ST. COLUMBUS SCHOOL
DAYAL BAGH, FARIDABAD
CLASS – XII (COMMERCE)
HOLIDAY HOMEWORK(2024-25)

General Instructions:-
1. Revise the completed syllabus of all the subjects for the Test to be held in July.
2. Holiday Homework of B.ST., Economics ,Accountancy, Mathematics and Information Technology should be done in the respective class work registers.
3. Holiday Homework of English should be done in a separate notebook.
4. Holiday Homework of Physical Education should be done in the school practical file.

SUBJECT – ENGLISH
Answer the questions in 150-200 words.

1. Revise the syllabus covered.
2. Prepare an article on "Importance of Discipline" for a local daily newspaper in about 150 to 200 words.
3. Rising population, fast and competitive lifestyle, lack of nutritious food, etc. have caused woes for a large section of our population. Providing health care used to be charitable and ethical activity. Today it has become commercialized a money spinning business. Write an article on "How to Provide Proper Healthcare to the Common Man"? You are Karan/Karuna.
4. Mukesh was finally able to fulfil his desire and he became a motor mechanic. He got a job with the most famous car makers Maruti that started a workshop in Firozabad. He lives in a decent house with his wife and children. He remembers his interaction that he had with Anees Jung years ago. He decided to write a letter informing her about his present status of life. Write this letter in about 150 to 200 words.
5. Write a letter to an editor of a national daily in about 150 words, expressing views on nuisance
   created by stray animals on the road.
6. You are Dhruv/Dhruvika, student editor of your school magazine, "The Buds". Write a notice to be placed on your school notice board, inviting short stories, articles, poems, etc. from students of all classes for the school magazine. Give all the necessary details.
7. Write in detail the way you employ to avoid harsh reality.(Deep Water)
8. Write a report for your school magazine in about 150 words on Inter House English Poem Recitation competition held at our school.
9. Justify the title of the lesson "Lost Spring". (200 words)
10. Highlight the significance of the title "My Mother at 66"
11. "A teacher should be a friend, philosopher and a guide for his pupils". Do you think M. Hamel fits into this image for a teacher? Discuss.
12. What is the advantage of Keeping Quiet?
13. Who is the hero of the story, 'The Tiger King'? How may he be identified?

14. The barefoot rag-pickers of Seemapuri live in periphery of Delhi, yet metaphorically speaking, miles away from it. Comment.
15. What do you think about the Sam's letter to Charley?
16. Make a project file on any one chapter already explained in the class.

SUBJECT-BUSINESS STUDIES

Answer the below mentioned questions:-

1. One of the important characteristic of management is demonstrated in the cartoon. Name the characteristic of management

2. Raj was a supervisor at 'Annapurna Aata Factory'. The Factory was producing 200 quintals of aata everyday. His job was to make sure that the work goes on smoothly and there was no interruption in production. He was a good leader who would give orders only after consulting his subordinates and work out the policies with the acceptance of the group. Identify and describe the leadership style being adopted by Raj.
3. Explain functions of Lower management.
4. "In order to be successful an organization must change its goals according to the needs of the environment." Which characteristic of management is highlighted in this statement?
5. What are the dimensions of management in people?
6. Name the device which permits direct communication between employees working at same level.
7. Mention any two features of management of science.

8. One of the principle of management has been violated here. Identify it

9. Give any two features of profession that are satisfied by management.
10. Name the level of management under which policies are formulated.
11. Which level of management is in direct touch with the workforce?
12. Name the function of management under which there is division of activities.
13. Name any two methods by which the principles of management are derived.
14. 'The principles of management are different from those of pure science.' Describe any one difference.
15. Who floated the idea of scientific management?

16. Who developed general principles of management?
17. What is meant by the principle of 'science, not rule of thumb'?
18. What are the objectives of standardization?
19. Which principle of management suggests that employees should be treated with justice and kindness?
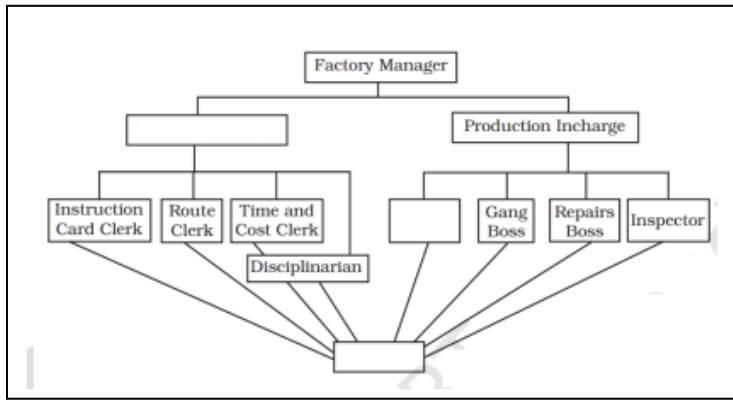20. Identify the feature of planning highlighted in the given picture.

21. Name that Principle of Fayol which suggests that communications from top to bottom should follow the official lines of command.
22. Name the function of management which involves setting of objectives and developing appropriate course of action to achieve these objectives.
23. Why is planning considered a pervasive function of management?
24. While planning, a manager is required to make certain assumptions about the future. What do we call these assumptions?
25. After identifying the alternative course of action, what is the next step in the planning process?
26. 'Offering 5% jobs to Physically Challenged Persons'. What type of plan is it?
27. "An employee will not be allowed to work on a day reporting more than 30 mins late." What type of plan is it?
28. What is an organization structure?
29. What is the span of management?
30. Name the type of an organization in which a friendly relationship exists among the members.
31. Name the type of an organization in which official relationship exists among the members.
32 Identify the principle shown in the given picture.

33. Fill in the box.

34. A Company has decided to launch new methods of a product to take on competitors, what type of plan is it ?
35. In what direction authority and responsibility flow?
36. Why selection is called a negative process?
37. Briefly explain difference between on the job training and off the job training?
38. Identify the missing concept in the given picture:

39. Name the function of management which coordinates the physical , financial and human resources and establishes productive relations among them for achievement of specific goals.

40. Name the concept explained in the picture.

41. The directors of Alpha Ltd. an organization manufacturing computers, have asked their production manager to achieve a target production of 150 computers per day. The production manager has asked his foreman to achieve this target, but he did not give him the authority for the requisition of tools and materials from the store department. The foreman could not achieve the desired target. Can the directors blame the production manager, and can the production manager blame his foreman for not achieving the target? Explain in brief the relevant principles relating to this situation in support of your answer.

42. Mohan, the manager expects his subordinate to adapt the new environs and working condition without giving them time to settle down. Which principle of management is being overlooked and why? Give one violating effect.

43. The business of Alpha – Beta- Gamma Ltd. is on a large scale. Smt. Rukmani is the CEO of the company. She directs the Marketing Manager that he can take decisions to spend up to Rs 1 Lakh in order to improve the performance of his division. For example, if the Marketing Manager wishes to run an advertising campaign within the limit of Rs 1 Lakh, then his decision can be taken without the consent of the CEO. This authority is not delegated to the remaining Department Heads. After the umpteen times insistence of other departmental managers, they were provided with this authority. After some days, another decision was taken with which authority was further delegated by Departmental Managers to their supervisors / subordinates.
   (i) What would you call the authority given to the Marketing Manager to take decision up to Rs. 1 Lakh?
   (ii) What does the change introduced in the organization with the delegation of authority to all the Departmental Managers signify?

44. A newly appointed personnel manager is of the view that staffing is the least important function of management in an established organization. Do you agree with this statement? Give five reasons of your answer.

45. Mr. Bhim Rajanwala is working as a personnel manager in a company of Delhi. Although he is not well educated, he is an experienced person. Before this, he has already worked on this post in two larger companies. His intention is always in promoting an efficient employee to a higher post and in demoting inefficient one to a lower vacant post:
   (i) State on what source of recruitment is Mr. Rajanwala concentrating?
   (ii) What are the benefits of which company is depriving by using this source?

46. Difference between Recruitment & Selection

47. Explain various training methods.

48. Explain Internal Recruitment. What are its various sources?

49. A company has been registered under the companies Act with an authorized share capital of Rs. 20,000 crores. Its registered office is situated in Delhi and manufacturing unit in a backward district of Rajasthan. Its marketing department is situated in Bhopal. The company is manufacturing Fast Moving Consumer Goods.(FMCG)
   (i) Suggest with the help of a diagram a suitable organization structure for the company.
   (ii)State any three advantages of this organization structure.

50. Flipkart is an e-commerce company founded in the year 2007 by Sachin Bansal and Binny Bansal. The company is registered in Singapore, but has its headquarters in Bengaluru, India.

The company seeks to increase traffic more clicks on their products) and boost sales and revenue through integration of Mobile Apps, Display, Pay Per Click and Search Engine Optimisation. In order to dispel the fear of people related to shopping online, Flipkart was the first company to implement the popular 'Cash On Delivery' facility. All the products sold by the company undera particular category may have different return/ replacement periods. Flipkart allows multiple payment options such as cash on delivery, credit or debit card transactions, net banking, e-gift voucher and card swipe on delivery. The company operates both ways when an order is received. The products for which it holds inventory are dispatched by it directly. For the products they do not store in inventory, they just send the order received by them to the supplier who ships it. The company plans to spend about 75 crore on e-commerce advertising in the year 2016. Flipkart reserves the right to terminate your membership and / or refuse to provide you with access to the website if it is brought to Flipkart's notice or if it is discovered that you are under the age of 18 years. This is because as per the Indian Contract Act, 1872, the minors, un-discharged insolvents, etc. are not eligible to use the Website.

In context of the above case, identify and explain the different types of plans being used by Flipkart by quoting lines from the paragraph.

SUBJECT – ECONOMICS

- ➢ Prepare a report on Change in National Income & possible reasons behind it in last 10 years.
- ➢ Collect data on unemployment from the following 3 sources:
    - o Report of Census of India
    - o National Sample survey organization report of employment and unemployment.
    - o Directorate General of Employment and Training data of Registration with Employment
- ➢ Prepare an animated video on either of the topic
    - o Sustainable development
    - o Population an asset to economy

- ➢ Read the following chapters of IED (Chapter 1 Indian Economy on Eve of Independence and Chapter 2 Indian Economy 1950-1990) & frame
    - o 5 MCQ, 5 Fill in the blanks and 5 True and false each from both the chapters.

PART- A (MACRO ECONOMICS)
1. Give two examples of externality which leads to the welfare of the people.
2. Explain the circular flow of income in two sector model.
3. Distinguish between stock and flow .Give two examples of each .
4. Why Real GDP is a better index of welfare of the people?
5. Define composition of GDP. How does it impact on welfare ?
6. Explain how the following should be treated in estimating GDP at mp.
   i)Fee to a lawyer by a firm
   ii)Interest paid by a firm on a car loan taken from a bank.

7. How should the following be treated in estimating N.I of a Country .You must give reason for your answer.
   (i)Buying mobile phones by a dealer for resale
   (ii)Payment of corporate tax.
   (iii)Expenditure on providing defence services by the government.
8. What are the non-monetary exchanges ? Give an example. Explain their impact on use of GDP as an index of welfare of the people.
9. If the real GDP is Rs 500 and nominal GDP is Rs 550, calculate Price index (base =100)
10. Outline the steps to calculate national income using income and value added method.

PART-B (Indian Economic Development)

1. Discuss the need for NEP 1991.
2. Discuss the fiscal reforms introduced under liberalization .
3. Do you think modernization will help to bring change in social outlook.
4. How privatization was done under LPG?
5. Why do you think WTO is an important organization?
6. Did reforms leads to betterment of agriculture sector? Give reason in support of your answer.
7. Critically evaluate NEP 1991.
8. Why do you think India is favorite destination for Outsourcing?
9. What do you mean by export promotion policy?
10. Do you think India has a diversified industrial sector because of implementation of NEP 1991? Support your answer with valid reason.

SUBJECT – ACCOUNTANCY

Answer the below mentioned questions:-

1 Anu, Bindu and Siya were partners in a firm sharing profits and losses in the ratio of 2:2:1. Siya was guaranteed that her share of profit will not be less than Rs.50,000. The firm's profit for the year ended 31st March, 2022 Rs. 2,00.000. The amount of deficiency borne by Anu and Bindu was:-
 (a) Rs.10,000 (b) Rs.2,500   (c) Rs.75,000   (d) Rs.5.000

2. Ram and Shyam are partners sharing profits and losses equally. Financial Statements are prepared for the year ended 31st March, 2021, which show a profit of Rs. 1,50,000 before allowing interest on a loan of Rs. 50,000 from Shyam @ 10% p.a. Each partner is entitled to salary as follows: Ram Rs. 15,000 per annum Shyam Rs. 10,000 per annum. What is Ram's total appropriation of profit for the year ended 31st March, 2021?
(a) Rs. 77,500. (b) Rs. 70,000. (c) Rs. 75,000. (d) Rs. 80,000.

3. State the provisions under Partnership Act in the absence of Partnership deed.
4. When does the capital account of a partner not show a debit balance in spite of regular losses incurred by the firm?
5. Does partnership firm has a separate legal entity? Give reason in support of your answer.
6. Partnership firm cannot have a separate legal entity. (T/F) Give reason.
7. Methods of settlement of dispute among the partners can't be part of the partnership deed. (T/F) Give reason.
8. The business of a partnership concern may be carried on by all the partners or any of them acting for all. This is called the element of _____between all the partners.
9. Two items which may appear on the debit side of a partner's current account are_____.
10.Partner's capital account will not show a debit balance in spite of losses year after year when _____.

11. A and B are partners having capitals of Rs.3,00,000 and Rs. 200,000 respectively. Current Accounts Balances on 1st April, 2018, A-Rs. 20,000 (Cr); B-Rs. 10,000 Their deed provides that:

(a) A withdrew Rs. 5,000 per quarter at the end of each quarter and B withdrew Rs. 2500 per month on the 1st day of every month.

(b) Interest on capital is to be allowed @ 5% p.a.

(c) Interest on drawing is to be charged @ 6%.

(d) B is entitled to salary of Rs. 25,000.

(e) A is entitled for commission @ 10% on net profits after charging B's salary, interest on capitals and his own commission.

(f) Of the first Rs.50,000 divisible as profits in any year, A is entitled to 70% and B 30%. Annual profits in excess of Rs. 50,000 are divisible equally.

The profits for the year ended 31 March, 2019 was Rs. 2,70,000. Prepare Profit and Loss Appropriation Account and partner's current account.

12. Pawan and Purna are partners in a firm sharing profits in the ratio of 3:2. The balance in their capital and current accounts as on January, 1, 2020 were as under:

	Pawan Rs..	Purna Rs..
Capital A/c	30000	20000
Current A/c	10000	8000

The partnership deed provided that Pawan is to be paid salary @Rs.500p.m. whereas Purna is to get commission of Rs. 4000 for the year.

Interest on capital is to be allowed @6% p.a. The drawings of both were Rs. 3000 and Rs.1000 respectively. Interest on drawings were:- Rs. 75 and Rs.25respectively. The net profit of the firm before making these adjustments was Rs. 24900.

Prepare Profit and Loss Appropriation A/c and their capital and current accounts.

13. Vikas and Vivek were partners in a firm sharing profits in the ratio of 3 : 2. On 1st April, 2019, they admitted Vandana as a new partner for 1/8th share in the profits with a guaranteed profit of Rs. 1,50,000. New profit sharing ratio between Vikas and Vivek will remain same but they decided to bear any deficiency on account of guarantee to Vandana in the ratio 3 : 2. Profit of the firm for the year ended 31st March, 2020 was Rs. 9,00,000. Prepare Profit & Loss Appropriation Account of Vikas, Vivek and Vandana for the year ended 31st March, 2020.

14. What is meant by Self-generated Goodwill?

15. If average profit is Rs. 60,000, normal rate is 10% and average capital employed is Rs. 500,000, calculate goodwill at three years' purchase of super profits.

16. Capital Employed in a firm is calculated from Assets Side Approach as follows:

(a) All Assets – Goodwill – Non-Trade Investments – Fictitious Assets – Long-term Outside Liabilities.

(b) All Assets – Goodwill – Non-Trade Investments – Fictitious Assets – Credit Balance in Current Accounts – All Outside Liabilities.

(c) Partners' Capital – Credit Balance in Current Accounts + Free Reserves + Credit Balance of Profit & Loss Account (if any) – Goodwill – Non-Trade Investments – Fictitious Assets – All Outside Liabilities.

(d) All Assets – Goodwill – Non-Trade Investments – Fictitious Assets – Debit Balance in Profit & Loss Account – Debit Balance in Current Account – All Outside Liabilities.

17. **Assertion-** Goodwill can be calculated when divides total profit by number of years.
    Reason- It is super profit method of calculation of Goodwill.
    (a) Both A & R are correct.
    (b) A is correct but R is incorrect.
    (c) A is incorrect but R is correct.
    (d) Both A & R are incorrect.

18 **Assertion-** Goodwill refers to reputation of business.
    Reason- Given in Company law.
    (a) Both A & R correct.
    (b) A is correct but R is not correct
    (c) A is not correct but R is correct.
    (d) Both A & R incorrect.

19. The profit earned by a business over the last 5 years are as follows:
Rs. 12000, Rs. 13000, Rs. 14000, Rs.18000 and Rs.2000 (loss) based on 2 years purchase of the last 5 years profits, value of goodwill will be .

    (A) Rs. 23,600
    (B) Rs. 22,000
    (C) Rs. 1,10,000
    (D) Rs.1,18,000.

20. The average profits of Smart industries are Rs. 130,000. The fixed assets of the firm are Rs. 900,000, current assets are Rs. 500,000 and current liabilities are of Rs. 400,000. In the same type of business, the normal rate of return is 10%. Calculate the value of goodwill by capitalisation of average profit method.

21. On the reconstitution of a firm the value of furniture increased from Rs.7,00,000 to Rs. 8,00,000 and stock reduced to Rs. 4,00,000 from Rs. 4,20,000. Gain or loss on revaluation will be:
(a) Gain Rs. 80,000
(c) GainRs.8,00,000
(b) LossRs.80,000
(d) Loss Rs.1,20,000

22. The ratio in which a partner surrenders his share in favour of a partner is known as:
(a) New profit-sharing ratio
(b) Sacrificing Ratio
(c) Gaining Ratio
(d) Capital Ratio

23. The ratio in which a partner receives a rise in his share of profits is known as:
(a) New Ratio
(b) Sacrificing Ratio
(c) Capital Ratio
(d) Gaining Ratio

24. Reserves and accumulated profits are transferred to partners ' capital accounts at the time of reconstitution in:
(a) Old profit-sharing ratio
(b) Sacrificing Ratio
(c) Gaining ratio
(d) New profit-sharing ratio

25. Increase and decrease in the value of assets and liabilities are recorded through:
(a) Partners' Capital Account
(b) Revaluation Account
(c) Profit and Loss Appropriation a/c
(d) Balance Sheet

26. X,Y and Z are partners in a firm sharing profits and losses in the ratio of 3:2:1. From 1st April, 2022, the partners decided to change their ratio as 2:3:1. The partnership deed provides that in the event of any change in profit sharing ratio, the goodwill should be valued at three years purchase of the average of five years profits.

Years	2018	2019	2020	2021	2022
Profits Rs.	150000	270000	340000	380000	140000 (loss)

Calculate the sacrifice or gain made by X,Y and Z on change in profit sharing ratio. Calculate the value of goodwill and give the necessary journal entry.

27. Ram, Shyam, Mohan and Sohan were partners in a firm sharing profits in the ratio of 5:2:2:1. On 31st March, 2020 their Balance Sheet was as follows:

Liabilities	Amount (Rs)	Assets	Amount (Rs)
Capitals:		Fixed assets	18,00,000
Ram -700,000		Current assets	675,000
Shyam-600,000			
Mohan-500,000	22,50,000		
Sohan-450,000	75,000		
Workmen compensation reserve	150,000		
Creditors	24,75,000		
			24,75,000

From the above date they decided to share the future profits in the ratio of 4:3:2:1. For this purpose the goodwill of the firm was valued at Rs,120,000. The partners also agreed for the following :
1. Claim against workmen compensation reserve was estimated at Rs. 70,000 and Rs. 75,000 depreciation on fixed assets was to be provided.
2. Capitals of the partners will be adjusted according to the new profit sharing ratio by opening current account.

Prepare Revaluation account, partner's capital accounts and the Balance sheet of the new partnership firm

28. X,Y and Z are partners in a firm sharing profits and losses in the ratio of 5:4:3. Their Balance Sheet as on 31st March, 2022 was:

Liabilities	Amount (Rs)	Assets	Amount (Rs)
Capitals:		Plant and machinery	420,000
X-	400,000	Furniture	60,000
Y-	300,000	Stock	300,000
Z-	200,000	Debtors	210,000
General reserve	75,000	Bank	40,000
Outstanding expenses	15,000		
Creditors	40,000		
	10,30,000		10,30,000

From 1st April, 2022, the partners decided to change their ratio as 3:4:5. For this purpose it was agreed that:

I. Furniture to be taken at 80% of its value.
II. Stock is appreciated by 20%.

III. Goodwill of the firm valued at Rs. 36000

Prepare Revaluation A/c, Partner's Capital A/c and the Balance Sheet of the new firm.

29 Amit and Sumit were partners in a firm with fixed capitals of Rs.6,00,000 and Rs.4,00,000 respectively. Kavi was admitted as a new partner for 1/5th share in the profit of the firm. Kavi brought Rs. 40,000 as his share of goodwill premium and Rs.3,00,000 as his capital. The amount of Goodwill premium credited to Sumit will be :
(a) Rs.20,000
(b) Rs.16,000
(c) Rs. 24,000
(d) Rs.40,000

30. List any two items that need adjustment in the books of accounts of a firm at the time of admission of a partner.

31. The share of new partner and the sacrificing ratio of old partners are decided by:
(a) The old partners and the new partners
(b) The new partner only
(c) The old partners only
(d) The accountant of the firm.

32. When a new partner is admitted, it is necessary to ascertain new profit sharing ratio even for old partners because _____.

33. Pawan and Jayshree are partners. Bindu is admitted for 1/4th share. The ratio in which Pawan and Jayshree will sacrifice their share in favour of Bindu will be _____.

34. Share of goodwill brought by new partner in cash is shared by old partners in:
(a) Sacrificing ratio
(b) Old profit sharing ratio
(c) New Profit sharing ratio
(d) None of the above

35. In addition to the amount of capital, a new partner is also required to contribute some additional amount for loss of their share in profits of the firm, which is known as _____

36 A and B are partners in a firm sharing profits in the ratio of 8: 7. On March 31, 2020, their capitals stood at Rs.80,000 and Rs.70,000 respectively. On that date, they admitted C as a new partner for 1/3rd share in the profits. C brought Rs.250,000 for his capital and Rs.15,000 for his share of goodwill/premium. Out of this goodwill/premium brought by C half of the amount was withdrawn by A and B. Record necessary journal entries in the books of the firm on C's admission.

37.Gold and Silver are partners in 1 firm sharing profits in the ratio of 4 :1. They admitted Copper as a new partner on April 1, 2020 for 1/3rd share in profit. It was agreed that Gold, Silver and Copper would share profits equally in future. Copper brought Rs.15,000 as goodwill premium. Record the necessary journal entries in the books of the firm. Show your workings clearly.

38. Anand and Vishnu are partners sharing profits and losses in the ratio of 2:1. Their balance sheet as at 31st March, 2015 stood as follows:

Liabilities	Amount (Rs)	Assets	Amount (Rs)
Capitals:		Goodwill	54,000
Anand – 200000		Machinery	120,000
Vishnu - 100000	300,000	Furniture	60,000
General reserve	21,000 5	Stock	70,000
Workmen compensation reserve	4,000	Debtors 90000	
Creditors	30,000	Less: provision 12000	78,000
Bills payable	26,000	Cash	59,000
Bank overdraft	10,000		
	441,000		441,000

On 1st April 2015, they admitted Krishna (a specially abled person) as a partner. The new profit sharing ratio is agreed as 3:2:1.

Other adjustments are as under:
1. Krishna is to bring Rs. 90,000 as capital and it was decided that the capital of all partners shall be in proportion to their profit sharing ratio
2. The goodwill of the firm is valued at Rs. 120,000 and Krishna will contribute his share of goodwill in cash.
3. All debtors are good.
4. Depreciate furniture by 10%.
5. Anand will pay off the bank overdraft.
6. Any deficiency or excess of capital will be adjusted through cash

Prepare Revaluation account, partner's capital accounts and the Balance sheet of the new partnership firm as well as identify the values involved in admitting Krishna as a partner.

39. A and B were partners in a firm sharing profits equally. Their capitals were A Rs. 1,20,000 and B Rs.80,000. The annual rate of interest is 20%. The profits of the firm for the last three years were 34,000; Rs. 38,000 and Rs. 30,000. They admitted C as a new partner. On C's admission the goodwill of the firm was valued at 3 years purchase of the super profits.
Calculate the value of goodwill of the firm on C's admission.

40. Vibha, Sudha and Ashish were partners in a firm sharing profits in the ratio 2:3:1. Sudha retired and the balance in her capital account after making necessary adjustments on account of reserves, revaluation of assets and re-assessment of liabilities was Rs. 85,000. Vibha and Ashish agreed to pay Sudha Rs.1,15,000 in full settlement of her claim. Record the necessary journal entry for goodwill on Sudha's retirement.

One **specific project** based on financial statement analysis of a company covering any two aspects from the following:
1. Comparative and common size financial statements
2. Accounting Ratios
3. Segment Reports
4. Cash Flow Statement

SUBJECT : APPLIED MATHEMATICS

1. Find the derivative of $(\log x)^x$
2. Find the derivative of $(x^2+y^2)^2=xy$
3. If $x^m y^n =(x+y)^{m+n}$ prove that $dy/dx = y/x$

4. Prove that of all rectangles with given perimeter, the square has the largest area.
5. Find dy/dx if $(x+y)^2 =2axy$
6. Find dy/dx where $x = (t+1/t)$ and $y = (t-1/t)$
7. Find the interval for strictly increasing or strictly decreasing
   i) $f(x)=10-6x-2x^2$ ii) $f(x)=20-9x+6x^2-x^3$
8. Find the interval in which the function $f(x)=\log(1+x) – x/1+x$ is strictly increasing or decreasing.
9. Find all the points of local maxima and local minima of the function
   $F(x)= x^3 – 6x^2 +6x +5$
10. A rectangular sheet of tin 45 cm by 24 cm is made into a box without top by cutting off squares from the corners and folding up the flaps. What should be the side of square in order that the volume of the box is maximum.
11. Prove that the radius of the right circular cylinder of greatest curved surface area which can be inscribed in a given right circular cone is half that of the cone.
12. Show that the altitude of the right circular cone of maximum volume that can be inscribed in a sphere of radius r is 4r/3. Also show that maximum volume of the cone is 8/27 of the volume of the sphere.
13. Find the points of local maxima and minima of the function $f(x)=3x^4 -4x^3+5$ in [-1,2]. Also find absolute maximum and minimum value.
14. Find the equation of tangents to the curve $3x^2 -y^2 =8$ which passes through the point (4/3 , 0).
15. Find the equation of the normal to the curve $x^2=4y$ which passes through the point (-1,4).
16. A man of height 2 metres walks at a uniform speed of 5km/h away from a lamp post which is 6 metres heigh. Find the rate at which the length of shadow increases.
17. A particle moves along the curve $6y = x^3 +2$. find the points on the curve at which y-coordinate is changing 8 times as fast as the x- coordinate.

Applied Maths Project

Select any one of the following topics and prepare a project containing minimum 10 pages

1. Weather prediction (prediction of monsoon from past data)
2. Predicting stock market crash
3. Predicting the outcome of an election-exit polls
4. Predicting of mortality of infants.
5. Visit kirana shops near your home and collect the data regarding certain the sales of certain commodities over a month.

REVISE THE ENTIRE SYLLABUS DONE

SUBJECT – INFORMATION TECHOLOGY

1. What is the need of DBMS ?

2. What is meant by a Database?

3. Why is the use of DBMS recommended? Explain by listing some of its major advantages.

4. What are the different categories that are available in the DBMS?

5. What is the purpose of SQL?

6. Explain the concepts of a Primary key and Foreign Key.

7. What are the main differences between Primary key and Unique Key?

8. Name the types of DBMS users.

9. What is RDBMS?

10. Do we consider NULL values the same as that of blank space or zero?

11. Write the names of the constraints you have studied in SQL.

12. What is data and information?

13. Differentiate between degree and cardinality.

14. Define the terms Attribute and Tuple.

15. What do you mean by View and Domain in SQL?

16. Define Candidate key.

17. Write all the data types you have studied in SQL.

18. Write the names of all the operators present in SQL.

19. What is the query called that combines rows in two or more tables?

20.By using which clause, you can specify a condition to specify the values that you want to view in a particular range.

21. Table Lab has 7 rows and 10 Columns. What is the degree and Cardinality of this table.

22.Mr. Khanna wants to remove all the rows from STOCK table to release the storage space, but he does not want to remove the structure of the table. What SQL statement should be used?

23. A table BUILDING contains a column SHOP.it has many duplicate values . Write query to print different values only.

24. Rewrite the command by removing the error

Select * from BOOK where price = null;

25.When using the LIKE clause, which wildcard symbol represent any sequence of none, one or more character.

26. Answer the following question based on the table ACCOUNT given below.

COLUMN_NAME	DATATYPE	SIZE	CONSTRAINT
ACC_NO	INTEGER	4	PRIMARY KEY
CUST_NAME	VARCHAR	30	NOT NULL
ACC_TYPE	CHAR	1	
TRANS_TYPE	CHAR	1	
TRAN_MONTH	INTEGER	2	
AMOUNT	INTEGER	7,2	

I.   Create the above table.

14

II. Insert the following values

ACC_NO	CUST_NAME	ACC_TYPE	TRANS_TYPE	TRAN_MONTH	AMOUNT
1709	Rahul	S	D	02	2000
1710	Azhar	C	D	09	2500
1711	Bupender	S	D	06	1000
1712	Pankaj				
1713	Sarita	S	W	12	
1714	Suman	C			500

III. Display all the accounts information.

IV. Display all the information of the saving accounts.

V. Display the name of all the people who have deposited money.

VI. Display the account number of all those people who have made any transaction before 6th month.

VII. Display all the information of those accounts whose name starts with 's'.

VIII. Display all the information of the accounts that has deposited more than 1500.

IX. Display the transaction type of all those accounts whose account number is greater than 1712.

X. Display the name and month of all those accounts whose amount is between 2000 to 3000.

XI. Add a new column "gender char(1)".

XII. Display the account no and amount of all those having current account and have withdrawn money.

XIII. Display all the information in order of their names.

XIV. Insert the account type as 'S' for account no. 1712.

XV. The withdrawn amount for Sarita is 6000.

XVI. Display the types of accounts given by this bank.

XVII. The amount for pankaj is 4500.

XVIII. Display the name of customer in descending order of their amount.

XIX. Display the total amount deposited.

XX. Display the information of the accounts whose name is either 'azhar', 'sarita' or 'suman'.

XXI. Display the maximum amount withdrawn.

XXII. Insert the value of column gender for all the rows.

XXIII. Display all the information for all the accounts whose account no. is greater than 1715 and account type is 'c'.

XXIV. Display all the information whose have deposited money after july.

XXV. Delete all the current account.

XXVI. Delete the whole table.

SUBJECT – PHYSICAL EDUCATION

➢ **Unit 1 Management of sporting events**
   1. Define management and its functions.
   2. Differentiate intramurals and extramurals.
   3. Pen down the various committees and their responsibilities.
   4. Write a short note on specific sports programme.
   5. Draw a fixture of 21 teams on the basis of knockout.

➢ **Unit 2 Children and Women in sports**
   1. Explain the common postural deformities in details.
   2. Differentiate between anorexia nervosa and bulimia nervosa.
   3. Write a short note on female athlete triad.
   4. Pen down the various causes of less participation of women in sports.
   5. Discuss about special consideration in detail.

➢ **Unit 3 Yoga as preventive measures for life style disease**
   1. Define yoga and its importance.
   2. Explain asthma and hypertension.
   3. Explain the procedure ,benefits and contraindications of bhujangasana.
   4. Write the four benefits of pranayam.
   5. What is diabetes?Draw a stick diagram of two any asana recommended to control obesity and explain their procedure.

➢   Practical 1 – Fitness Test administration (SAI KHELO INDIA TEST)

➢   Practical 2 – Procedure for Asanas, Benefits & contraindication for any two asanas for each lifestyle disease

• Obesity – Procedure, Benefits & contradictions for Tadasana, Pawanmuktasana
• Diabetes - Procedure, Benefits & contradictions for Bhujangasana, Paschimottasana.
• Asthma - Procedure, Benefits & contradictions for Gomukhasana, Anulom-viloma
• Hypertension –Matyasana ,ArdhHalasana.
• Back pain and Arthritis –Bhadraasana, Makrasana.

➢   Practical 3 -Labelled diagram of field and equipment , rules, terminologies and skills .Anyone IOA recognised game/sport of your choice.

➢   Make a First Aid Box with a Red Cross on it having the following First Aid Tools –

• Boroline or Boroplus ,Soframycin ,Dettol or Savlon ,Neosporin, Crocin, Bandage, Cotton, Band-Aid Strips.

Be Happy By Doing Good

1. Spare some time and help your mother in household work. Talk to your parents and elders and learn values.

2. Adopt the habit of reading newspaper and learn new words and expressions.

3. Read at least two books (Hindi & English) apart from prescribed syllabus.

4. Respect flora and fauna (Plants and Animals). Keep your home and surroundings clean. Plant at least 5 saplings.

5. Keep water for birds and stray animals outside your house or in balcony.

6. Food is equal to God. So avoid wasting of food.

7. Try to share your knowledge and donate old books and notebooks to the underprivileged and deprived children of your locality.

8. Maintain a diary in English & Hindi and write your experience along with daily routine during summer break. It will help you in enriching your vocabulary and writing skills.

ENJOY YOUR SUMMER BREAK......