CLASS XII HHW (DIPAWALI s CHATT)

English

Prepare the project as per guidelines provided and submit for evaluation under Internal Assessment.

विषय-हिंदी

अप्रत्याशित लेखन

निम्नलिखित विषयों पर 200 से 300 शब्दों में लेख लिखिए-

क.इम्तिहान के दिन

ख.मेरा प्रिय टाइमपास

ग.एक कामकाजी औरत की शाम

परियोजना कार्य-2(ACTIVITY)

सूर्यकांत त्रिपाठी 'निराला'

महादेवी वर्मा

जीवन परिचय और उनकी रचनाएं (सचित्र)

MATHEMATICS (041)

Chapter 10: Vector Algebra

Q1. Find the position vector of a point R which divides the line joining two points P and Qwhose position vectors are (2a + b) and (a - 3b) externally in the ratio 1 : 2. (CBSE 2020)

Q2. Find the projection of the vector a = i + 3j + 7k on the vector b = 7i - j + 8k. (CBSE 2019)

Q3. If a, b, c are unit vectors such that a + b + c = 0, find the value of a·b + b·c + c·a. (CBSE2023)

Q4. Find a vector of magnitude 9 units in the direction of the vector -2i + j + 2k. (CBSE2022)

Q5. Find the area of a parallelogram whose adjacent sides are represented by the vectors a = 3i + j + 4k and b = i - j + k. (CBSE 2018)

Q6. If the vertices A, B, C of a triangle ABC have position vectors (1, 2, 3), (-1, 0, 0), (0, 1, 2)respectively, find the angle ABC. (CBSE 2020)

Q7. Show that the vectors 2i - 3j + 4k and -4i + 6j - 8k are collinear. (CBSE 2019)

Q8. Find the value of 'p' for which the vectors a = 3i + 2j + 9k and b = i + pj + 3k are parallel.(CBSE 2023)

Q9. Find the unit vector perpendicular to both the vectors a = 4i - j + 3k and b = -2i + j - 2k.(CBSE 2022)

Q10. If |a| = 10, |b| = 2 and a·b = 12, then find the value of |a × b|. (CBSE 2020)

Chapter 11: Three-Dimensional Geometry

Q1. Find the vector equation of the line passing through the point (1, 2, 3) and parallel to thevector 3i + 2j - 2k. (CBSE 2023)

Q2. Find the shortest distance between the lines r = (i + 2j + k) + λ(i - j + k) and r = (2i - j - k) + μ(2i + j + 2k). (CBSE 2022)

Q3. Find the direction cosines of the line passing through the two points (-2, 4, -5) and (1, 2,3). (CBSE 2020)

Q4. Find the coordinates of the point where the line through (3, -4, -5) and (2, -3, 1) crossesthe plane 2x + y + z = 7. (CBSE 2019)

Q5. Find the vector and Cartesian equations of the line passing through the origin and (5, -2,3). (CBSE 2018)

Q6. Find the angle between the pair of lines given by r = 3i + 2j - 4k + λ(i + 2j + 2k) and r = 5i - 2j + μ(3i + 2j + 6k). (CBSE 2020)

Q7. Show that the lines $(x - 5)/7 = (y + 2)/-5 = z/1$ and $x/1 = y/2 = z/3$ are perpendicular to each other. (CBSE 2023)

Q8. Find the shortest distance between the lines $x + 1 = 2y = -12z$ and $x = y + 2 = 6z - 6$. (CBSE 2022)

Q9. Find the equation of a line passing through the point (2, 1, 3) and perpendicular to the lines $(x - 1)/1 = (y - 2)/2 = (z - 3)/3$ and $x/-3 = y/2 = z/5$. (CBSE 2019)

Q10. If a line makes angles α, β, γ with the positive direction of coordinate axes, then find the value of $\sin^2\alpha + \sin^2\beta + \sin^2\gamma$. (CBSE 2020)

Chapter 12: Linear Programming

Q1. Minimize $Z = 3x + 5y$ subject to constraints: $x + 3y \geq 3$, $x + y \geq 2$, $x, y \geq 0$ using the graphical method. (CBSE 2023)

Q2. Maximize $Z = 4x + y$ subject to constraints: $x + y \leq 50$, $3x + y \leq 90$, $x \geq 0$, $y \geq 0$ graph scientifically. (CBSE 2022)

Q3. Determine graphically the minimum value of the objective function $Z = -50x + 20y$ subject to constraints: $2x - y \geq -5$, $3x + y \geq 3$, $2x - 3y \leq 12$, $x, y \geq 0$. (CBSE 2020)

Q4. Solve the following Linear Programming Problem graphically: Maximize $Z = x + 2y$ subject to $x + 2y \geq 100$, $2x - y \leq 0$, $2x + y \leq 200$, $x, y \geq 0$. (CBSE 2019)

Q5. Show that the minimum of Z occurs at more than two points for $Z = 4x + y$ subject to constraints $x + y \leq 40$, $x + 3y \leq 90$, $x \geq 0$, $y \geq 0$. (CBSE 2018)

Q6. Discuss the corner point method for solving a bounded linear programming problem. (CBSE 2020)

Q7. Maximize $Z = 3x + 4y$ subject to the constraints: $x + y \leq 4$, $x \geq 0$, $y \geq 0$. Find the maximum value and the point at which it occurs. (CBSE 2023)

Q8. The feasible region for a LPP is shown to be unbounded with corner points (0,4), (0.5, 2.5) and (3,0). If $Z = -3x + 4y$, determine the minimum value of Z. (CBSE 2022)

Q9. Explain the condition under which an open half plane contains no common points with the feasible region in an unbounded LPP maximization scenario. (CBSE 2019)

Q10. Solve the following LPP graphically: Maximize $Z = 5x + 3y$ subject to $3x + 5y \leq 15$, $5x + 2y \leq 10$, $x \geq 0$, $y \geq 0$. (CBSE 2020)

Chapter 13: Probability

Q1. An insurance company insured 2000 scooter drivers, 4000 car drivers and 6000 truck drivers. The probability of an accident are 0.01, 0.03 and 0.15 respectively. One of the insured persons meets with an accident. What is the probability that he is a scooter driver? (CBSE 2023)

Q2. A die is tossed thrice. Find the probability of getting an odd number at least once. (CBSE 2022)

Q3. Two cards are drawn successively with replacement from a well-shuffled pack of 52 cards. Find the probability distribution of the number of aces. (CBSE 2020)

Q4. Find the probability of throwing at most 2 sixes in 6 throws of a single die. (CBSE 2019)

Q5. A man is known to speak truth 3 out of 4 times. He throws a die and reports that it is a six. Find the probability that it is actually a six. (CBSE 2018)

Q6. If $P(A) = 4/5$, and $P(B|A) = 2/5$, then evaluate $P(A \cap B)$. (CBSE 2020)

Q7. Given that E and F are events such that $P(E) = 0.6$, $P(F) = 0.3$ and $P(E \cap F) = 0.2$, find $P(E|F)$ and $P(F|E)$. (CBSE 2023)

Q8. A black and a red die are rolled together. Find the conditional probability of obtaining a sum greater than 9, given that the black die resulted in a 5. (CBSE 2022)

Q9. Probability of solving specific problem independently by A and B are 1/2 and 1/3 respectively. If both try to solve the problem independently, find the probability that the problem is solved. (CBSE 2019)

Q10. Bag I contains 3 red and 4 black balls while another Bag II contains 5 red and 6 black balls. One ball is drawn at random from one of the bags and it is found to be red. Find the probability that it was drawn from Bag II. (CBSE 2020)

APPLIED MATHEMATICS

Chapter 12: Perpetuity, Sinking Funds, Bonds, and EMI

Q1. [Perpetuity - PYQ]
Find the present value of a perpetuity of ₹18,000 payable at the end of each year, if money is worth 6% per annum compounded annually. (Given: i = 0.06)

Q2. [Deferred Perpetuity - CBSE Pattern]
Find the present value of a perpetuity of ₹6,000 per year, the first payment being deferred for 4 years, if money is worth 8% per annum compounded annually.

Q3. [Sinking Fund - PYQ]
A company establishes a sinking fund to replace a machine costing ₹5,000,000 after 10 years, when its scrap value will be ₹500,000. What equal amount should the company deposit at the end of each year if the fund earns interest at 9% p.a. compounded annually? (Use $(1.09)^{10} = 2.3674$)

Q4. [Sinking Fund - CBSE Pattern]
An individual wants to accumulate ₹15,00,000 at the end of 5 years to buy a car. How much should he invest at the end of every quarter into a fund that pays 8% per annum compounded quarterly? (Use $(1.02)^{20} = 1.4859$)

Q5. [Bond Valuation - PYQ]
Find the purchase price of a ₹1,000 bond yielding 10% per annum compounded semi-annually, paying coupons at 8% per annum semi-annually, and redeemable at par in 5 years. (Use $(1.05)^{-10} = 0.6139$)

Q6. [Bond Valuation - Case Study Type]
A ₹10,000 face-value bond with a coupon rate of 7% p.a. compounded annually matures in 3 years. If the current market yield (required rate of return) is 6% p.a., determine whether the bond is selling at a premium, discount, or par, and find its exact current value. (Use $(1.06)^{-3} = 0.8396$)

Q7. [EMI Calculation - PYQ]
A person takes a housing loan of ₹25,00,000 from a bank at an interest rate of 12% per annum compounded monthly, to be repaid in 15 years. Calculate the Equated Monthly Installment (EMI) using the flat-rate amortization method.

Q8. [Amortization Schedule & EMI - PYQ]
A vehicle loan of ₹6,00,000 is to be repaid in equal monthly installments over 5 years. If the

bank charges interest at 9% p.a. compounded monthly, calculate the reducing-balance EMI. (Use $(1.0075)^{-60} = 0.6387$)

Q9. [Linear Interpolation / Sinking Fund - CBSE Pattern]
To pay off a debt of ₹20,00,000 due in 6 years, a firm deposits ₹2,80,000 annually into a sinking fund. Find the approximate rate of interest per annum compounded annually that the fund must yield.

Q10. [Bond Yield to Maturity (YTM) - CBSE Pattern]
A ₹5,000 face-value bond is currently trading in the stock market at ₹4,750. The bond pays a yearly coupon of 9% and has exactly 4 years left until maturity (redeemable at par). Estimate its approximate Yield to Maturity (YTM).

Chapter 13: CAGR, Financial Returns, and Depreciation

Q11. [Linear Method of Depreciation - PYQ]
A manufacturing company purchases a modern packaging press for ₹8,50,000. The useful life of the press is estimated to be 8 years, after which its residual scrap value is valued at ₹50,000. Calculate:
(a) The annual depreciation amount using the Linear Method.
(b) The book value of the asset at the end of the 5th year.

Q12. [Reducing Balance Depreciation - PYQ]
An office automation system costs ₹3,00,000. If it depreciates at a fixed rate of 15% per annum on a reducing balance basis, find its scrap value at the end of 4 years. (Use $(0.85)^4 = 0.5220$)

Q13. [Compound Annual Growth Rate (CAGR) - PYQ]
An investor puts ₹2,50,000 into a mutual fund scheme in the year 2021. By 2026, the value of the investment grows to ₹4,02,500. Calculate the Compound Annual Growth Rate (CAGR) of this investment over the 5-year period. (Given: (1.61)^0.2 = 1.10)

Q14. [CAGR Comparison - CBSE Pattern]
Company A's revenue grew from ₹10 Crore to ₹16 Crore in 3 years. Company B's revenue grew from ₹20 Crore to ₹30 Crore in 4 years. Determine which company has a better Compound Annual Growth Rate (CAGR). (Use (1.6)^1/3 = 1.1696 and (1.5)^1/4 = 1.1067)

Q15. [Nominal vs Effective Returns - PYQ]
A fixed deposit scheme offers a nominal rate of interest of 8% per annum. Calculate the Effective Rate of Interest if the compounding is done:
(a) Quarterly

(b) Monthly

Q16. [Real Rate of Return - PYQ]
During a financial year, a real estate fund yielded a nominal return of 11.5%. If the prevailing inflation rate during that same period was recorded at 4.2%, calculate the exact Real Rate of Return for the investor.

Q17. [Total Return on Stock Investment - CBSE Pattern]
An investor buys 200 shares of a company at a market price of ₹150 per share. After one year, the investor receives a dividend of ₹6 per share and sells all the shares at ₹168 each. Find the investor's absolute total return and percentage rate of return.

Q18. [Net Present Value (NPV) - PYQ]
A logistics company is evaluating an investment project requiring an initial cash outflow of ₹4,00,000. The project is expected to generate net cash inflows of ₹1,50,000, ₹1,80,000, and ₹1,60,000 at the end of years 1, 2, and 3 respectively. If the cost of capital is 10% p.a., calculate the Net Present Value (NPV) and state whether the project should be accepted.

Q19. [Internal Rate of Return (IRR) Concept - CBSE Pattern]
An asset requires an immediate investment of ₹1,00,000 and yields a single lump-sum payout of ₹1,25,440 at the end of 2 years. Find the Internal Rate of Return (IRR) for this investment scenario.

Q20. [Linear Depreciation & Book Value Relationship - CBSE Pattern]
The book value of an industrial plant dropped from ₹12,00,000 to ₹7,50,000 over a span of 3 years under the straight-line method of depreciation. If the total expected useful life of the plant is 6 years, calculate its final estimated scrap value.

Guidelines for Students:

- Clearly state the formulas used before substituting financial variables.
- Present compound interest exponents using log tables or the specific fractional exponent values provided in the questions.
- Maintain an organized ledger style when practicing loan amortization problems.

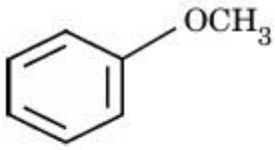
Class 12 Physics Holiday Homework
Chapter: Wave Optics

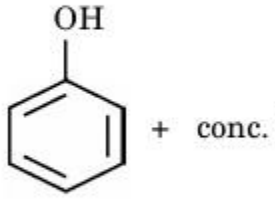
1. What type of wavefront is associated with light diverging from a linear source like a narrow slit? Draw a neat diagram showing the geometric shape of the wavefront as it propagates outwards.
2. Define a wavefront. What is the phase difference between any two points lying on the exact same wavefront? Justify your answer.
3. When a plane light wave travels from an optically rarer medium to a denser medium, its speed decreases. Does this decrease in speed imply a corresponding change in the frequency of the wave? Explain why or why not.
4. State two essential conditions required for two independent light sources to act as coherent sources. Why can two independent monochromatic sodium lamps never produce a steady interference pattern?
5. How is the fringe width (β) in a Young's double-slit experiment affected if the entire experimental setup is completely immersed in water of refractive index μ = 1.33? Write down the mathematical relation.
6. What happens to the interference pattern formed on the screen when the two coherent slits in a YDSE setup are moved:
   (a) infinitely close to each other,
   (b) very far apart from each other?
7. In a Young's double-slit experiment, two light waves each of baseline intensity I_0 arrive at a point on the screen with a path difference of λ / 6. Calculate the net resultant intensity of light at this specific point on the screen.
8. Distinguish between interference and diffraction patterns based on:
   (a) The uniformity of bright fringe intensities,
   (b) The absolute intensity at the minimum/dark fringe locations.
9. In a single-slit diffraction experiment, how does the angular width of the central maximum change if the width of the slit is reduced to half its original size?
10. Use Huygens' principle to explain how a plane wavefront propagates through space. Briefly describe how secondary wavelets give rise to a new wavefront.

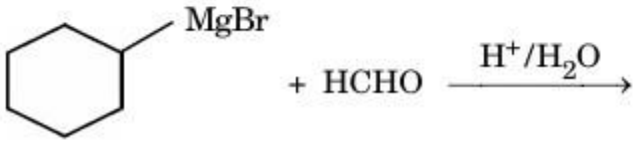
Chemistry

1. Write the reaction of D-Glucose with the following :

   (a) HCN (b) Br_2 water (c) $(CH_3CO)_2O$
2. Write two differences between DNA and RNA.
3. Why are haloarenes less reactive towards nucleophilic substitution reaction ? How does the presence of nitro ($-NO_2$) group at ortho- and para-positions in haloarenes increase the reactivity towards nucleophilic substitution reaction ?
4. A compound (A) with molecular formula C_4H_9I which is a primary alkyl halide, reacts with alcoholic KOH to give compound (B). Compound (B) reacts with HI to give (C) which is an isomer of (A). When (A) reacts with Na metal in the presence of dry ether, it gives a compound (D), C_8H_{18}, which is different from the compound formed when n-butyl iodide reacts with sodium. Write the structures of (A), (B), (C) and (D). Write the chemical equation when compound (A) is reacted with alcoholic KOH.
5. Write structure of the products of the following reactions :

   (a) 

   (b) 

   (c) 

6. Give reasons for the following :
   (a) Benzoic acid does not undergo Friedel-Crafts reaction.
   (b) HCHO is more reactive than CH3CHO towards addition of HCN.
   (c) Vinyl group directly attached with carboxylic acid should decrease the acidity of corresponding carboxylic acid due to resonance, but on the contrary it increases the acidity.
7. Answer the following questions :
   (a) How can you convert the following ?
      (i) Ethanoic acid to methanamine
      (ii) Propanenitrile to 1-aminopropane
   (b) Why is pKb value of aniline more than that of methylamine ?

(c) Arrange the following in increasing order of their basic strength in aqueous solution : $CH_3 – NH_2$, $(CH_3)_2NH$, $(CH_3)_3N$

8. Answer the following questions :
   (i) Draw structure of the methyl hemiacetal of methanal.
   (ii) There are two – NH2 groups in semicarbazide. However only one is involved in the formation of semicarbazones. Give reason.
   (iii) How will you convert ethanol to 3-hydroxybutanal ?
   (iv) Write the final product formed when phthalic acid is treated with NH_3 followed by strong heating.
9. Write the reaction involved in the following :
   (I) Clemmensen reduction
   (II) Etard reaction
10. An organic compound (X) having molecular formula $C_5H_{10}O$ can show various properties depending on its structures. Draw each of the structures if it :
   (I) shows Cannizzaro reaction.
   (II) reduces Tollens' reagent and has a chiral carbon.
   (III) gives positive iodoform test.

BIOLOGY

1. Prepare practical files in all respects.

2. Prepare the project file of Biology for AISSE- 2027 as per assigned topic.

3. Revise unit- 6,7,8 and 9 completely and solve 5 sample paper. After opening the school submit all assignments for a check.

COMPUTER SCIENCE

Write a menu-driven program to implement a stack using a list. Perform Push, Pop, Peek, Display and Exit operations.

Write a program to create a stack and push only even numbers from a given list [10, 15, 22, 33, 40]. Display the stack.

Write a program with functions Push(), Pop(), Display(). Push 5 names entered by user, then pop 2 names and display the remaining stack.

Write a program to implement a stack of books. Each book has BookNo, BookName, Price. Write Push_Book() and Pop_Book() functions. Pop should display the deleted book details.

Write a program to check if a stack is empty or not using a function isEmpty(). If empty, print Underflow.

Write a program to count total number of elements in a stack without using len() function.

Write a program to reverse a string using stack operations. Push each character, then pop to get reversed string.

Write a program to reverse a list [1, 2, 3, 4, 5] using stack push and pop operations.

Write a program to implement a stack where each element is a tuple (RollNo, Name, Marks). Write functions to push student details and pop the top student.

Write a program to transfer all elements from Stack1 to Stack2 in the same order using a temporary stack. Use only push and pop.

Write a program to display only the top 3 elements of a stack without deleting them.

Write a function Push_Odd(N) where N is a list of numbers. Push only odd numbers into a stack and display the stack.

Write a program to check if a string is a palindrome using stack operations.

Write a program to implement a stack of employees. Each employee is a dictionary {'EmpId':101, 'Name':'Amit', 'Salary':50000}. Write Push_Emp() and Pop_Emp() functions.

Write a program to implement Peek() function which returns the top element of stack without deleting it. If stack is empty, print Stack is Empty.

Write a program to delete the middle element of a stack and display the remaining stack.

Write a program to sort a stack in ascending order using another temporary stack. Use only push and pop operations.

Write a program to convert a decimal number to binary number using stack.

Write a program to evaluate a postfix expression like 2 3 + 5 _ using stack. This is a very important CBSE question.

Write a program to check if parentheses in an expression ((a+b)_(c-d)) are balanced or not using stack.

ACCOUNTANCY Session 2026–27

General instruction:

i) **Prepare project on accountancy as per the discussion and provided sample project**
ii) **And Solve the following question**

Q1. A company issued 2,000, 10% Debentures of ₹100 each at a discount of 5%, redeemable at a premium of 10%. The amount of loss on issue of debentures will be:

(a) ₹10,000 (b) ₹20,000 (c) ₹30,000 (d) ₹15,000

Q2. When debentures are issued as collateral security, the company may:

(a) Pass an entry for cash received (b) Pass no entry or show it as a note to accounts (c) Credit Bank Account (d) Debit Debentures Account

Q3. Which of the following is NOT a limitation of financial statement analysis?

(a) Ignores qualitative aspects (b) Based on historical information (c) Helps in decision-making (d) Possibility of window dressing

Q4. In a Common Size Statement of Profit and Loss, all items are expressed as a percentage of:

(a) Net Profit (b) Gross Profit (c) Revenue from Operations (d) Total Assets

Q5. The purpose of preparing a Comparative Balance Sheet is to:

(a) Calculate cash balance (b) Analyse changes in assets and liabilities over different periods (c) Calculate depreciation (d) Determine cash from operating activities

Q6. Purchase of machinery by issuing equity shares will be classified as:

(a) Operating Activity (b) Investing Activity (c) Financing Activity (d) Non-cash investing and financing activity

Q7. Dividend paid by a financial company is classified as:

(a) Operating Activity (b) Investing Activity (c) Financing Activity (d) None of the above

Q8. Which of the following is a financing activity?

(a) Purchase of investments (b) Issue of debentures (c) Sale of machinery (d) Payment of salaries

Q9. If revenue from operations increases from ₹5,00,000 to ₹6,00,000, the percentage increase is:

(a) 10% (b) 15% (c) 20% (d) 25%

Q10. Interest received on investments by a non-financial company is classified as:

(a) Operating Activity (b) Investing Activity (c) Financing Activity (d) Cash Equivalent

Q11. A company issued 5,000, 12% Debentures of ₹100 each at a premium of 5%, redeemable at a premium of 10%. Pass the necessary journal entry for the issue of debentures.

Q12. Explain any three objectives of Financial Statement Analysis.

Q13. From the following information, calculate the absolute change and percentage change in Revenue from Operations:

Particulars	**2025 (₹)**	**2026 (₹)**
Revenue from Operations	8,00,000	10,00,000

Q14. Classify the following activities into Operating, Investing and Financing Activities:

(i) Purchase of furniture for cash. (ii) Issue of equity shares for cash. (iii) Payment of income tax. (iv) Purchase of goods for cash. (v) Interest received on investments by a non-financial company. (vi) Redemption of debentures.

Q15. A company has the following information: Revenue from Operations ₹10,00,000; Cost of Revenue from Operations ₹6,00,000; Employee Benefit Expenses ₹1,00,000; Other Expenses ₹50,000. Calculate the percentage of each expense and Gross Profit to Revenue from Operations.

Q16. Sunshine Ltd. issued 4,000, 9% Debentures of ₹100 each at a discount of 4%, redeemable at a premium of 5%. The amount was payable in full on application. Pass the necessary journal entry for the issue of debentures.

Q17. Prepare a Comparative Statement of Profit and Loss from the following information, showing absolute change and percentage change:

Particulars	**2025 (₹)**	**2026 (₹)**
Revenue from Operations	5,00,000	6,00,000
Cost of Revenue from Operations	3,00,000	3,60,000
Other Expenses	1,00,000	1,20,000
Tax Rate	30%	30%

Q18. From the following information, prepare a Common Size Balance Sheet:

Particulars	**Amount (₹)**
Share Capital	4,00,000
Reserves and Surplus	1,00,000
Long-term Borrowings	2,00,000
Trade Payables	1,00,000
Fixed Assets	5,00,000
Non-current Investments	1,00,000
Current Assets	2,00,000

Q19. Classify the following transactions into Operating, Investing and Financing Activities as per AS-3:

(i) Cash received from customers. (ii) Cash paid to suppliers. (iii) Purchase of land. (iv) Issue of debentures. (v) Interest paid on debentures by a non-financial company. (vi) Dividend received on investments by a non-financial company. (vii) Repayment of bank loan. (viii) Purchase of machinery.

Q20. Prepare a Common Size Statement of Profit and Loss from the following information:

Particulars	**Amount (₹)**
Revenue from Operations	8,00,000
Other Income	40,000
Cost of Revenue from Operations	4,80,000
Employee Benefit Expenses	80,000
Other Expenses	40,000
Tax Rate	30%

Q21. Galaxy Ltd. issued 10,000, 12% Debentures of ₹100 each at a discount of 5%, redeemable at a premium of 10%. The amount was payable as follows: ₹30 on application and the balance on allotment. All the debentures were subscribed and the amount was duly received. Pass the necessary journal entries in the books of the company.

Q22. From the following Balance Sheets of ABC Ltd., prepare a Comparative Balance Sheet as at 31st March, 2025 and 31st March, 2026. Calculate absolute change and percentage change for each item:

Particulars	**31.03.2025 (₹)**	**31.03.2026 (₹)**
Equity Share Capital	5,00,000	6,00,000
Reserves and Surplus	1,00,000	1,50,000
Long-term Borrowings	2,00,000	2,50,000
Trade Payables	1,00,000	1,00,000
Fixed Assets	5,00,000	6,00,000
Non-current Investments	1,00,000	1,00,000
Current Assets	3,00,000	4,00,000

BUSINESS STUDIES General Instructions

i) **Prepare project on accountancy as per the discussion and provided sample project**
ii) **And Solve the following question**

Q1. The primary objective of Financial Management is to:
(a) Profit maximization (b) Wealth maximization (c) Sales maximization (d) Cost minimisation

Q2. A company increases its proportion of debt in the capital structure. This is likely to increase:
(a) Financial risk (b) Operating risk (c) Business risk (d) Market risk

Q3. Which of the following factors affects the fixed capital requirement of a company?
(a) Credit allowed to customers (b) Inventory turnover(c) Nature of business
(d) Availability of trade credit

Q4. The decision regarding the amount of profit to be distributed among shareholders and the amount to be retained in the business is known as:
(a) Investment Decision (b) Financing Decision (c) Dividend Decision (d) Working Capital Decision

Q5. Which of the following is a money market instrument?
(a) Equity Shares (b) Treasury Bills (c) Preference Shares (d) Debentures

Q6. The market where securities are traded for the first time is known as:
(a) Secondary Market (b) Primary Market (c) Money Market (d) Foreign Exchange Market

Q7. Which of the following is NOT a function of the Securities and Exchange Board of India (SEBI)?
(a) Protecting investors' interests (b) Regulating stock exchanges
(c) Prohibiting insider trading (d) Fixing the prices of all securities

Q8. The marketing philosophy which focuses on aggressive selling and promotional efforts is:
(a) Production Concept (b) Product Concept (c) Selling Concept (d) Marketing Concept

Q9. Branding, packaging and labelling are important decisions related to:
(a) Price (b) Product (c) Place (d) Promotion

Q10. A company offers a discount of 20% on its products during a festive season. This is an example of:

(a) Advertising (b) Personal Selling (c) Sales Promotion (d) Public Relations

Q11. Explain any three factors affecting the Capital Structure of a company.
Q12. Explain any three functions of the Stock Exchange.
Q13. Differentiate between Primary Market and Secondary Market on any three bases.
Q14. Explain any three factors affecting the Working Capital requirements of a business.
Q15. Explain any three functions of marketing.
Q16. A company is considering two financial plans, Plan A and Plan B, for financing its business expansion.

Particulars	**Plan A**	**Plan B**

Total Capital Employed	₹20,00,000	₹20,00,000
Debt	₹4,00,000	₹12,00,000
Equity	₹16,00,000	₹8,00,000
Rate of Interest on Debt	10%	10%

The company's expected EBIT is ₹4,00,000 and the tax rate is 30%.
Calculate the EPS under both plans, assuming the face value of each equity share is ₹100. Which plan would be more favourable to equity shareholders?

Q17. Explain any four functions performed by the Securities and Exchange Board of India (SEBI).

Q18. Explain any four factors affecting the price determination of a product.

Q19. Read the following case carefully and answer the questions that follow:

Rohan Ltd. is planning to expand its business by introducing a new range of electronic products. The company requires additional funds for purchasing machinery, establishing a new production unit and meeting day-to-day operational expenses. The finance manager is analysing the investment and financing decisions of the company.The company is also considering issuing equity shares and debentures to raise the required funds. The finance manager believes that the capital structure should be planned carefully to balance risk and return.

Answer the following questions:

(a) Identify the financial decision related to purchasing machinery and establishing a new production unit. (1)

(b) Identify the financial decision related to raising funds through equity shares and debentures. (1)

(c) Explain any two factors affecting the investment decision of a company. (2)

(d) Explain any two factors affecting the choice of capital structure. (2)

Q20. Read the following case carefully and answer the questions that follow:

Fresh Foods Ltd. manufactures packaged food products. The company has introduced attractive packaging and labelling to differentiate its products from competitors. It also provides discounts, free samples and special offers to attract customers. The management believes in understanding customer needs and satisfying them more effectively than competitors.

Recently, the company has also started using social media platforms and advertisements to create awareness about its products.

Answer the following questions:

(a) Identify the marketing management philosophy followed by the company. (1)

(b) Identify the two elements of the marketing mix reflected through attractive packaging and special offers. (2)

(c) Explain any three functions of packaging performed by the company.

Physical Education (048)

1. Calculate the B.M.I. of yourself & your parents as well as siblings (if any) & mention the category of Index
2. Write any 3 asanas helpful to recover from diabetes. Kindly make a diagram of any 1 asana .
3. Make a diagram of the playing surface with measurements of an outdoor game of your choice.

FMM HOLIDAY HOMEWORK

Write the following Questions:

1)A startup is a company that is in the first stage of its operations. How do you describe it?

2)Write the working process of Internet Broking.

3) What is operational and legal Risk?

4) What are the rights enjoyed by Preference shareholders?

5)Explain Impact Cost?

6) Explain the conditions under which the relevant authority may require a trading member to suspend its business in part or in whole?

7) Explain the various categories of membership with NSE and NSCCL.

8) Describe the various advantages of the Screen-Based Trading System (SBTS)?

DAV KAPILDEV PUBLIC SCHOOL, RANCHI

HOLIDAY HOMEWORK -2026-27

CLASS- 12

SUBJECT- ECONOMICS

SECTION A — INTRODUCTORY MACROECONOMICS

Q1 to Q10: Multiple Choice Questions (1 Mark Each)

1. Which of the following is an example of a flow variable?

(A) Capital

(B) Wealth

(C) Savings

(D) Foreign Exchange Reserves

2. The value of the Marginal Propensity to Consume (MPC) lies between:

(A) 0 and 1

(B) -1 and 1

(C) 1 and infinity

(D) 0 and infinity

3. If the value of the Multiplier (K) is 4, the value of Marginal Propensity to Save (MPS) will be:

(A) 0.25

(B) 0.75

(C) 0.50

(D) 1.00

4. Primary deficit in a government budget is equal to:

(A) Revenue Deficit minus Interest Payments

(B) Fiscal Deficit minus Interest Payments

(C) Fiscal Deficit plus Borrowings

(D) Capital Deficit minus Revenue Deficit

5. Which of the following transactions will be recorded in the current account of the Balance of Payments?

(A) Foreign Direct Investment in India

(B) Borrowings from the IMF

(C) Export of Software Services

(D) Purchase of shares in a foreign company

6. Depreciation of domestic currency means:

(A) Rise in the exchange rate under a fixed exchange rate system

(B) Fall in the external value of domestic currency in terms of foreign currency

(C) Rise in the external value of domestic currency

(D) None of the above

7. Read the following statements carefully and choose the correct alternative:

- **Statement 1:** Ex-ante savings are always equal to ex-ante investments at equilibrium level of income.
- **Statement 2:** Aggregate Demand is always equal to Aggregate Supply at equilibrium level.
- (A) Both statements are true.
- (B) Both statements are false.
- (C) Statement 1 is true, Statement 2 is false.
- (D) Statement 2 is true, Statement 1 is false.

8. Which of the following is a quantitative instrument of credit control by the Central Bank?

(A) Margin Requirements
(B) Moral Suasion
(C) Open Market Operations
(D) Selective Credit Controls

G. Nominal Gross Domestic Product is measured at:

(A) Constant prices
(B) Current prices
(C) Factor cost
(D) Base year prices

10. If Marginal Propensity to Consume (MPC) is 0.8, what is the value of the investment multiplier?

(A) 2
(B) 4
(C) 5
(D) 10

Short Answer Questions (Type I — 3 Marks)

11. Distinguish between 'Revenue Receipts' and 'Capital Receipts' of the government, giving one example of each.

OR

Explain the "allocation of resources" objective of a government budget.

12. Explain the function of the Central Bank as a "Banker to the Government."

Short Answer Questions (Type II — 4 Marks)

13. Calculate Gross Domestic Product at Factor Cost (GDP_{FC}) and Net National Product at Market Price (NNP_{MP}) from the following data:

S.No.	Particulars	Amount (in ₹ Crores)
(i)	Net Factor Income from Abroad	-20
(ii)	Gross Domestic Fixed Capital Formation	100

S.No.	Particulars	Amount (in ₹ Crores)
(iii)	Private Final Consumption Expenditure	500
(iv)	Change in Stock	30
(v)	Government Final Consumption Expenditure	200
(vi)	Net Indirect Taxes	40
(vii)	Net Exports	-10
(viii)	Consumption of Fixed Capital	25

14. Explain the components of Aggregate Demand in a two-sector economy.

15. What is meant by "appreciating the domestic currency"? How does it affect the exports of a country?

Long Answer Question (6 Marks)

16. (a) Define "Excess Demand" in an economy. Explain its two fiscal measures to correct excess demand. *(4 marks)*

(b) Can an economy be in equilibrium at a level of full employment when there is involuntary unemployment? Explain briefly. *(2 marks)*

OR

(a) Explain the working of the investment multiplier with the help of a numerical example, assuming an initial increase in investment of ₹100 crores and an MPC of 0.75. *(4 marks)*

(b) Differentiate between "Autonomous Consumption" and "Induced Consumption." *(2 marks)*

SECTION B — INDIAN ECONOMIC DEVELOPMENT

Q17 to Q26: Multiple Choice Questions (1 Mark Each)

17. The main motive behind the British economic policies in India was:

(A) Development of Indian infrastructure

(B) Promotion of modern industrialization

(C) Protection and promotion of the British economy

(D) Alleviation of poverty in India

18. The green revolution was primarily restricted to which two crops in its initial phase?

(A) Rice and Wheat

(B) Wheat and Cotton

(C) Rice and Sugarcane

(D) Jute and Tea

1G. Which of the following industrial policy resolutions laid down the foundation of the Industrial Policy of independent India?

(A) Industrial Policy Resolution of 1948

(B) Industrial Policy Resolution of 1956

(C) Industrial Policy of 1991

(D) Five-Year Plan of 1951

20. Outsourcing has gained popularity in India mainly due to:

(A) High cost of labor in India

(B) Availability of cheap and skilled IT labor

(C) Strict labor regulations

(D) Lack of technological infrastructure in developed nations

21. The process of globalization involves:

(A) Integration of domestic economy with the world economy

(B) Restriction on international trade

(C) Nationalization of domestic industries

(D) Discontinuation of foreign exchange reserves

22. Which organization regulates the financial sector in India?

(A) SEBI

(B) RBI

(C) NABARD

(D) Ministry of Finance

23. Read the following statements carefully:

- **Statement 1:** Human capital considers education and health as a means to increase labor productivity.
- **Statement 2:** Human development considers education and health as an integral part of human well-being.
- (A) Both statements are true.
- (B) Both statements are false.
- (C) Statement 1 is true, Statement 2 is false.
- (D) Statement 2 is true, Statement 1 is false.

24. Which of the following is a non-institutional source of rural credit in India?

(A) Regional Rural Banks (RRBs)

(B) Land Development Banks

(C) Moneylenders

(D) Cooperative Credit Societies

25. Casualization of workforce refers to:

(A) Shift of workforce from regular salaried employment to self-employment

(B) Shift of workforce from self-employment and regular salaried work to casual wage work

(C) Increase in permanent government jobs

(D) Absolute decline in total unemployment

26. Sustainable development refers to development that meets the needs of the present without compromising the ability of:

(A) Future generations to meet their own needs

(B) Present generation to maximize current consumption

(C) Foreign countries to trade freely

(D) Industrial sectors to extract resources uninhibitedly

Short Answer Questions (Type I — 3 Marks)

27. Why was the public sector given a leading role in industrial development during the planning period (1950–1990)?

OR

What are the main features of the "New Economic Policy" introduced in India in 1991?

28. Distinguish between "Physical Capital" and "Human Capital" on any three parameters.

Short Answer Questions (Type II — 4 Marks)

2G. Explain the term "organic farming." State any two benefits and two challenges associated with it.

30. "Unemployment is a major social and economic challenge in India." Explain any two major causes of unemployment in the Indian economy.

31. State the dual role played by the environment in economic development.

Long Answer Question (6 Marks)

32. (a) Discuss the state of the agricultural sector at the time of independence. *(3 marks)*

(b) Critically appraise the policy of import substitution adopted by India during the first seven Five-Year Plans. *(3 marks)*

33. (a) Explain the role of diversification of agricultural activities in ensuring sustainable rural livelihoods. *(3 marks)*

(b) Discuss the significance of microcredit (Self-Help Groups) in meeting the credit needs of the rural poor. *(3 marks)*

34. Compare and analyze the developmental path of India and Pakistan with respect to economic growth, sectoral transformation, and human development indicators.