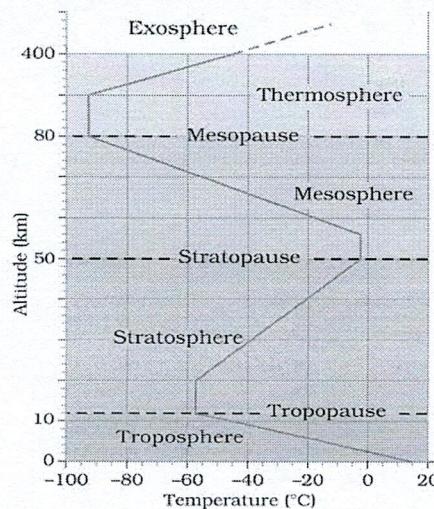
**Structure of Atmosphere**

3

15. Which is the most important layer for all biological activity? [1]
    (A) Troposphere
    (B) Stratosphere
    (C) Mesosphere
    (D) Thermosphere

16. Which layer of the atmosphere contains the ozone layer? [1]
    (A) Troposphere
    (B) Stratosphere
    (C) Mesosphere
    (D) Thermosphere

17. Which is the uppermost layer of the atmosphere? [1]
    (A) Troposphere
    (B) Stratosphere
    (C) Thermosphere
    (D) Exosphere

SECTION B
Question numbers 18 and 19 are Source-based Questions. [3x2=6]

18. **Read the given passage carefully and answer the questions that follow:** [3]
    The Peninsular drainage system is older than the Himalayan one. This is evident from the broad, largely-graded shallow valleys, and the maturity of the rivers. The Western Ghats running close to the western coast act as the water divide between the major Peninsular rivers, discharging their water in the Bay of Bengal and as small rivulets joining the Arabian Sea. Most of the major Peninsular rivers except Narmada and Tapi flow from west to east. The Chambal, the Sind, the Betwa, the Ken, the Son, originating in the northern part of the Peninsula belong to the Ganga river system. The other major river systems of the Peninsular drainage are – the Mahanadi, the Godavari, the Krishna and the Kaveri. Peninsular rivers are characterised by fixed course, absence of meanders and non-perennial flow of water. The Narmada and the Tapi which flow through the rift valley are, however, exceptions.
    (A) Which two peninsular rivers flow from east to west?
    (B) Which is the largest peninsular river system?
    (C) Why does the Kaveri river carry water throughout the year?

19. **Observe the given figure and answer the questions that follow:** [3]
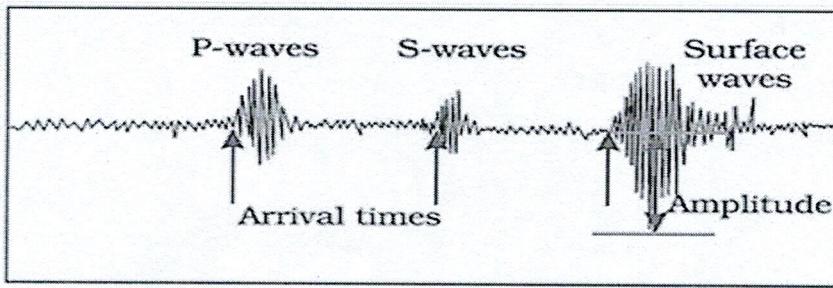
Earthquake Waves

    (A) Name the waves which travel through gaseous, liquid and solid materials.
    (B) What are surface waves?
    (C) Which characteristic of the S-waves has helped scientists to understand the structure of the interior of the earth?

SECTION C
## Question numbers 20 to 23 are Short Answer Type Questions. [3x4=12]

20. How does the tillite provides evidence in support of the continental drift? [3]

OR

Describe the three major divisions of the ocean floor based on the depth as well as the forms of relief.

21. Study the given figure and answer the following questions: [1+1+1=3]
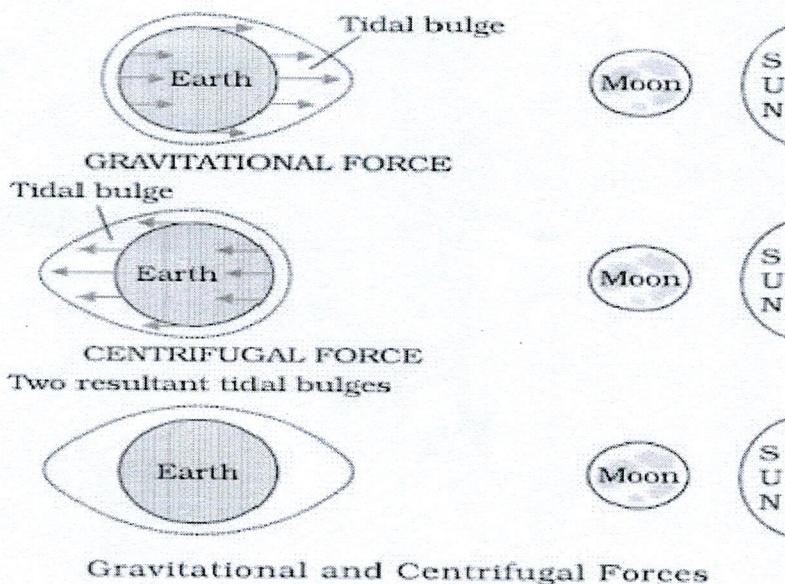
Relation between gravitational forces and tides

(I) What are major causes for the occurrence of tides?
(II) What is 'tide-generating' force?
(III) Why is the study of tides very complex, spatially and temporally?

22. How does the extra tropical cyclone differ from the tropical cyclone? [3]

23. Why does the western coastal plain receive very heavy rainfall? [3]

SECTION D
Question numbers 24 to 28 are Long Answer Type Questions. [5x5=25]

24. Mention any five causes that precede mass movements. [5]

25. What is the average temperature of surface water of the oceans? Explain the factors which affect the distribution of ocean water. [5]

OR

Where is a major portion of the ocean floor found? Explain the four major divisions of the ocean floors.

26. Explain any five features of the Indian desert. [5]

OR

Name the two major island groups of India. How are they different from each other?

5

27. 'Notwithstanding the broad climatic unity, the climate of India has many regional variations'. Elaborate this statement giving suitable examples [5]

OR

How is the economic life in India affected by monsoon?

28. 'The Himalaya ranges show a succession of vegetation from the tropical to the tundra, which change in with the altitude'. Explain. [5]

OR

Explain any five important reasons of the declining of wildlife in India.

SECTION E

Question numbers 29 & 30 are Map based questions having 5 sub-parts each. [5x2=10]

29. Locate and label **any five** of the following geographical features on the Political Outline map of World: [5]
    (A) Gobi Desert
    (B) Mediterranean Sea
    (C) Labrador Current
    (D) Eastern Madagascar
    (E) Sahara Desert
    (F) Caspian Sea
    (G) Oyashio Current

30. Locate and label **any five** of the following geographical features on the Political Outline map of India with appropriate symbols: [5]
   (A) The westernmost longitude of India in degree
    (B) Vindhya Range
    (C) Anaimudi Peak
    (D) Chilika Lake
    (E) Mawsynram
    (F) Kaziranga National Park
    (G) Kolleru Lake

THE WORLD - POLITICAL
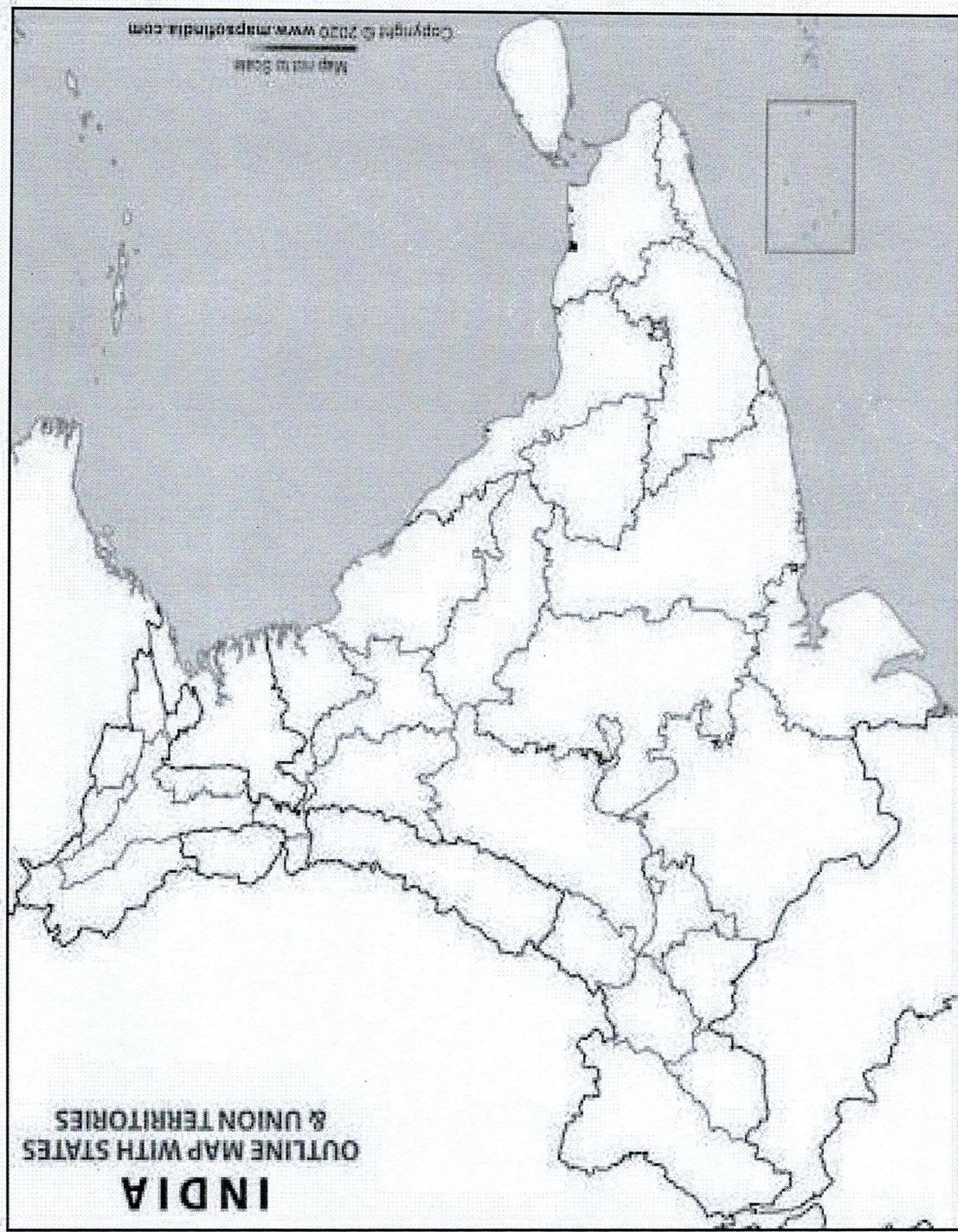
SCALE

Kms.0   2000   4000   6000 Kms.

Projection : Mercator.

90°
120°
150°
180°

66½°S
60°
150°
30°
23½°S
0°
23½°N
30°
60°
66½°N
90°
120°

60°
30°
0°
30°
60°
90°
120°
150°
180°

66½°N
60°
23½°N
30°
0°
23½°S
30°
60°
66½°S
90°

INDIA

OUTLINE MAP WITH STATES
& UNION TERRITORIES

Q.30

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI	Subject – History
Time – 3 Hours	Maximum Marks- 80

General Instructions:

i. Question paper comprises five Sections – A, B, C, D and E. There are 34 questions in the question paper. All questions are compulsory.

ii. Section A – Question 1 to 21 are MCQs of 1 mark each.

iii. Section B – Question no. 22 to 27 are Short Answer Type Questions, carrying 3 marks each. Answer to each question should not exceed 60-80 words.

iv. Section C - Question no 28 to 30 are Long Answer Type Questions, carrying 8 marks each. Answer to each question should not exceed 300-350 words.

v. Section D – Question no.31 to 33 are Source based questions with three sub questions and are of 4 marks each.

vi. Section-E - Question no. 34 is Map based, carrying 5 marks that includes the identification and location of significant test items. Attach the map with the answer book. Map will be provided.

vii. There is no overall choice in the question paper. However, an internal choice has been provided in few questions. Only one of the choices in such questions have to be attempted.

viii. In addition to this, separate instructions are given with each section and question, wherever necessary.

SECTION A

1. Who participated in the popular rights movement and launched the first agitation against pollution in 1897 in japan
   a) Tanaka Shozo
   b) Mateo Ricci
   c) Naito Konah
   d) Meiji Taza

2. Mesopotamia is in modern _____.
   a) Iran
   b) Syria
   c) Egypt
   d) Iraq

3. Who among the following kings were connected with the organisation of trade in Mesopotamia
   a) Gigamesh
   b) Enmerker
   c) Nabopolasser
   d) All of the above

1

4. Identify the given image from the following options:
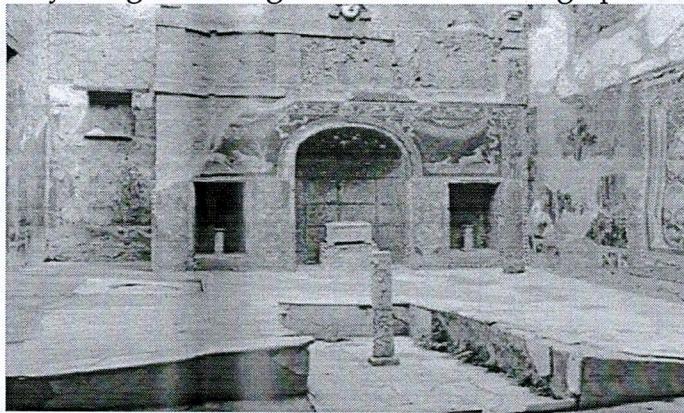
    a) Amphitheatre at Vindonissa
    b) Wine merchant's dining room in Pompeii
    c) Pont du Gard, near Nimes, France
    d) Shops in Forum Julium, Rome

5. The term Yasaq means
    a) Law
    b) Courier
    c) Trade
    d) War

6. Identify a Roman God /Goddess from the ancient Mythological figures
    a) Juno
    b) Adhena
    c) Innana
    d) Yami

7. Identify an anthropologist with the help of following information
    a. He composed a lecture on The Great Australian Silence.
    b. He condemned historians for not making any records of aborigines.
    a) W.E.H. Stanner
    b) Henry Reynolds
    c) James Cook
    d) Judith wright

8. Where did Feudalism first take its roots?
    a) England
    b) France
    c) Germany
    d) Italy

9. Which among the following was the most famous town/s of Mesopotamia?
    i. Ur
    ii. Uruk
    iii. Mari
    iv. Babylonia
    a) i and ii
    b) ii and iii
    c) i, ii, iii and iv
    d) ii and iv

10. Who among the following Renaissance men wrote Canterbury Tales?
    a) Brunelleschi
    b) Geoffrey Chaucer
    c) Thomas more
    d) Leonardo Da vinci

11. Which among the following were the warrior class of Japan ?
    a) Shoguns
    b) Daimyos
    c) Samurais
    d) Ueki

12. Which among the following is Correctly matched?

List I	List II
(a) Thomas More's	Ninety-Five Theses
(b) Martin Luther	Utopia
(c) Isaac Newton	Principia Mathematica
(d) Andreas Vesalius	The Social Contract

13. Who collected tithe?
    a) The Priest
    b) The Nobles
    c) The Peasantry
    d) The knights

14. Edo is now called _____.
    a) Tokyo
    b) Singapore
    c) Hong-Kong
    d) Shanghai

15. Slavery was a common practice in
    a) Roman Empire
    b) Egypt
    c) Mesopotamia
    d) All of the above

16. What was the real name of Genghis Khan
    a) Temarin
    b) Qubilai
    c) Temujin
    d) Toluy

17. Which of these statement is false about Cicero?
    a) He was Roman essayist
    b) He was Roman laywer
    c) He was contemporary to Julius Ceasar
    d) He was a British officer

18. What does 'San Min Chui' mean?
    a) Democracy, Nationalism, Socialism
    b) Nationalism, socialism, Communism
    c) Nationalism, Democracy, socialism
    d) Nationalism, Socialism, Democracy

19. It laid the foundation for the prosperity of Australia:
    a) Agriculture
    b) Fishing Industry
    c) Mining Industry
    d) Construction industry

20. **Assertion (A):** Nuclear family was common in Roman society
    Reason (R): Women had much freedom and rights in the Roman empire than anywhere else in that time
    i. Both A and R are true and R is the correct explanation of A.
    ii. Both A and R are true but R is not the correct explanation of A.
    iii. A is true but R is false.
    iv. A is false but R is true

21. **Assertion (A):** The name Mesopotamia is derived from the Greek words mesos and potamos.
    Reason (R): Mesopotamia is the land between three main rivers- Great Zab, Euphrates and the Tigris rivers.
    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 of A.
    c) A is true but R is false.
    d) A is false but R is true.

SECTION B

22. Explain the role of Gold Rush in economic and political expansion of America.
    ### OR
    Why did white Americans feel sympathy for the natives who were denied the benefits of citizenship?

23. Explain the condition of European women in the Renaissance period
    ### OR
    How Renaissance affected Church and Religion of Europe.

24. Explain the fourteenth century crisis?

    ### OR
    Compare and contrast the political history of France and Britain

25. Why did the Guomindang, despite its attempts to unite China, fail?
    ### OR
    Explain New Democracy and why it was criticised?

26. Division of labour is one of the important features of urban life. Explain it with example.

27. Explain the army system of Genghis Khan

SECTION C

28. Explain the social hierarchy of the Roman Empire

OR

Explain the Roman society with special reference to the condition of women

29. Explain the Japanese path of modernisation.

30. Discuss the main features of European feudalism.

SECTION D

31. **Read the following text carefully and answer the questions that follow:**

Art and Science

Formal education was not the only way through which humanists shaped the mind of their age. Art, architecture and books were wonderfully effective in transmitting humanist ideas. Artists were inspired by studying works of the past. The material remains of Roman culture were sought with as much excitement as ancient text: a thousand years after the fall of Rome, fragments of art were discovered in the ruins of ancient Rome and other deserted cities. Their admiration for the figures of perfectly proportioned men and women sculpted so many centuries ago, made Italian sculptors want to continue that tradition. In 1416, Donatello (1386-1456) broke new ground with his life-like statues. Artists' concern to be accurate was helped by the work of scientists.

  i. Besides education, in what other ways did the humanists shape the minds of their age? (1)
  ii. Examine the sentence: Artists concern to be accurate was helped by the work of scientists.

                                    (1)
  iii. What was the source of inspiration for the artists?
                                      (2)

32. **Read the following text carefully and answer the questions that follow:**

Slavery and Roman Empire

Slavery was an institution deeply rooted in the ancient world, both in the Mediterranean and in the Near East, and not even Christianity when it emerged and triumphed as the state religion (in the fourth century) seriously challenged this institution. It does not follow that the bulk of the labour in the Roman economy was performed by slaves. That may have been true of large parts of Italy in the Republican period (under Augustus there were still 3 million slaves in a total Italian population of 7.5 million) but it was no longer true of the empire as a whole.
Slaves were an investment, and at least one Roman agricultural writer advised landowners against using them in contexts where too many might be required (for example, for harvests) or where their health could be damaged (for example, by malaria). These considerations were not based on any sympathy for the slaves but on hard economic calculation. On the other hand, if the Roman upper classes were often brutal towards their slaves, ordinary people did sometimes show much more compassion.

As warfare became less widespread with the establishment of peace in the first century, the supply of slaves tended to decline and the users of slave labour thus had to turn either to slave breeding or to cheaper substitutes such as wage labour which was more easily dispensable. In fact, free labour was extensively used on public works at Rome precisely because an extensive use of slave labour would have been too expensive. Unlike hired workers, slaves had to be fed and maintained throughout the year, which increased the cost of holding this kind of labour. This is probably why slaves are not widely found in the agriculture of the later period, at least not in the eastern provinces. On the other hand, they and freedmen, that is, slaves who had been set free by their masters, were extensively used as business managers, where, obviously, they were not required in large numbers. Masters often gave their slaves or freedmen capital to run businesses on their behalf or even businesses of their own.

    i. Infer the reason for the decline in the supply of trade in the first century. (1)
    ii. Prudent landowners gradually switched over to slave breeding or hiring paid labourers. What is slave breeding? (1)
    iii. Why were the landowners advised against using slaves where too many of them were required? (2)

33. **Read the following text carefully and answer the questions that follow:**

About Cathedrals

Because of the inadequacy which we often felt on feast days, for the narrowness of the place forced the women to run towards the altar upon the heads of the men with much anguish and noisy confusion, [we decided] to enlarge and amplify the noble church...
We also caused to be painted, by the exquisite hands of many masters from different regions, a splendid variety of new windows... Because these windows are very valuable on account of their wonderful execution and the profuse expenditure of painted glass and also a goldsmith... who would receive their allowances, namely, coins from the altar and flour from the common storehouse of the brethren, and who would never neglect their duty, to look after these [works of art].
-Abbot Suger (1081-1151) about the Abbey of St Denis, near Paris.

    i. Why was it decided to enlarge and amplify the noble Church? (1)
    ii. With what names, the big churches were called? (1)
    iii. Why were an official master craftsman and a goldsmith appointed in the big churches? (2)

SECTION E

34. **A.** In the given map of world, identify the places marked as **I** and **II**
    i. France
    ii. Britain
    iii. Italy
    B. In the same Map locate and label the following countries
    Map of world with marking of USA and Australia

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP,RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI

Time – 3 Hours

Subject – Physical Education

Maximum Marks - 70

GENERAL INSTRUCTIONS:-

(a) The question paper consists of 5 sections and 37 Questions.

(b) Section A consists of questions 1-18 carrying 1 mark each and is multiple choice questions. All questions are compulsory.

(c) Section B consist of questions 19-24 carrying 2 marks each and are very short answer types and should not exceed 60-90 words. Attempt any 5.

(d) Section C consist of questions 25-30 carrying 3 marks each and are short answer type and should not exceed 100-150 words. Attempt any 5.

(e) Section D consist of questions 31-33 carrying 4 marks each. All questions are compulsory.

(f) Section E consist of question 34-37 carrying 5 marks each and are short answer types and should not exceed 200-300 words. Attempt any 3.

SECTION-A

1. _____are those skills which are performed at the same time as others but without direct confrontation. (1)
   (a) Discrete Skills
   (b) Serial Skills
   (c) Coactive Skills
   (d) None of the above

2. For the first time in which year Sit and Reach test was developed? (1)
   (a) 1952
   (b) 1953
   (c) 1954
   (d) 1960

3. Target Olympic Podium Scheme (TOPS) was introduced in which year by Government of India? (1)
   (a) 2017
   (b) 2018
   (c) 2019
   (d) 2020

4. Which of the following is Hidden Disability? (1)
   (a) ADHD
   (b) Dyslexia
   (c) ASD
   (d) Down Syndrome

1

5. The First Summer Youth Olympics were held in Singapore in _____. (1)
   (a) 2008
   (b) 2009
   (c) 2010
   (d) 2012

6. Given below are the two statements labeled Assertion (A) and Reason (R). (1)
   Assertion (A):-Passive Flexibility is the foundation for active Flexibility.
   Reason (R):-Active Flexibility is always more than Passive Flexibility.
   (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 the not the correct explanation of (A).
   (c) (A) is True, but (R) is False.
   (d) (A) is False, but (R) is True.

7. _____ is the common passageway of both the Digestive and Respiratory Systems. (1)
   (a) Pharynx
   (b) Stapes
   (c) Tendon
   (d) Ligament

8. Who said, Psychology is the Science of Human Behaviour? (1)
   (a) Ross
   (b) James Drever
   (c) Pillsbury
   (d) K M Burns

9. Turning the foot so the sole faces laterally is known as _____. (1)
   (a) Inversion
   (b) Protraction
   (c) Eversion
   (d) None of the above

10. Identify the Pranayama image given below:- (1)
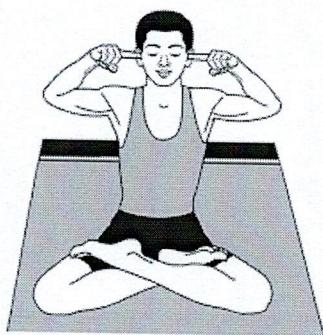
_____.
   (a) Bhramari
   (b) Kapalabhati
   (c) Ujjai
   (d) Nadi Sodhan

11. _____ blood doping is the injection of fresh blood, taken from a second person, straight into the athlete. (1)
   (a) Homologous
   (b) Autologous
   (c) Both 'A' and 'B'
   (d) None of the above

12. Identify the Body Movements by the image given below:- (1)
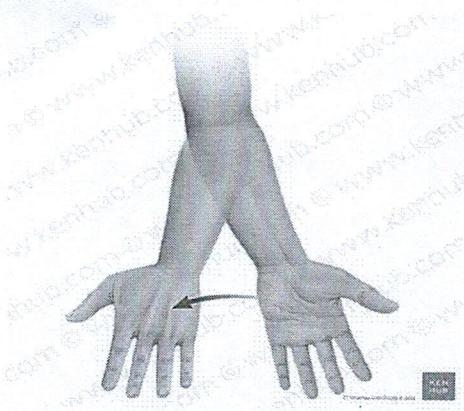
   (a) Flexion & Extension
   (b) Adduction & Abduction
   (c) Elevation & Depression
   (d) Supination & Pronation

13. Boxing was included in which year of the Ancient Olympic Games? (1)
   (a) 708 BCE
   (b) 688 BCE
   (c) 724 BCE
   (d) 648 BCE

14. Hippocrates was a famous Physician of which country? (1)
   (a) Greece
   (b) Italy
   (c) France
   (d) Germany

15. Early childhood remains from _____. (1)
   (a) 40-65 yrs.
   (b) 10-20 yrs.
   (c) 20-40 yrs.
   (d) None of the above

16. In which year a separate Ministry of Sports and Youth Affairs was set up in India? (1)
   (a) 1979
   (b) 1980
   (c) 1981
   (d) 1982

17. What should be the healthy amount of fat percentage in Men? (1)
   (a) 10-12 Percent
   (b) 15-18 Percent
   (c) 20-25 Percent
   (d) None of the above

18. What is the other name of Amphiarthroses Joint? (1)
   (a) Immovable Joint
   (b) Freely Movable Joint
   (c) Synarthroses Joint
   (d) Slightly Movable Joint

SECTION-B

19. Write short note on Diuretics and Stimulants? (2)

20. Define Kinesiology and Biomechanics? (2)

21. Explain Task and Social Cohesion? (2)

22. Explain the procedure of Tratak Kriya? (2)

23. Write any four functions of Bone? (2)

24. Write the meaning of Citius-Altius-Fortius and Communis? (2)

SECTION-C

25. Write any six components of Khelo-India programme? (3)

26. Explain all the types of Freely Movable Joints with suitable example? (3)

27. Define Skill, Technique and Style with suitable example? (3)

28. Explain any six management of Adolescent problem? (3)

29. Briefly explain Endomorph, Mesomorph and Ectomorph in detail? (3)

30. Define First-aid and explain any three objectives of First-aid. (3)

SECTION-D

31. On the basis of the given picture, answer the following question:- (4)
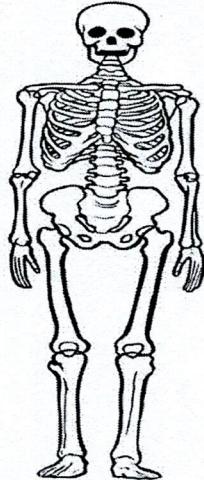
1. Scapula & Skull are example of _____.
2. The number of Ribs are_____.
3. Ball & Socket Joint is situated at_____.
4. Upper & Lower limbs consists of how many bones?

32. Psychological attributes are the specific characteristics of a person that influence their behaviour and thought. These attributes are very significant to consider when trying to understand the reason for someone's behaviour. Here, our main concern is about the psychological attributes of sportspersons or athletes such as attention, resilience, and mental toughness. These psychological attributes play a very effective role in sports performance.
On the basis of above passage, answer the following question:- (4)

4

1. Attention is the _____ of an athlete/sportsperson to keep on task.
2. There are various _____, such as attention, resilience and mental toughness.
3. _____ can be defined as the ability or tendency to bounce back.
4. The most popular model of attention in the field of sports was developed in which year?

33. For appropriate body composition, the BMI test is usually considered very effective. Those individuals, who have high BMI, they are advised to do heavy workout. They must pay attention to their body weight by sufficient workout and appropriate amount of diet. (4)
    1. The normal range of BMI is _____.
    2. 35.0-39.9 is the range of _____.
    3. An individual with BMI 28.0 comes under _____.
    4. Calculate the BMI of a male whose body weight is 70 kg & his height is 1.60 Mt.

SECTION-E

34. Explain the Principles of Sports Training ? (5)

35. Explain the importance of Anatomy and Physiology in Sports? (5)

36. Explain Harvard Step Test in detail? (5)

37. Discuss the elements of Astanga Yoga in detail? (5)

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION   (2024-25)

Class – XI

Time – 3 Hours

Subject – Physics

Maximum Marks - 70

General Instructions:
(1) There are 33 questions in all. All questions are compulsory.
(2) This question paper has five sections: Section A, Section B, Section C, Section D and Section E.
(3) All the sections are compulsory.
(4) Section A contains **sixteen** questions, **twelve** MCQ and **four** Assertion Reasoning based of **1** mark each, Section B contains **five** questions of **2** marks each, Section C contains **seven** questions of **3** marks each, Section D contains **two case study based** questions of **four marks** each and Section E contains **three** long answer questions of **5** marks each.
(5) There is no overall choice. However, an internal choice has been provided in one question in Section B, one question in Section C, one question in each CBQ in Section D and all three questions in Section E. You have to attempt only one of the choices in such questions.
(6) Use of calculators is not allowed.

SECTION A

1. The SI unit of a physical quantity is pascal-second. The dimensional formula of this quantity will be:
   (a) $[ML^{-1}T^{-1}]$
   (b) $[ML^{-1}T^{-2}]$
   (c) $[ML^2T^{-1}]$
   (d) $[M^{-1}L^3T^0]$

2. The instantaneous velocity of a particle moving in a straight line is given as $v = \alpha t + \beta t^2$, where α and β are constants. The distance travelled by the particle between 1s and 2s is:
   (a) $3\alpha + 7\beta$
   (b) $\frac{3\alpha}{2} + \frac{7\beta}{3}$
   (c) $\frac{2}{\alpha} + \frac{7}{\beta}$
   (d) $\frac{2}{7\alpha} + \frac{3}{7\beta}$

3. Two projectiles thrown at 30^0 and 45^0 with the horizontal respectively, reach the maximum height in the same time. The ratio of their initial velocities is:
   (a) $1: \sqrt{2}$
   (b) $3: \sqrt{2}$
   (c) $\sqrt{2}:1$
   (d) $1: 2$

4. If $\vec{A} = 2\hat{\imath} + 3\hat{\jmath}$ and $\vec{B} = \hat{\imath} + \hat{\jmath}$ find the magnitude of component of $\vec{A}$ along $\vec{B}$ is
   (a) $5/\sqrt{2}$
   (b) $3/\sqrt{2}$
   (c) $1/\sqrt{2}$
   (d) $\sqrt{2}$

5. The time period of an earth satellite in circular orbit is independent of:
   (a) the mass of the satellite
   (b) radius of its orbit
   (c) both the mass and radius of the orbit
   (d) neither the mass of the satellite nor the radius of its orbit.

1

6. A boy of 50 kg is standing in a lift moving down with an acceleration 9.8 m/s². The apparent weight of the boy will be (take g = 9.8 m/s²)
   (a) 5.10 N
   (b) 490 N
   (c) 50 N
   (d) zero

7. The SI unit of universal gas constant (R) is
   (a) watt K^{-1} mol^{-1}
   (b) newton K^{-1} mol^{-1}
   (c) joule K^{-1} mol^{-1}
   (d) erg K^{-1} mol^{-1}

8. A particle moves with a velocity $(5\hat{i} - 3\hat{j} + 6\hat{k})$ m/s under the influence of a constant force vector $\vec{F} = (10\hat{i} + 10\hat{j} + 20\hat{k})$ N. The instantaneous power applied to the particle is
   (a) 200 Js⁻¹
   (b) 140 Js⁻¹
   (c) 40 Js⁻¹
   (d) 170 Js⁻¹

9. The angular momentum of a system of particles is conserved:
   (a) when no external force acts upon the system
   (b) when no external torque acts upon the system
   (c) when no external impulse acts upon the system
   (d) when the axis of rotation remains the same.

10. The given graph shows the extension (Δl) of a wire of length **1m** suspended from the top of a roof at one end and with a load **W** connected to the other end. If the cross-sectional area of the wire is 10⁻⁶ m², the Young's modulus of the material of the wire is:

   $\Delta l (\times 10^{-4}$ m$)$
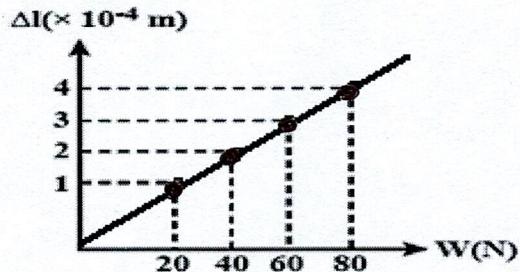
   (a) 2×10^{11} N/m²
   (b) 2×10^{-11} N/m²
   (c) 3×10^{12} N/m²
   (d) 2×10^{-13} N/m²

11. The x−t graph of a particle undergoing simple harmonic motion is shown below. The displacement of the particle at t=4/3 s is:
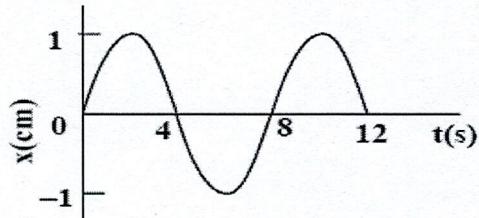
   (a) $\frac{1}{\sqrt{3}}$
   (b) $\sqrt{3}$
   (c) $\frac{\sqrt{3}}{2}$
   (d) $\frac{2}{\sqrt{3}}$

12. An ideal gas undergoes isothermal process from some initial state I to final state F. Choose the correct equation for the given process(the symbols carry their usual meaning) :
   (a) dU=dW
   (b) dQ=0
   (c) dQ=dU
   (d) dQ=dW

2

For Questions 13 to 16, two statements are given - one labelled Assertion (A) and other labelled Reason (R). Select the correct answer to these questions from the options as given below.
(a) If both Assertion and Reason are true and Reason is correct explanation of Assertion.
(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(c) If Assertion is true but Reason is false.
(d) If both Assertion and Reason are false.

13. **Assertion**: The average speed of an object is greater than or equal to the magnitude of the average velocity over a given time interval.
    Reason: The two are equal only if the path length is equal to the magnitude of displacement.

14. **Assertion:** The graph of the total energy of a particle in SHM with respect to position is a straight line with zero slope.
    Reason: The total energy of a particle in SHM remains constant throughout its motion.

15. **Assertion:** The temperature of a gas does not change, when it undergoes an adiabatic expansion.
    Reason: During an adiabatic process, heat energy is exchanged between a system and its surroundings.

16. **Assertion:** Linear momentum of a body changes even when it is moving uniformly in a circle.
   **Reason:** In uniform circular motion, velocity remains constant.

SECTION-B

17. The volume of a liquid flowing out per second of a pipe of length l and radius r is written by a student as $V = \pi P r^4 / 8\eta l$ where P is the pressure difference between the two ends of the pipe and η is the coefficient of viscosity of the liquid having dimensional formula $ML^{-1} T^{-1}$. Check whether the equation is dimensionally correct.

18. Find the expression for the total energy of a satellite revolving around the surface of the earth. What is the significance of the negative sign in the expression?

19. Derive an expression for the excess pressure inside a soap bubble.

<div align="center">OR</div>

A slab consists of two parallel layers of different materials 4 cm and 2 cm thick. The coefficient of conductivity of the materials is 0.54 Wm^{-1}K^{-1} and 0.36 Wm^{-1}K^{-1} respectively. If the opposite faces of the slab are kept at 100°C and 0°C, calculate the temperature at the interface at steady state.
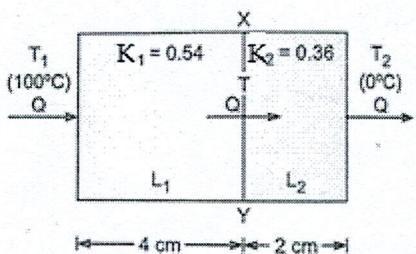
20. Using the expression of average pressure exerted by gas molecule $(P = \frac{1}{3}\rho v_{rms}^2)$, show that the average kinetic energy of a gas molecule is directly proportional to the absolute temperature of gas. Hence bring out the kinetic interpretation of temperature.

21. Two wires each of area of cross section 1.0×10^{-3} m², one made of steel and other made of brass are loaded as shown in the figure. The unloaded length of steel wire is 1.5 m and that of brass wire is 1.0 m. Young's modulus of steel is 2.0×10^{11} Pa. Compute the elongation of steel wire. Young's modulus of brass is 0.9×10^{11} Pa. (1 Pa = 1 N/m²).
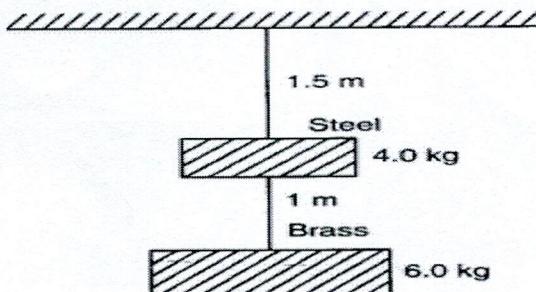

SECTION-C

22. The time of oscillation **T** of a small drop of a liquid under surface tension (whose dimensions are those of force per unit length) depends upon the density **d**, the radius **r** and the surface tension **S**. Derive the expression for the time (**T**) of oscillation of liquid drop by dimensional analysis method.

23. The acceleration experienced by a boat after the engine is cut off is given by $\frac{dv}{dt} = -kv^3$ where **k** is a constant. If v_0 is the magnitude of the velocity at cut off, find the magnitude of the velocity (**v**) at time t after the engine gets cut off.

24. Define terminal velocity. Derive an expression for the terminal velocity of a spherical body falling through a viscous liquid.

25. A transverse harmonic wave on a wire is expressed as:
    y(x, t) = 3 sin (36t +0.018x +π/4).
    where x and y are in cm and t in seconds.

    (i) Is it a stationary wave or a travelling wave?
    (ii) What is the speed of the wave?
    (iii) Find its
    (a) frequency
    (b) amplitude
    (c) initial phase at the origin
    (iv) Calculate the smallest distance between two adjacent crests in the wave.
    ### OR
    A trolley of mass 3.0 kg is connected to two identical springs, each of force constant 600 N/m as shown in Fig.
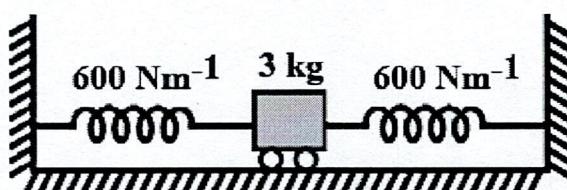
    If the trolley is displaced from its equilibrium position by 5.0 cm and released, what is
    (a) the time period of oscillation
    (b) the maximum speed of the trolley
    (c) How much is the total energy dissipated as heat by the time the trolley comes to rest due to the damping force?

4

26. A projectile is fired from the ground at an angle θ with the horizontal.
    (a) Show that its trajectory is parabolic in nature.
    (b) Obtain an expression for the maximum height attained by it.

27. Show that for small oscillations, the motion of a simple pendulum is simple harmonic. Derive an expression for its time period and frequency of oscillation.

28. Derive the expression for variation in the value of acceleration due to gravity 'g' with height above the surface of the Earth. Draw a graph showing the variation of acceration due to gravity 'g' with distance 'r' starting from the centre of the earth to a point outside the earth.

SECTION-D (Case based questions)

29. Friction between any two surfaces in contact is the force that opposes the relative motion between them. The force of limiting friction (F) between any two surfaces in contact is directly proportional to the normal reaction R between them i.e. F $\propto$ R or F = μR, where μ is coefficient of limiting friction.
    If θ is angle of friction then $\mu = \tan \theta$.
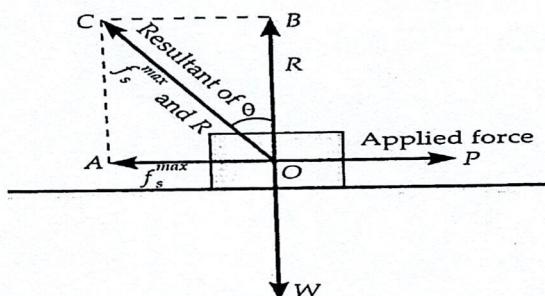
With the help of passage given above, chose the appropriate alternative for each of the following questions:

(i) The force of 49 N is just able to move a block of wood of mass 10 kg on a rough horizontal surface. Taking g= 9.8 m/s^2, the coefficient of friction will be:
    (A) 0.5
    (B) 4.9
    (C) 0.2
    (D) 5

(ii) If the coefficient of friction is 1, then the angle of friction is:
    (A) 34^0 26'
    (B) 30^0
    (C) 26^0 34'
    (D) 45^0

(iii) A block of mass 2 kg is lying on an inclined plane, inclined to the horizontal at 60^0. If the coefficient of friction is 0.5, the magnitude of frictional force acting on the block
    (take g= 9.8 m/s^2) will be:
    (A) 490 N
    (B) 4.90 N
    (C) 0.49 N
    (D) 149 N

5

(iv) A horizontal force of 1.2 kgf is applied on a 1.5 kg block which rests on a horizontal surface. If the coefficient of friction is 0.3, the force of friction (take g= 9.8 m/s²) will be:
   (A) 0.45 kgf
   (B) 1.2 kgf
   (C) 1.5 kgf
   (D) 0.3 kgf

OR

(iv) A horizontal force of 10 N is necessary to just hold a block stationary against a wall. The coefficient of friction between the block and the wall is 0.2. The weight of the block is-
   (A) 2 N
   (B) 50 N
   (C) 100 N
   (D) 20 N

30. The centre of mass of a body or a system of bodies is the point which moves as though all of the mass were concentrated there and all external forces were applied to it. Hence, a point at which the entire mass of the body or system of bodies is supposed to be concentrated is known as the centre of mass.
   The motion of this unique point is identical to the motion of a single particle whose mass is equal to the sum of all individual particles of the system and the resultant of all the forces exerted on all the particles of the system by surrounding bodies or action of a field of force is exerted directly on that particle.

(i) Two bodies of masses 1 kg and 2 kg are lying in xy-plane at (-1, 2) and (2, 4), respectively. The coordinate of centre of mass will be:
   (A) (1, 10/3)
   (B) (1, 0)
   (C) (0,1)
   (D) (None of these)

(ii) Two balls of same masses start moving towards each other due to gravitational attraction, if the initial distance between them is L. Then, they meet at
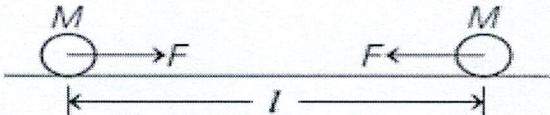
   (A) L/4
   (B) L/2
   (C) L/3
   (D) L

(iii) Centre of mass of the earth and the moon system
   (A) cannot be predicted
   (B) lies closer to the moon
   (C) lies closer to the earth
   (D) lies at the mid-point of line joining the earth and the moon

(iv) Two identical particles move towards each other with a velocity 2v and v respectively. The velocity of centre of mass is
   (A) v
   (B) v/3
   (C) v/2
   (D) zero

6

OR

(iv) Centre of mass of an isolated system has :
    (A) increasing velocity
    (B) decreasing velocity
   (C) constant velocity
    (D) none of these

SECTION-E

31. (a) Derive an expression for the height to which a liquid will rise in a capillary tube due to capillary action.
    (b) What will happen if the length of the capillary tube is smaller than the height to which the liquid rises in the tube? Justify mathematically.

OR

(a) State Bernoulli's theorem. With the help of labelled diagram, prove that the total energy per unit volume of an ideal liquid in streamline motion always remains constant.
(b) A horizontal pipe line carries water in a streamline flow. At a point along the pipe where the cross sectional area is **10 cm²**, the water velocity is **1 m/s** and pressure is **2 ×10³ Pa**. What is the pressure at another point where the cross-sectional area is **5 cm²**?

32. (a) What is Elastic Collision? Prove that in one dimensional elastic collision between two bodies the relative velocity of approach before collision is equal to relative velocity of separation after collision.
    (b) Find the expression for the velocities of the two bodies after collision.

OR

(a) A body of mass **m** initially at rest slides down from the top of an inclined plane of length *l* having an angle of inclination *θ* with the horizontal. It comes to a rest after covering a distance **S** on the horizontal plane as shown in the given figure. Assuming the coefficient of friction for both the inclined and the horizontal planes to be same as *μ* .
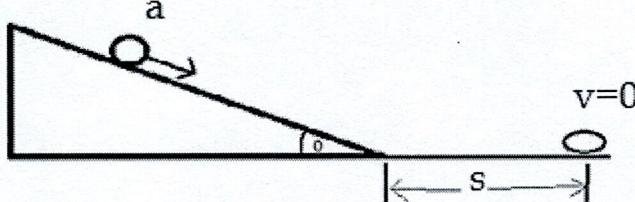
Obtain expressions for
(i) acceleration of block down the inclined plane and show the different forces acting on the body during its motion down the inclined plane
(ii) work done by friction on the inclined plane and on the horizontal plane
(iii) velocity of the body as it reaches the bottom of the inclined plane.

(b) A body of mass 0.5 kg travels in a straight line with velocity $v = ax^{3/2}$ where $a = 5$ m$^{-1/2}$ s^{-1}. What is the work done by the net force during its displacement from x = 0 to x = 2 m?

7

33. What are Standing waves? Explain analytically the formation of standing waves in closed organ pipes. Derive an expression for the fundamental frequency of vibration in it. Show that in various modes of its vibrations, only odd harmonics are produced.

OR

What are Beats? Discuss the formation of Beats analytically. Prove that the number of beats per second is equal to the difference between frequencies of the two superposing waves.

A tuning fork of unknown frequency, when sounded together with one of frequency 288 Hz gives 4 beats per second. When loaded with wax, it again gives 4 beats per second. Find the value of this unknown frequency.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class – XI
Time – 3 Hours

Subject – Political Science
Maximum Marks - 80

General Instructions:

1. The question paper consists of five sections (A, B, C, D and E) with 30 questions in total.
2. All questions are compulsory.
3. Question numbers 1-12 are multiple choice questions of one mark each.
4. Question numbers 13-18 are of 2 marks each. Answers to these questions should not exceed 50-60 words each.
5. Question numbers 19-23 are of 4 marks each. Answers to these questions should not exceed 100-120 words each. There is an internal choice in two of the 4 marks questions
6. Question numbers 24-26 are passage, cartoon and map-based questions. Answer accordingly.
7. Question numbers 27-30 are of 6 marks each. Answers to these questions should not exceed 170-180 words.
8. There is an internal choice in 6 marks questions.

SECTION A

1. The composition of the Constituent Assembly was based on the proposals of which of the following?
   A. Wavel Plan
   B. Cabinet Mission Plan
   C. Cripps Mission
   D. August Offer

2. The Nehru Report of 1928 provided that every person of age _____ and above should be entitled to vote.
   A. 18
   B. 21
   C. 25
   D. 28

3. Who among the following does not influence the process of judicial appointment?
   A. Chief Justice of India
   B. Council of Minister
   C. President
   D. Bar Council of India

4. Who among the following is not involved in policy making process?
   A. Executive
   B. Bureaucracy
   C. Citizens
   D. None of the above

1

5. Which of the following states does not have bicameral legislature?
   A. Andhra Pradesh
   B. Madhya Pradesh
   C. Telangana
   D. Bihar

6. Which type of executive system does India follow?
   A. Semi-Presidential
   B. Parliamentary
   C. Presidential
   D. Semi Presidential

7. In which year did the Supreme Court gave judgement in Keshavananda Bharti Case?
   A. 1971
   B. 1973
   C. 1975
   D. 1977

Assertion-Reason Question
Direction –Question 8 and 9 , In the question given below, there are two statements marked as Assertion (A) and Reason(R) . Read these statements and choose one correct answer from the given options.
a. Both A and R are true and R is the correct explanation of A
b. Both A and R are true and R is not the correct explanation of A
c. A is true, but R is false
d. A is false, but R is false

8. **Assertion-(A)** In Indian constitution discrimination has been provided in Article 15
   Reason-(R) Our constitution also abolishes the practice of untouchability.

9. **Assertion- (A)** One of the duties of a democratic government is to meet the basic needs of its people
   Reason –(R) According to Rawls, a society is that society in which ascending sense of respect and descending sense of disrespect is dissolved into the creation of compassionate society.

10. _____ equality means that all people are equal before law.
    A. Political
    B. Social
    C. Civil
    D. Positive

11. " It means that the court orders that the arrested person should be presented before it. It can also order to set free and arrested person if the manner or grounds of arrest are not lawful or satisfactory." . Name the Writ mentioned above.
    A. Mandamus
    B. Prohibition
    C. Habeas Corpus
    D. Quo Warranto

12. Match list I with List II .

List I	List II
A. French Constitution	i. Directive Principles of State Policy
B. Irish Constitution	ii. Idea of Residual Powers
C. US Constitution	iii. Principles of Liberty, Equality and Fraternity
D. Canadian Constitution	iv. Fundamental Rights

Codes:-
A. A-(iii), B-(i), C-(iv), D-(ii)
B. A-(i), B-(ii), C-(iii), D-(iv)
C. A-(ii), B-(i), C-(iii), D-(iv)
D. A-(iv), B-(ii), C-(iii), D-(i)

SECTION B

13. What is Preventive Detention?

14. What does Immanuel Kant say about Justice?

15. What is the purpose behind parliamentary privilege?

16. How can equality be established in the society?

17. What do you mean by the term Nationalism?

18. How can you explain Social Justice and how can that be established?

SECTION C

19. Justice delayed is justice denied'. Justify the statement and give suggestions for fast redressal of justice

20. Discuss the objectives of our constitution as embodied in the Preamble.

21. What is the difference between Political Executive and Permanent Executive?

22. "Equality must involve some kind of fairness." Justify this statement.

23. What are the main characteristics of the method of Amendment to the Constitution of India ?

SECTION D

24. **Read the following passage carefully and answer the question that follows :-**
But I have come to say a few words on behalf of the Adivasis of India. In the past, thanks to the major political parties, thanks to the British government and thanks to every enlightened Indian citizen, we have been isolated and kept, as it were, in zoo. We are willing to mix with you and it is for that reason that we have insisted on a reservation of seats as far as the legislatures are concerned. We have not asked for separate electorates under the 1935 Act. Throughout the legislatures in India, there were altogether only 24 Adivasi MLAs. Out of total of 1585 and not a single representative at the centre.
I. Whose words are depicted in the passage ?
   A. Jaipal Singh
   B. Mahatma Gandhi
   C. B.R Ambedkar
   D. Jawaharlal Nehru

II. _____ are the tribal community and along the indigenous population of India. They mostly live on Hunting and Gathering.
   A. Adivasis.
   B. Baniya
   C. Jain's
   D. None of these

III. What is the strength if Adivasis according to the Act of 1935 in the legislatures ?
   A. 24
   B. 35
   C. 34
   D. 22

IV. The Delimitation Commission is appointed by the _____ of India and works in collaboration with the Election Commission of India.
   A. Vice President
   B. President
   C. Governor
   D. Chief Minister

25. Study the cartoon given below and answer the question that follows.

I. What does the picture given here depicts?
   A. Interruption by women and meeting.
   B. Representing bad influence of politicians activities on child.
   C. Women showing anger on husband
   D. All of the above.

II. Who said the following statement?
   "Politics envelops is like a coil of snake and there is no other way out but to wrestle with it "
   A. Jawaharlal Nehru
   B. Mahatma Gandhi
   C. Aristotle
   D. Socrates

III. Which of the following statement is incorrect in context of politics ?
   A. Politics is required to take fair decision.
   B. There is no need of politics for existence of any society.
   C. Politics is important for the progress of society.
   D. Politics involves the multiple negotiations.

IV. What is the significance of Politics ?
  A. It binds the diverse people together.
  B. It helps in developing country.
  C. It is a process to establish equality.
  D. All of the above.

26. Observe the Cartoon give below and answer the questions that follows :-

  I.   What does the cartoon represent?   (1)
  II. Why do you think such situations occur ?   (2)
  III. Who takes the final decision on all such matters ?   (1)

SECTION E

27. Elucidate the functions of the Constitution

OR

Write some factors or rising of Nationalism. What do you understand by National self determination?

28. Differentiate between Political Science and Politics.

OR

'Gandhian Principles of politics are relevant in Indian politics.' Justify the statement

29. What are various attributes of Justice? Explain with example

OR

What are the Salient features of Fundamental Rights?

30. Explain the Dimensions of Equality?

OR

What are the impacts of Judicial Activism? Explain both Positive and Negative factors.

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI	Subject – Psychology
Time – 3 Hours	Maximum Marks- 70

General instructions:

➢ Section A has 15 questions, from Question No. 1 to 15 carrying 1 marks each.
➢ Section B has 5 questions, from Question No. 16 to 21, carrying 2 marks each. Answer to these questions should not exceed 30 words.
➢ Section C has 4 questions, from Question No. 22 to 24, carrying 3 marks each. Answer to these questions should not exceed 60 words.
➢ Section D has 4 questions from 25 to 28. Each question carries 4 marks. Answer to these questions should not exceed 120 words. Answer both questions.
➢ Section E has 2 questions from 29-30 carrying 6 marks. Answer to these questions should not exceed 200 words. Answer both questions
➢ Question Nos. 31 – 34 in Section F are based on two cases given. Answer to each 1 mark question should not exceed 20 words. Answer to each 2 marks question should not exceed 30 words

Q1	The following statement describes _____ factor that influences selective attention, 'The bright lights in the new year celebrations caught my attention'. a) Internal factors c) External factors b) Motivational factors d) Cognitive factors	1
Q2	Cynthia got an opportunity to participate in an experiment, in which the psychologist focused on the acquisition, storage, manipulation, and transformation of information received from the environment along with its use and communication. Identify the branch to which the psychologist belongs to _____. a) Biological Psychology c) Clinical Psy b) Cognitive Psy d) Developmental Psychology	1
Q3	**Assertion (A):** Another source of threat to prenatal development are 'Teratogens'. **Reason (R):** These are environmental agents that cause deviations in normal development that can lead to serious abnormalities or death. 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 of A c) A is true, R is false d) A is false, R is true	1
Q4	Raju has short break at 10:30am and at 12:30pm regularly in school. He knows he can buy food from the food counter being arranged around this time. He pays attention to the appearance of the food counter at regular intervals of time. This phenomenon of attending to stimuli that appears at regular intervals of time than when they appear at irregular intervals is called _____ . a) Temporal Uncertainty c) Spatial Uncertainty b) Partial Reinforcement d) Conditioned learning	1

1

Q5	No memories are reported pertaining to early childhood particularly during the first 4 to 5 years. This phenomenon is known as _____ a) Short Term Memory Loss b) Forgetting due to retrieval failure c) Childhood Amnesia d) Decayed Memory	1
Q6	**Assertion (A)** – There is no one method that can solve all problems related to retention and bring about an overnight memory improvement. **Reason (R)** – As you need to attend to a wide variety of factors which affect your memory such as your health status, your interest and motivation, your familiarity with the subject matter and so on. 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 of A c) A is true, R is false d) A is false, R is true	1
Q7	A researcher wants to study the behaviour of an avid reader during a literature festival. Which of the following methods can be used for the purpose? a) Naturalistic observation b) Correlation method c) Experimental method d) Survey method	1
Q8	The variables on which the effect of independent variable is observed is called _____. a) Extraneous Variable b) Relevant Variable c) Dependent Variable d) Confounding Variable	1
Q9	Verbal learning is usually intentional but a person may learn some features of the words unintentionally or incidentally. (True/ False)	1
Q10	_____ memory helps us remember the meaning of say 'non-violence' or remember that 2+6=8 or the STD code of New Delhi is 011 or that the word 'elaphant' is misspelt. a) Long Term Memory b) Implicit Memory c) Semantic Memory d) Procedural Memory	1
Q11	**Assertion (A):** A reinforcer has numerous features, which affect the course and strength of a response. **Reason (R):** A reinforcer is any stimulus or event, which decreases the probability of the occurrence of a (desired) response. 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 of A c) A is true, R is false d) A is false, R is true	1
Q12	The Gestalt psychologists also indicate that our cerebral processes are always oriented towards the perception of _____ a) Good figure b) Figure – ground segregation c) Proximity d) Similarity	1

Q13	Around 1910, _____ rejected the ideas of mind and consciousness as subject matters of psychology. a) N. N. Sengupta c) Durganand Sinha b) JB Watson d) Sigmund Freud	1
Q14	Which of the following is learnt with the help of observational learning? a) Courtesy c) Pro-social behavior b) Politeness d)All of the above	1
Q15	**Assertion (A):** Cultural differences have also been found in the gaze behaviour. **Reason (R):** The processes involved in emotions have been known to be influenced by culture. 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 of A c) A is true, R is false d) A is false, R is true	1
	SECTION – B	
Q16	Define Cognition. Mention some of the major cognitive processes. **OR** Define the term 'motivation'. Mention its types.	2
Q17	Mention any two goals of psychological enquiry.	2
Q18	What are monocular cues and binocular cues in depth perception?	2
Q19	Define 'Learning'. Briefly explain any one method used in studying Verbal Learning	2
Q20	What is inductive and deductive reasoning?	2
Q21	Explain the following terms: a) Maintenance rehearsal b) chunking.	2
	SECTION – C	
Q22	Differentiate between declarative and procedural memories **OR** Define mnemonics? Suggest a plan to improve your own memory with the help of mnemonics using images.	3
Q23	Explain the functional limitations of sense organs.	3
Q24	Explain in detail the process of creative thinking	3
	SECTION – D	
Q25	Give a brief account of the evolution of psychology.	4
Q26	Define Adolescence. Discuss some of the major concerns faced by adolescents.	4

Q27	Explain the procedures for studying verbal learning. **OR** Define operant conditioning. Discuss the factors that influence the course of operant conditioning.	4
Q28	Why is it important to manage negative emotions? Suggest ways to manage negative emotions.	4
	SECTION – E	
Q29	What are the challenges faced by individuals on entry to adulthood? **OR** What is development? Explain in detail Urie Bronfenbrenner's contextual view of development.	6
Q30	What are the step of conducting psychological research ? Explain the difference between experimental and control group with the help of an example. **OR** Explain the characteristics of a standardised test and Describe the limitations of psychological enquiry in detail.	6
	SECTION – F	
	A study was performed by Dweck (1975). She was concerned with children who gave up too easily when faced with a difficult problem or failure. She wondered how they could be helped. Common sense tells us to give them easy problems in order to increase their success rate so that their confidence goes up. Only later should we give them difficult problems which they will be able to solve because of their new-found confidence. Dweck's study tested this. She took two groups of students who were trained for 25 days in solving math problems. The first group was given easy problems which they were always able to solve. The second group had a mix of easy and difficult problems. Obviously, in case of difficult problems, they failed. Whenever this happened Dweck told them that their failure was because they had not tried hard enough and persuaded them not to give up and keep trying. After the training period was over, a new set of math problems were given to the two groups. What Dweck found goes against common belief. Those who had always succeeded because they were given easy problems, gave up much faster when they faced failure than those who had experience of both success and failure and were taught to attribute failure to their lack of effort.	
Q31	Dwek looks at the study of psychology as a natural science or popular notions?	1
Q32	Explain briefly hypothetico-deductive model	2
	In the classic study by Watson & Rayner (1928), a 9-month-old infant called Albert was exposed to multiple stimuli like a white rabbit, a rat, cotton wool and various masks to see if he responded to them in any way. Since he did not show any signs of fear these were neutral stimuli. Separately, when the researchers made a loud noise by striking a steel bar with a hammer behind Albert's head, it scared him and made him cry. When Albert was 11 months old, the researchers brought him into the laboratory. The white rat was presented and within seconds the hammer was struck on the steel bar creating the loud noise. Albert burst into tears. This pairing of the presentation of the white rat and the loud noise was repeated across two sessions a week apart. Now, little Albert showed all the signs of fear (crying and avoidance behaviour) every time the rat was shown even when no sound was made.	

| Q33 | Was a control group used in this study? | 1 |
| Q34 | This study happened before ethical guidelines were implemented in psychology. Discuss any one violation of ethics by today's standards that you observed here. | 2 |

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class - XI	**Subject – Sociology**
Time – 3 Hours	**Maximum Marks- 80**

General Instructions

1. The question paper is divided into four sections.
2. There are 35 questions in all. All questions are compulsory.
3. Section A includes question No. 1-16. These are objective type questions.
4. Section B includes question No. 17-25. These are very short answer type questions carrying 2 marks each. Answer to each question should not exceed 30 words.
5. Section C includes question No. 26-32. These are short answer type questions carrying 4 marks each. Answer to each question should not exceed 80 words.
6. Section D includes question No. 33-35. They are long answer type questions carrying 6 marks each. Answer to each question should not exceed 200 words each. Question no 35 is to be answered with the help of the passage given.

SECTION - A

1. .... explanation for behaviour based on the assumption that one can really identify natural reasons for behaviour.
   A. Naturalistic
   B. Scientific
   C. Artificial
   D. None of these

2. Which among the following disciplines is characterized by long fieldwork tradition, living in the community studies and using ethnographic research methods?
   A. Social Anthropology
   B. Psychology
   C. Sociology
   D. History

3. Who among the following used the term 'life chances', which refers to the rewards and advantages afforded by market capacity?
   A. Max Weber.
   B. Karl Marx.
   C. Emile Durkheim
   D. None of the above.

4. A social group can be defined by the characteristics of -----.
   i. Persistent interaction to provide continuity.
   ii. A stable pattern of these interactions.
   iii. A sense of belonging.
   iv. Acceptance of common norms and values.
   Codes.
   A. i, iii and iv
   B. ii and iv
   C. iii and iv
   D. All of these

1

5. According to sociologist the number of joint families has gradually increased in post independence India. According to him, the rising life expectancy in India is a contributing factor. Over the period 1941-50 to1981- 85 it increased for men from 32.5 to 55.4 years and for women from 31.7 to 55.7 years. As a result, the proportion of people aged 60 and up in the total population has risen.
    A. A M Shah.
    B. Emile Durkheim.
    C. Herbert Spencer.
    D. George Simmel.

6. **Assertion (A):** Sovereignty refers to the undisputed political role of state over a given territorial area.

    Reason (R): These states were achieved largely through struggles,which limited the power of monarchs or actively overthrow them.
    Codes
    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 of A.
    C. A is true but R is false.
    D. A is false but R is true.

7. Who is the founder of the Functional School of Anthropology?
    A. Leslie White.
    B. Edward Taylor.
    C. Clifford Geertz.
    D. Bronislaw Malinowski.

8. Assertion (A): Cultural change is the way in which societies change their pattern of culture.
    Reason (R): Cultural change can occur through changes in the natural environment, contact with other cultures or processes of adaptation.
    Codes.
    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 of A.
    C. A is true but R is false.
    D. A is false but R is true.

9. Political changes come through----.
    A. Mass dissent of people.
    B. Technological innovations.
    C. Redistribution of power.
    D. Coercion.

10. The term 'dominant castes' was coined by…..
    A. MN Srinivas.
    B. Ramaswamy Naikar.
    C. A R Desai.
    D. DP Mukherjee.

11. Culture is used as a short label for a very wide field of.. ..
    i.   Ideas
    ii. Values
    iii. Beliefs
    iv. Ethics
    Codes
    A. i and ii
    B. i, iii and iv
    C. ii and iv
    D. All of the above

12. **Assertion (A):** Legitimacy implies conformity to existing norms of right, propriety and Justice.
    Reason (R): Legitimacy refers to the degree of acceptance that is involved in power relations.
    Codes.
    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 of A.
    C. A is true but R is false.
    D. A is false but R is true.

13. During the late 17th and 18th century, western Europe saw the emergence of radically new ways of thinking about the world. Referred to as these new philosophies established the human being at the centre of the universe and rational thought as the central feature of the human being.
    A. The Positivism
    B. The Rationalism.
    C. The Enlightenment.
    D. The Anarchism

14. **Assertion (A):** Karl Max placed great emphasis on economic structures and processes because he believed that they formed the foundations of every social system throughout human history.
    Reason (R): For Marx, the most important method of classifying people into social group was with reference to religion, language, nationality or similar identities rather than production process.
    Codes.

    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 of A.
    C. A is true but R is false.
    D. A is false but R is true.

15. At university of------ L.K.Anantkrishna Iyer helped to set up the first Anthropology post graduate department.
    A. Bombay
    B. Cochin
    C. Calcutta
    D. Baroda

16. **Assertion (A):** Caste is an institution based on segmental division.
    Reason (R): Caste does not restrict the choice of occupation.
    Codes
    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 of A.
    C. A is true but R is false.
    D. A is false but R is true.

SECTION – B

17. What is the view of Darwin about society?

18. In sociology, what do you understand by Status?

19. What do you mean by patriarchal society?

20. How is culture related to identity?

    OR

    Describe the cosmopolitan outlook to culture.

21. What is the meaning of authority?

    OR

    Define conformity.

22. What do you understand by the term 'division of labour'?

    OR

    "Sacred and profane are two important social facts". Define them.

23. What do you understand by charismatic authority?

24. What are the three principles of change that are recognised by D. P. Mukherjee?

25. What do you understand by the term assimilation?

    OR

    What do you understand by 'living tradition'?

SECTION – C

26. Bring out four differences between Sociological perspective and common sense knowledge.

    OR

    List any four relationships between sociology and political science.

27. Discuss the importance of primary groups in the society.

28. What are political institutions, also differentiate between power and authority.

29. Peer groups are extremely important agent of socialization. Discuss.

    OR

    Explain the role of socialization in personality formation.

30. Technological changes do not always ensure a significant impact on society. Justify.

    OR

    Explain the differences between rural and urban societies in detail.

31. What are the main features of the 'theory of alienation'?

OR

Discuss Durkheim's notion of social Solidarity.

32. Describe comprehensive features of caste offered by Ghurye.

OR

What is welfare state? Why AR Desai was critical of the claims made on its behalf.

SECTION - D

33. Discuss some of the factors behind social change in the society.

OR

Define 'Dominant caste'. What are the changes that have taken place in rural households due to agriculture?

34. Explain the concept of 'Interpretive sociology' given by Max Weber. What do you understand by ideal types?

OR

Discuss the main features of the Marxian concept of social change through "Mode of production theory".

35. Read the given passage and answer the questions that follow.

GS Ghurye can be considered the founder of institutionalised sociology in India. He headed India's very first postgraduate teaching department of Sociology at Bombay University for thirty five years. He guided a large number of research scholars. Many of whom went on to occupy prominent positions in the discipline. He also found the Indian Sociological Society as well as its journal Sociological Bulletin. His academic writings were not only prolific but very wide ranging in the subjects they covered. At a time when financial and institutional support for university research was very limited, Ghurye managed to nurture sociology as an increasingly Indian discipline.

1. What were the main arguments on either side of the debate (Ghurye Vs Verrier Elwin) about how to relate to tribal community? (3)

2. Outline the positions of Herbert Risley and GS Ghurye on the relationship between race and caste in India. (3)

DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class – XI

Time –2 Hours

Subject – Fine Arts Painting/Graphics

Maximum Marks- 30

General Instructions:
- Section-A: Attempt all Questions (Each Question will carry 1 Mark)
- Section-B: Attempt all Questions (Each Question will carry 2 Marks)
- Section-C: Attempt any two Questions (Each Question will carry 6 Marks)

SECTION-A
Very short answer or select the right answer from the given options: [1x8=8]

1. (A) Pietradura is used in _____.
   - (a) Jain Architecture
   - (b) Hindu Architecture
   - (c) Indo-Islamic Architecture
   - (d) Indo-cave temple Architecture

   (B) The Bhimbetka rock shelters were discovered by _____.
   - (a) Alexander Cunningham
   - (b) H.D. Sankalia
   - (c) V.S. Wakankar
   - (d) Mortimer Wheeler

   (C) Which of the following features is not a part of Indo-Islamic Architecture?
   - (a) Arches in architecture
   - (b) Human figures in architecture
   - (c) Calligraphy in architecture
   - (d) Minarets in architecture

   (D) What is the architectural style of the Gol Gumbaz in Bijapur is known for?
   - (a) Tall spires
   - (b) Largest dome without support
   - (c) Ornamental carvings of animals
   - (d) Hindu temple motifs

   (F) The paintings in Bhimbetka belong to which period?
   - (a) Paleolithic to Medieval periods
   - (b) Indus Valley Civilization period
   - (c) Gupta period
   - (d) Mauryan period

1

(H) **Assertion (A):** Hunting scenes pre-dominant the Mesolithic paintings.
   Reason (R): Pre-historic people only knew how to paint animals.
   (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 of A.
   (c) A is true, but R is false.
   (d) A is false, but R is true.

(I) Which architecture was made in Kalinga style of architecture?
   (a) Khajuroho Temple
   (b) Ellora Temple
   (c) Konark Temple
   (d) Dilwara Temple

(J) Match the following

List-I	List-II
A. Kalibagnan	1. Punjab
B. Ropar	2. Gujrat
C. Harappa	3. Pakistan
D. Lothal	4. Rajasthan

   (a) A-1, B-3, C-4, D-2
   (b) A-4, B-1, C-3, D-2
   (c) A-3, B-4, C-2, D-1
   (d) A-3, B-1, C-4, D-2

SECTION-B : (Short answer type questions)
The answer to this question is expected in around 100 words.   [2x5=10]

2. **(A)** Which evidence suggests that the Indus Valley Civilization had advanced arts and crafts? Describe in detail.

OR

(B) Discuss the historical and artistic significance of the rock cut relief sculpture "Descent of the Ganga" at Mahabalipuram.

3. **(A)** Describe the basic differences between Buddha and Mahavira sculpture.

OR

(B) Appreciate the aesthetic beauty of 'Didarganj Yakshini'.

4. **(A)** 'This is a relief panel sculpture installed in a corner of Vimal Vasahi Temple' - Describe this relief sculpture.

OR

(B) "Ravana penance for a long time to please Lord Shiva but Shiva did not appear to him. Ravana became very angry and began shaking the Mount Kailash to punish Lord Shiva." Describe the sculpture.

5. **(A)** Give one example of a painting of the Paleolithic period as an evidence of dance and music according to your syllabus.

OR

(B) 'The Bodhisattva was called Padmapani _____ and was done in the_____ fresco technique.' Describe the statement and technique.

2

6. **(A)** 'Tower of Victory' patronized by the founder of the Delhi Sultanate. Describe the statement & this tower according to your syllabus.

OR

(B) It is a combination of a Mosque and gateway made in by the Deccani style of architecture is known as whispering gallery. Described this architecture in detail.

SECTION-C (Long answer type questions)
An answer to this question is expected in more than 200 words (Any two) [6x2=12]

7. "Shiva's dance is the source of all movements, gives rhythm to the universe.
   In sacred, He creates and preserves, destroys and releases energy".
   Describe the significance of the sculpture. How to create this type sculpture with bronze material, explain it.

8. What is the major characteristic of Indo-Islamic architecture?
   What is the difference between Indo-Islamic architecture and Hindu architecture?

9. " It is this Symbol of the victory of Dharma." Justify the statement with the help of form, symbolic representation that attributes is the Lion Capital and discuss its symbolic significance according to the mentioned image.
   What are the distinguished features in Mauryan art?
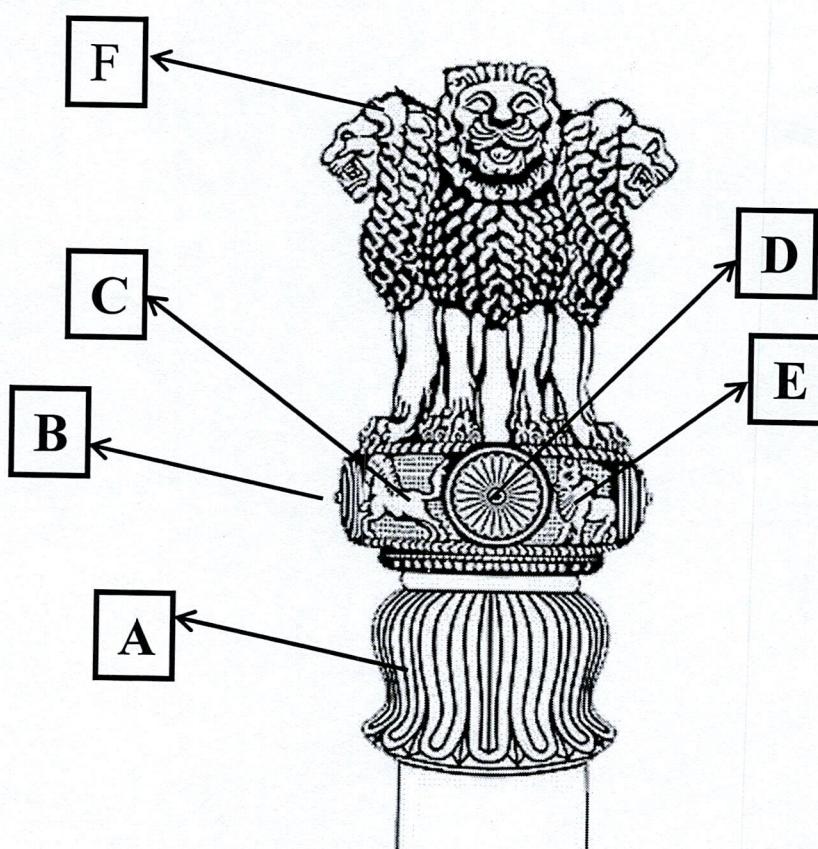
DELHI PUBLIC SCHOOL
SAIL TOWNSHIP, RANCHI
ANNUAL EXAMINATION (2024-25)

Class – XI	Subject – Hindustani Music Vocal
Time – 2 Hours	Maximum Marks- 30

सामान्य निर्देश :

इस प्रश्न पत्र में तीन खण्ड है **क , ख और ग।**

खण्ड-क 1 अंको का है। सभी प्रश्न अनिवार्य है।

खण्ड-ख 2 अंको का है। किन्हीं **पांच** प्रश्नों के उत्तर दे।

खण्ड-ग 6 अंको का है। किन्हीं **दो** प्रश्नों के उत्तर दे।

खण्ड - क   [1×8=8]

1. एकताल की खाली कौन सी मात्राओं पर आती है?
   i) 3-5
   ii) 3-9
   iii) 9-11
   iv) 3-7

2. सात स्वरों वाले राग को कौन सी जाति का राग कहा जाता है?
   i) औड़व - औड़व
   ii) षाड़व - षाड़व
   iii) संपूर्ण -संपूर्ण
   iv) कोई नहीं

3. इन तालों में से कौन सी ताल पखावज की ताल है?
   i) एकताल
   ii) तीनताल
   iii) चारताल
   iv) कहरवा ताल

4. पंडित विष्णु दिगंबर पलुस्करजी ने लाहौर में गंधर्व महाविद्यालय की स्थापना कब की?
   i) 1899
   ii) 1901
   iii) 1905
   iv) 1911

1

5. इन घरानों में से कौन सा घराना सही नहीं है?

    i) दिल्ली घराना

    ii) आगरा घराना

    iii) उदयपुर घराना

    iv) जयपुर घराना

6. मिलन कीजिए।

I	II
क. छोटा ख्याल	1. विलंबित लय
ख. बड़ा ख्याल	2. 14वी सदी
ग. नाट्यशास्त्र	3. 6 वी सदी
घ. बृहद्देशी	4. 36 अध्याय

    i) क-2 , ख - 1, ग - 4 , घ- 3

    ii) क-3 , ख - 1, ग - 4, घ- 2

    iii) क-3 , ख - 4, ग - 1, घ- 2

    iv) क-2 , ख -3, ग -4, घ-1

7. सही कथन को चुनिए -

    क. राग भीमपलासी मे ग नि स्वर कोमल लगते है।

    ख. विलंबित ख्याल की रचना 6वी सदी में हुआ था।

    ग. ख्याल के दो प्रकार होते है।

    घ. 6 मात्राओं वाले ताल एकताल है।

    i) क और ख

    ii) क और ग

    iii) ग और घ

    iv) ख और घ

8. **कथन - I:** तराना एक आधुनिक गायन शैली का एक प्रकार है। इस में स्वर और लय की प्रधानता होती है।

   कथन - II: तराना बड़े ख्याल के बाद गाया जाता है और इसकी लय विलंबित होती है।

   (i) कथन (अ) सही है, किन्तु (ब) गलत है।

   (ii) कथन (अ) गलत है, किन्तु (ब) सही है।

   (iii) कथन (अ) और कथन (ब) दोनो सही है।

   (iv) कथन (अ) और कथन (ब) दोनो गलत है ।

9. निम्नलिखित में से **किन्ही दो** को परिभाषित कीजिए : -

   निबद्ध - अनिबद्ध गान, राग, लक्षण गीत

10. दो तान सहित राग बिहाग के महत्वपूर्ण लक्षणों को लिखिए।

11. सूलताल का विस्तृत विवरण और इसका ठेका दुगुन सहित लिखिए।

12. 'नाट्य शास्त्र' की विषय वस्तु पर प्रकाश डालिए।

13. तानसेन जी के जीवन और संगीत के बारे में चर्चा करें।

14. राग भीमपलासी का शास्त्रीय परिचय लिखें ।

15. ध्रुपद गायन शैली की विशेषताएं क्या हैं ?

16. बृहद्देशी ग्रंथ का लेखक कौन है और इसकी रचना कब हुई ?

खण्ड - ग   [6×2=12]

17. एकताल और चारताल के ताल चक्र, लक्षण, और प्रयोग के बारे में विविधता से चर्चा करें। इन दोनों तालों के बीच में और समानताओं का उल्लेख करते हुए इनके संगीत में प्रयोग के उदाहरण भी दें।

18. आधुनिक काल में संगीत के प्रचार प्रसार में जिस व्यक्ति का परम योगदान हो उसका जीवन परिचय और उनके कार्य बताईए।

19. राग बिहाग में छोटे ख्याल की स्थाई को स्वर लिपिबद्ध करते हुए दो 16 मात्राओं वाले तान भी लिखें।

DELHI PUBLIC SCHOOL
SAIL Township, Ranchi
Annual Examination 2025

Class: XI
Max Marks: 70

Subject: Informatics Practices (065)
Time: 3 Hours

General Instructions:
- *There are 4 groups A, B, C, D, E*
- *Group A contains 11 marks from MCQ type questions.*
- *Group B contains 25 marks of Programming & Prog. Logic.*
- *Group C contains 14 marks from Computer fundamentals, Programing & Database concept.*
- *Group D contains 11 marks from SQL Commands*
- *Group E contains of 9 marks from Cyber security*
- *Keep margin at the left side of your answer script & clearly write the Question Numbers*
- *Keep spaces and mark 'line-of-separation' in between two answers.*

GROUP – A [11 marks]

Answer the following questions (Objective type):   [11X1=11]

1) A computer system has main three physical components in the CPU, are: _____.

2) _____ operator gives a decimal quotient of the division of any two numbers.

3) Cache Memory works as: _____ (i) Volatile memory   (ii) Non-volatile memory
   (iii) Switching between CPU & RAM   (iv) Controls ROM.

4) In the statement, **for i in range(0,10,3)**, values of i are: (i) 0 1 2 3 4 5 6 7 8 9   (ii) 1 3 5 7 9
   (iii) 0 3 6 9   (iv) 1 4 7

5) The output of the following code is_____:
   ```
   L = [5,10,15,20,25,30,35,40,45,50]
   del L[2]
   L[3]=25
   print(L)
   ```
   (i)   [5, 10, 20, 55, 30, 35, 40, 45, 50]
   (ii) [5, 10, 20, 25, 30, 35, 40, 45, 50]
   (iii) [5, 10, 55, 20, 25, 30, 35, 40, 45, 50]
   (iv) [5, 10, 15, 20, 25, 30, 35, 40, 45, 50]

6) Break terminates (i) Program (ii) Loop (iii) Flow of data   (iv) Immediate block

7) _____ is a mapping (non-scalar) data type. It is an unordered collection of key-value pairs; key-value pairs are put inside curly braces.   (i) Dictionary (ii) Module (iii) NumPy (iv) None of these

8) A Table "Employee" has 5 columns and 7 rows. Now two more rows have been added and one column has been removed. Choose the correct option.
   (i) Degree=7, Cardinality=6
   (ii) Degree=4, Cardinality=9
   (iii) Degree=5, Cardinality=7
   (iv) Degree=9, Cardinality=4

9) append() function is applied to add a value at_____ of the list.
   (i) First   (ii) Mid
   (iii) Just before last   (iv) Last

10) The 'Modify' keyword is used for: (i) Update Data   (ii) Update Column   (iii) None   (iv) Both (i) & (ii)

11) ____ is an integrated service which offers the things to bring physical objects online which easily allow to configure devices for machine-to-machine communication.
    (i)   NLP   (ii) IOT   (iii) VNP   (iv) GPT

12) Being a programmer, you help your juniors to complete their Python project work and write the output of <u>Any Thre</u> of the following codes given as tasks.   **[3X1=3]**

    (i)
```python
str = 'INDOARYAN'
for i in str:
    if (i=="A" or i=="N" or i=="R" or i=="Y"):
        print(i)
```

    (ii)
```python
L1 = list(range(20, 2,-2))
print(L1)
```

    (iii)
```python
str="IndoAryan"
str=str*2
print(str)
```

    (iv)
```python
str="Indo-Aryan"
print(str[-5:] )
```

13) Write a program to create a list of 3X4 2D arrays Lst initialized by zero (0). Then fill those with user-given values. Finally, print the sum of each row.   **[3]**

14) Create a module **calc_peri()** to find the perimeter of a rectangle, where input the values in the module and after calculating the result, return the result to the caller function to print.   **[3]**

<div align="center">**OR**</div>

Write a program to create an Array (using **NumPy**) with the following list:

x=[[7,8,9] , [1,2,3] , [10,11,12], [4,5,6]]

Then print the values of the Array of:

(i) 1st row and 2nd to 3rd columns of the array

(ii) 1st to 2nd rows and 1st to last columns of the array

15) Find out the Error(s), if there and show the output of the following code.   **[4]**
```python
c=1
while (c<=3):
        n=1
        while (n<=c):
                print(n , end)
                n=n+1
        print('/n')
c=c+1
```

16) Draw a Flowchart to check whether the entered number is Palindrome or not.   **[2]**

17) Draw a Flowchart to print Grade (A, B, C or D), on Average Marks input by the user according to the the followings:

Average	Grade
100-80	A
79-60	B
59-40	C
39-0	D

[2]

18) Write a program to find S=(1!) + (2!) + (3!) + (4!)….. Nth Term.   **[2]**

19) Write a program to enter a character and check that the character is a vowel or consonant.   **[2]**

20) Write a program to find: S = 1 + 1 + 2 +3 + 5 + 8 + ……….. Nth term   **[2]**

21) Write a program to enter a number and check whether it is present in a LIST L=[11,66,33,88,55,77]   **[2]**

GROUP – C [14 Marks]

22) Explain the functionality of Memory management of a disk with a diagram. [2]

23) Differentiate the functions of the **System** Software and **Application** Sofware. [2]

24) (i) Differentiate **3GL** and **4GL**. (ii) Write the function of **FAT**. [2]

25) Explain the roles of **Logical Error** and **Syntax Error** in developing programming (with example). [2]

26) Difene the functional importance of No **Data Inconsistency** and **Data Redundancy** in RDBMS. [2]

27) Explain the role of the **Key** in a database. Differentiate **Primary** Key and **Foreign** Key. [2]

28) Show the steps to find the final output (T/F) of the following statement, if x=5, y=15 & z=20. [2]

! (((x>=y) or (y==z)) and ((z!=x) and !(y<z)))

GROUP – D [11 Marks]

29) **Write the SQL commands of the following queries:** [11X1=11]

Table : ITEMS

ID	PNAME	PRICE	MDATE	QTY
T001	Soap	12.00	2007-03-11	200
T002	Paste	39.50	2006-12-23	55
T003	Deodorant	125.00	2007-6-12	46
T004	Hair Oil	28.75	2007-9-25	325
T005	Cold Cream	66.00	2007-10-9	144
T006	Tooth Brush	25.00	2006-2-17	455

(i) (a) Create a table ITEMS (as given above) with suitable Data types and essential constraints, such as Primary Key, Not Null, Unique, Check (Quantity must be more than 10), Default (Price as 0.0).

(b) Enter a new record (as given the first record of the table) to ITEMS.

(ii) (a) Display PNAME, PRICE, and QTY only for the Quantity 100 or above but less than 300.

(b) Display product name, and price for those items whose range of price is 65 to 125.

(c) Display the details of those, and have the third character of the Product name as "o".

(d) Display the details in descending order of quantity, those prices are more than 50.

(iii) (a) Delete the products produced before 2007.

(b) Increase the price by 5% of the product names 'soap' and 'paste'.

(iv) (a) Add a new column "Manufacturer" of Char type of size:20 to the table.

(b) Increase the size of the column PNAME by 10 (assume the existing size is 15).

(v) Calculate and Display the Total Price of each item under the caption "Total". (Total=PriceXQuantity)

GROUP – E [9 Marks]

30) Explain Cloud Computing in the light of AI?

31) Write the application of Machine Learning (ML). How it is different from traditional computing? [2]

32) What is Big Data? Write the functionality of Big Data. [2]

33) Explain the concept of 'Smart City'. [2]

34) Write notes on <u>any one</u> of the following: (i) NLP (ii) Block Chain Technology [2]

[1]

###