## Dr ar <br>  <br> hOLIDAY PROJECT / ACTIVITIES

## CLASS - XII COMMERCE

## SUBJECT: INFORMATION PRACTICES

## General Instruction :

i. Solve all MYSQL base questions .

Q1. Predict the output of the following query: SELECT MOD $(9,0)$; a. 0 b. Null c. NaN d. 9

Q2. Which of the following SQL functions does not belong to the Math functions category?

a. POWER()<br>b. ROUND()<br>c. $\operatorname{LENGTH}()$ d. $\operatorname{MOD}()$

Q3. Predict the output of the following query:
SELECT LCASE (MONTHNAME ('2023-03-05'));
a.. May
b. March
c. may
d. march

Q4. With reference to SQL, identify the invalid data type.
a. Date
b. Integer
c. Year
d. Month

Q5. Raj, a Database Administrator, needs to display the average pay of workers from those departments which have more than five employees. He is
experiencing a problem while running the following query:
SELECT DEPT, AVG(SAL) FROM EMP WHERE COUNT(*) > 5 GROUP BY DEPT;
Which of the following is a correct query to perform the given task?
a) SELECT DEPT, AVG(SAL) FROM EMP WHERE COUNT(*) > 5 GROUP BY DEPT;
b) SELECT DEPT, AVG(SAL) FROM EMP HAVING COUNT(*) > 5 GROUP BY DEPT;
c) SELECT DEPT, AVG(SAL) FROM EMP GROUP BY DEPT WHERE COUNT $(*)>5$;
d) SELECT DEPT, AVG(SAL) FROM EMP GROUP BY DEPT HAVING $\operatorname{COUNT}(*)>5$;

Q6. Consider the given SQL string: "12\#All the Best!" Write suitable SQL queries for the following:
i. Returns the position of the first occurrence of the substring "the" in the given string.
ii. To extract last five characters from the string.

Q7. What are aggregate functions in SQL? Name any two.
Q8. What is the purpose of the following clauses in a select statement?
SELECT * FROM T1 WHERE PID=2001 AND VIS="VP1":

Q9. Define equi-join. What is non-equi join?

Q10. Based on the SQL table CAR_SALES, write suitable queries for the following:

| Number | Segment | Fuel | Qt1 | Qt2 |
| :--- | :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | COMPACT <br> HATCHPACK | PETROL | $\mathbf{5 6 0 0 0}$ | $\mathbf{7 0 0 0 0}$ |
| $\mathbf{2}$ | COMPACT <br> HATCHPACK | DIESEL | $\mathbf{3 4 0 0 0}$ | $\mathbf{4 0 0 0 0}$ |
| $\mathbf{3}$ | MUV | PETROL | $\mathbf{3 3 0 0 0}$ | $\mathbf{3 5 0 0 0}$ |
| $\mathbf{4}$ | MUV | DIESEL | $\mathbf{1 4 0 0 0}$ | $\mathbf{1 5 0 0 0}$ |
| $\mathbf{5}$ | SUV | PETROL | $\mathbf{2 7 0 0 0}$ | $\mathbf{5 4 0 0 0}$ |
| $\mathbf{6}$ | SUV | DIESEL | $\mathbf{1 8 0 0 0}$ | $\mathbf{3 0 0 0 0}$ |
| 7 | SEDAN | PETROL | $\mathbf{8 0 0 0}$ | $\mathbf{1 0 0 0 0}$ |
| $\mathbf{8}$ | SEDAN | DIESEL | $\mathbf{1 0 0 0}$ | $\mathbf{5 0 0 0}$ |

Display fuel wise average sales in the first quarter.
Display segment wise highest sales in the second quarter.
Display the records in the descending order of sales in the second quarter.
Q11.Write MySQL statements for the following:
i. To create a database named FOOD.
ii. To create a table named Nutrients based on the following specification:

| Column_Name | Data Type | Constraints |
| :--- | :--- | :--- |
| Food_Item | Varchar(20) | Primary Key |
| Calorie | Integer |  |

Q12. Write the output produced by the following SQL commands:
SELECT MID("Informatics",3,4), SUBSTR("Practices",3);
SELECT LEFT("INDIA",3), RIGHT("Computer Science",4);
SELECT LENGTH("Informatics Practices");
Q13. Preeti manages database in a block chain start-up. For business purposes, she created a table named BLOCKCHAIN. Assist her by writing the following queries:

| Id | User | Value | Hash | Transaction_date |
| :--- | :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | STEVE | $\mathbf{9 0 0}$ | ERTU | $\mathbf{2 0 2 0 - 0 9 - 1 9}$ |
| 2 | MEESHA | $\mathbf{1 4 5}$ | @345r | $\mathbf{2 0 2 1 - 0 3 - 2 3}$ |
| $\mathbf{3}$ | NIMISHA | $\mathbf{5 6 7}$ | \#wert5 | $\mathbf{2 0 2 0 - 0 5 - 0 6}$ |
| $\mathbf{6}$ | PIHU | $\mathbf{6 7 8}$ | \%rtyu | $\mathbf{2 0 2 2 - 0 7 - 1 3}$ |
| $\mathbf{5}$ | KOPAL | $\mathbf{7 6 8}$ | rrt4\% | $\mathbf{2 0 2 1 - 0 5 - 1 5}$ |
| 7 | PALAKSHI | $\mathbf{5 3 4}$ | wer@3 | $\mathbf{2 0 2 2 - 1 1 - 2 9}$ |

Write a query to display the year of oldest transaction.

Write a query to display the month of most recent transaction.
Write a query to display all the transactions done in the month of May.
Write a query to count total number of transactions in the year 2022.

Q14. Write suitable SQL queries for the following:
To display current date and time.
To round off the value -34.4567 to 2 decimal place.
To remove all the probable leading and trailing spaces from the column userid of the table named user.
To display the length of the string 'FIFA World Cup'.
Q15. Elon has created following table named exam:

| Reg No | Name | Subject | Marks |
| :--- | :--- | :--- | :--- |
| 1 | SANYA | COMPUTER SCIENCE | $\mathbf{9 8}$ |
| 2 | SANCHAY | IP | $\mathbf{1 0 0}$ |
| 3 | VINESH | CS | $\mathbf{9 0}$ |
| 4 | SNEHA | IP | 99 |
| 5 | AKSHITA | IP | $\mathbf{1 0 0}$ |

Help him in writing SQL queries to the perform the following task:
a) Insert a new record in the table having following values: [6,'Khushi','CS',85]
b) To change the value "IP" to "Informatics Practices" in subject column.
c) To remove the records of those students whose marks are less than 30.
d) To add a new column Grade of suitable datatype.
e) To display records of "Informatics Practices" subject.

Q16. Consider the following table named "Product", showing details of products being sold in a grocery shop.

| Pcode | Pname | Uprice | Manufacturer |
| :--- | :--- | :--- | :--- |
| P01 | Washing Powder | $\mathbf{1 2 0}$ | Surf |
| P02 | Tooth Paste | $\mathbf{5 4}$ | Colgate |
| P03 | Soap | $\mathbf{2 5}$ | Lux |
| P04 | Tooth Paste | $\mathbf{6 5}$ | Pepsodent |
| P05 | Soap | $\mathbf{9 8}$ | Dove |
| P06 | Shampoo | $\mathbf{2 4 5}$ | Dove |

Write the output(s) produced by executing the following queries on the basis of the information given above in the table Product:
SELECT PName, Average(UPrice) FROM Product GROUP BY Pname;
SELECT DISTINCT Manufacturer FROM Product;
SELECT COUNT(DISTINCT PName) FROM Notes Product;
SELECT PName, MAX(UPrice), MIN(UPrice) FROM Product GROUP BY PName;

Write SQL query for the following:
Add a new column Discount to the table Product.
Calculate the value of the discount in the table Product as 10 per cent of the UPrice for all those products where the UPrice is more than 100 , otherwise the discount will be 0 .

## SUBJECT: BUSINESS STUDIES

1. Explain briefly any five features of management.
2. "Management is a profession like medical or legal profession." Do you agree with this statement? Give any four reasons in support of your answer.
3. Identify the functions of the management: (a) Motivating empolyees and giving instructions to them to perform the tasks assigned to them. (b) Recruitment and selection of the personnel. (c) Finding out deficiencies in implementation of plans. (d) Preparing a blueprint for future. (e) Process of defining and grouping activity of an enterprise to establish authority relationship.
4. Vikas has completed his C.A. by clearing a specified examination by the Institute of Chartered Accountant of India. No body can become a C.A. without this step. He is working as finance manager in Kajaria Ltd. which is involved in manufacturing of tiles. There are other Chartered Accountants, too, in the company but Vikas has the reputation of creative application of existing theoretical knowledge which he has gained during his education.
He integrates the activities of finance department with production and sales department due to which performance of the company is geting better day-by-day.
(a) Mention the characteristic of profession discussed above.
(b) At which level of management Vikas is working in the company?
(c) Which nature of management is mentioned above?
(d) Name the concept of management which Vikas is performing by integrating the activities of his department with other departments. Give one importance of this concept.
5. Mr. Taneja is the Chairman of Navyug Ltd. which is involved in manufacturing of new year diaries since last two decades. He is responsible for the welfare and survival of the organisation. On an average, if a diary costs ₹100 (including paper, printing, binding etc.)
then company has a policy of selling it at MRP of ₹ 125 , thereby earning a margin of $25 \%$ on cost.
The management, in order to exploit the growth potential of the company fully, is planning to add table calenders and telephone diaries also. Due to this addition of new products, number of employees have to be doubled and, hence sales volume would also increase. Different corporates are also giving bulk orders to the company during Diwali season. Reputation of the company is growing day-by-day. The paper material used by the company is recyclable and not harmful for the environment, i.e., eco-friendly. Some part of the profit, earned by the company, is also donated to old age homes and blind school.
(a) By quoting lines from the given paragraph, list the objectives of management mentioned.
(b) In which category of objectives of management, the given objectives come?
(c) List any two values which are communicated to the society by the company.
(d) At which level of management is Mr. Taneja working?
6) The profits and market share of Dana Choga, which was in food catering and bakery business, started declining. The customers were annoyed as many a times they did not get what they had ordered for. The chef was always short tempered as the ingredients required by him were usually not available, the store manager complained that he always ordered whatever requisitions were given to him but then also he was blamed, the delivery boys were frequently late to deliver, the person at the reception always complained that the orders taken by her were not met promptly.
(a) State which quality of management is missing in the above organization.
(b) Also, highlight the importance of this quality of management.
7) 'Aapka Vidyalaya’ believes in holistic development of students and encourages team building through a mix of curricular, co-curricular and sports activities. On its founders day a stage performance had to be put up. A committee of ten prefects was constituted to plan different aspects of the function. They all decided to use recycled paper for decoration. There was a spirit of unity and harmony and all members supported each other. With mutual trust and belongingness the programme was systematically planned and executed. Kartik, one of the prefects realised that unknowingly the group had applied one of the principles of management while planning and executing the programme. He was so inspired by the success of the function that he asked his father to apply the same principle in his business. His father replied that he was already using this principle.
(a) Identify the principle of management applied for the success of the programme.
(b) State any two features of management highlighted in the above para.
(c) Identify any two values which 'Aapka Vidyalaya' communicated to the society.
8. Voltech Ltd. is engaged in producing electricity from domestic garbage. There is almost equal division of work and responsibility between workers and management. The management even takes workers into confidence before taking important decisions. All the workers are satisfied as the behaviour of management is good.
(a) State and explain briefly the principles of management described in above para.
(b) Identify the value which the company wants to communicate to the society.
9. Distinguish between the principles of 'unity of direction' and 'unity of command' on the basis of (a) meaning (b) aim.
> 10. Distinguish between 'Motion study' and 'Time study' on the basis of meaning and purpose.
10. Principles of Taylor and Fayol are mutually complementary. One believed that management should not close its ears to constructive suggestions made by the employees, while the other suggested that a good company should have an employee suggestion system, whereby suggestions which result in substantial time or cost reduction should be rewarded.
Identify and explain the principles of Taylor and Fayol referred in the above para.
11. Taylor's principles of scientific management and Fayol's principles of management are mutually complementary. Do you agree with this view? Give any four reasons in support of your answer.

## SUBJECT: ACCOUNTANCY

1) A, B and C are partners in a firm. Their capital accounts showed the balance on 1st April 2017 as $₹ 20,000 ; ~ ₹ 15,000$ and ₹ 10,000 respectively. During the year A withdrew ₹ 400 at the beginning of the each month. B withdrew ₹ 500 at the end of the each month. C withdrew ₹ 800 at the middle of the each month for six month ending 30th September 2017. Interest on drawing is to be charged @ $12 \%$ p.a. Calculate interest on drawings of each partner.
2) $A$ and $B$ are partners in a firm sharing profit and losses in the ratio of $2: 1$. They decide to admit C as a new partner for $1 / 3$ share on 01.04.2018. For this purpose goodwill of the firm is to be valued on the basis of two years purchases of the average profits for the last 3 years. The profits of the firm for the last three years were:

| Year ending | Profit/(Loss) <br> $₹)$ |
| :--- | :---: |
| 31st March |  |
| 2016 |  |
| 31st March | $3,00,000$ |
| 2017 | $(1,00,000)$ |
| 31st March | $2,50,000$ |
| 2018 |  |

Additional Information:
(i) There was an abnormal loss of ₹ 30,000 in the year 31st March, 2016.
(ii) Closing Stock as on 31st March, 2018 was overvalued by ₹ 30,000 .
3) (Premium for Goodwill is paid in Kind) $L$ and $M$ are partners in a firm sharing profits in the ratio of $3: 1$. They admitted O as a new partner. L surrender $1 / 4$ of his share and $M$ surrender $1 / 3$ of his share in favour of O . O brought the following assets towards his share of capital and goodwill: Stock ₹40,000, Debtors ₹ 60,000 , Land ₹
$1,00,000$, Plant ₹ 60,000 . The goodwill of the firm was valued at ₹ 4,80,000. Record the necessary journal entries for the same.
4) A, B, C, D, X, Y and $Z$ are partners in a firm. During the year A withdrew ₹300 at the beginning of the each month. B withdrew ₹ 600 at the end of the each month. C withdrew ₹ 500 at the middle of the each month. D withdrew $₹ 1,000$ at the beginning of the each quarter. X withdrew $₹ 2,000$ at the end of the each quarter. Y withdrew $₹ 5,000$ during the year. Z withdrew the following:-
> $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}, \mathrm{X}, \mathrm{Y}$ and Z are partners in a firm. During the year A withdrew ₹ 300 at the beginning of the each month. B withdrew ₹ 600 at the end of the each month. C withdrew $₹ 500$ at the middle of the each month. D withdrew ₹ 1,000 at the beginning of the each quarter. X withdrew $₹ 2,000$ at the end of the each quarter. Y withdrew $₹ 5,000$ during the year. Z withdrew the following:-

| April 30, 2017 | 6,000 |
| :--- | :--- |
| June 30, 2017 | 4,000 |
| September 1, 2017 | 8,000 |
| December 31, 2017 | 3,000 |
| February 28, 2018 | 5,000 |

Interest on drawing is to be charged @ $12 \%$ p.a. calculate interest on drawings for the year 31st March 2018.
5) A business has earned average profits of $₹ 1,00,000$ during the last few years and the normal rate of return in similar business is $10 \%$. Find out the value of goodwill by:
(i) Capitalisation of super profit method and
(ii) Super profit method if the goodwill is valued at 3 years' purchase of super profit.
The assets of the business were ₹ $10,00,000$ and its external liabilities ₹ 1,80,000.
6) J and K are partners in a firm. Their capitals are $\mathrm{J} ₹ 3,00,000$ and K $₹ 2,00,000$. During the year ended 30.3.2010 the firm earned a profit of $₹ 1,50,000$. Assuming that the normal rate of return is $20 \%$, calculate the value of goodwill of the firm.
(i) By capitalisation method and
(ii) By super profit method if the goodwill is valued at 2 years' purchase of super profit.
7) (Not able to bring cash for Premium for Goodwill) Amar and Samar were partners in a firm sharing profits and losses in $3: 1$ ratio. They admitted Kanwar for $1 / 4$ share of profits. Kanwar could not bring his share of goodwill premium is cash. The goodwill of the firm was valued at ₹ 80,000 on Kanwar's admission. Record necessary journal entry for goodwill on Kanwar's admission.
8) Anita, Asha and Amrit are partners sharing profits in the ratio of 3 : 2:1 respectively. From 1st April, 2018, they decided to share profits in the ratio of $1: 3: 2$. 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. The profits and losses of the preceding five years are : Profits 2013-14 - ₹ 1,20,000; 2014-15 - ₹3,00,000; 2015-16 - ₹3,40,000; 2016-17 - ₹ 3,80,000; 2017-18-₹ $1,40,000$ (Loss).
Showing the working clearly, give the necessary journal entry to record the above change.
9) The Partnership agreement between Maneesh and Girish provides that:
(i) Profits will be shared equally;
(ii) Maneesh will be allowed a salary of ₹ $400 \mathrm{p} . \mathrm{m}$;
(iii) Girish who manages the sales department will be allowed a commission equal to $10 \%$ of the net profits, after allowing Maneesh's salary;
(iv) $7 \%$ p.a. interest will be allowed on partner's fixed capital;
(v) $5 \%$ interest will be charged on partner's annual drawings;
(vi) The fixed capitals of Maneesh and Girish are ₹ $1,00,000$ and ₹ 80,000 respectively. Their annual drawings are $₹ 16,000$ and ₹ 14,000
respectively. The net profit for the year ending March 31, 2013 amounted to ₹ 40,000 .
Prepare firm's Profit and Loss Appropriation Account.
10) A and B entered into partnership on 1st April, 2016 without any partnership deed. They introduced capitals of $₹ 5,00,000$ and $₹ 3,00,000$ respectively. On 31st October, 2016, A advanced ₹ $2,00,000$ by way of loan to the firm without any agreement as to interest.
The profit and loss account for the year ended 31.03.2017 showed a profit ₹ $4,30,000$ but the partners could not agree upon the amount of interest on loan to be charged and the basis of division of profits. Pass a journal entry for the distribution of profit between the partners.
11) $K$ and $P$ were partners in a firm sharing profits in $4: 3$ ratio. Their capitals on 01.04.2017 were:
$\mathrm{K} ₹ 80,000$ and $\mathrm{P} ₹ 60,000$. The partnership deed provided as follows:
(i) Interest on capital and drawings will be allowed and charged @ $12 \%$ p.a. and $10 \%$ p.a. respectively.
(ii) K and P will be entitled to a monthly salary of ₹ 2,000 and ₹ 3,000 respectively.
The profits for the year ended 31.03 .2018 were $₹ 1,00,300$. The drawings of K and P were $₹ 40,000$ and
₹50,000 respectively.
Prepare Profit and Loss Appropriation Account and Capital Account of K and P for the year ended 31.3.2017 assuming that the capitals of the partners were: (i) fluctuating. (ii) Fixed.
12) $X$ and $Y$ are partners in a firm sharing profits in the ratio of $3: 2$.

On 1 April 2017 their fixed capitals were $₹ 3,00,000$ and $₹ 2,50,000$ respectively. On 1.7.2017 they decided that their total fixed capital should be ₹ $6,00,000$. They further decided that this capital should be in their profit sharing ratio. Accordingly, they introduced extra capital or withdrew excess capital. The partnership deed provided for the following:
(i) Interest on capital @ $12 \%$ p.a.
(ii) Interest on drawings @ $18 \%$ p.a.
(iii) A monthly salary of $₹ 2,000$ to X and a monthly salary of $₹ 1,500$ to Y . The drawings of X and Y during the year as follows:

| Year 2017-18 | $\mathrm{X}(₹)$ | $\mathrm{Y}(₹)$ |
| :--- | :---: | :---: |
| June 30 | 20,000 | 15,000 |
| September 30 | 20,000 | 25,000 |
|  |  |  |

During the year ended 31.03 .2018 , the firm earned a net profit of ₹ $1,50,000.10 \%$ of this profit was to be transferred to general reserve. You are required to prepare:
(i) P \& L Appropriation A/c (ii) Partner's Capital A/c (iii) Partner's Current A/c.
13) Ankur and Bobby were into the business of providing software solutions in India. They were sharing profits and losses in the ratio 3 : 2. They admitted Rohit for a $1 / 5$ share in the firm. Rohit, an alumni of IIT, Chennai would help them to expand their business to various South African countries where he had been working earlier. Rohit is guaranteed a minimum profit of $₹ 2,00,000$ for the year. Any deficiency in Rohit's share is to be borne by Ankur and Bobby in the ratio $4: 1$. Losses for the year ₹ $10,00,000$. Pass the necessary journal entries.
14) $A, B$ and $C$ sharing profits and losses in the ratio of $2: 2: 1$. D was admitted as a new partner with $1 / 5$ share in profit in the firm on 31-03-2017. An extract of their Balance Sheet as at 31st March, 2017 was as follows:

| Liabilities | $(₹)$ | Assets | $(₹)$ |
| :--- | :---: | :--- | :---: |
| Investment Fluctuation Fund | 90,000 | Investment | $3,00,000$ |

Show the accounting treatment investment fluctuation fund in each of the following alternative cases:

Case 1. If there is no other information.

Case 2. If the market value of investments is $₹ 3,00,000$.
Case 3. If the market value of investments is $₹ 2,60,000$.
Case 4. If the market value of investments is $₹ 2,00,000$.
Case 5. If the market value of investments is ₹ $3,50,000$.
15) $X$ and $Y$ were partners in a firm sharing profits in the ratio of 3 :
2. On 31.3.2017 their Balance Sheet was as follows:

| Liabilities | Amount (₹) | Assets | Amount (₹) |  |
| :--- | ---: | ---: | :--- | ---: |
| Sundry Creditors | 50,000 | Land and Building | $1,00,000$ |  |
| Bills Payable | 20,000 | Machinery | 80,000 |  |
| Outstanding Expenses |  | 10,000 | Stock | $1,00,000$ |
| Capital Accounts : |  | Debtors | 40,000 |  |
| X | $1,80,000$ |  | Cash | 10,000 |
| Y | $2,50,000$ |  | $3,30,000$ |  |

On the above date, Z was admitted as a new partner in the firm for 1/4th share in the profits on the following terms :
(i) Z will bring ₹ $1,20,000$ for his capital and $₹ 20,000$ for his share as premium for goodwill.
(ii) Machinery was to be depreciated by $10 \%$ and Land and Building was to be appreciated by ₹ 30,000 .
(iii) Stock was overvalued by ₹ 20,000 .
(iv) A provision of $5 \%$ was to be created for doubtful debts.
(v) Salary outstanding was ₹5,000.

Prepare Revaluation Account, Partners' Capital Accounts and the Balance Sheet of the new firm.
16) Given below is the Balance Sheet of Krishna and Suresh who are partners in a firm sharing profits in the ratio of $3: 2$.

| Liabilities |  | Amount (₹) | Assets | Amount (₹) |
| :---: | :---: | :---: | :---: | :---: |
| Creditors <br> Reserves <br> Capital Accounts : <br> Krishna <br> Suresh |  | 15,000 | Plant and Machinery | 30,000 |
|  |  | 5,000 | Patents | 5,000 |
|  |  |  | Furniture | 3,000 |
|  | 30,000 |  | Stock | 16,000 |
|  | 20,000 | 50,000 | Debtors | 15,000 |
|  |  |  | Cash | 1,000 |
|  |  | 70,000 |  | 70,000 |

On that date, Mohan is admitted as a partner for $1 / 5$ th share on the following terms :
(i) He is to contribute $₹ 14,000$ as his share of capital which includes his share of premium for goodwill.
(ii) Goodwill is valued at 2 years' purchase the average profits of the last 4 years, which were ₹ 10,000 ; ₹ 9,000 ; ₹ 8,000 and ₹ 13,000 respectively.
(iii) Plant to be written down to ₹ 25,000 and patents written up by ₹ 8,000.
(iv) Unrecorded investment $₹ 7,000$ is to be brought into books Prepare Revaluation Account, Partners' Capital Accounts and the Balance Sheet of the new firm.

## SUBJECT: ECONOMICS

Q1. a) Prepare short notes, after reading and understanding chapters with help of any suitable online learning platform, of first three chapters of INDIAN ECONOMIC DEVELOPMENT.
b) Make minimum 10 MCQs from each chapter of first three chapters of INDIAN ECONOMIC DEVELOPMENT.

Q2. Complete the board project as discussed in the class.

## SUBJECT: ENGLISH

1. What's in a name ?

Do a research work on the names of both the English booksFlamingo \& Vistas. Find out the relevance of naming these books with reference to your class. Write down this research in your English Notebook.
2. "Good words are worth much, and cost little." -George Herbert With reference to the chapter, The Last Lesson, write a speech on: "Tomorrow never comes".
3. Make a scrap book of various types of invitation for social and formal gatherings.

# SUBJECT: PHYSICAL EDUCATION 

## I. Tick the correct option

1. National Sports Day is celebrated on
a. 9th August b. 19th August c. 28th August d. 29th August
2. Which of the races is run "to promote brotherhood"?
a. Run for Fun b. Run for specific cause
c. Run for Unity
d. Health Run
II. Answer the following questions briefly.
3. Write briefly about any two types of Run.
4. Write about the objectives of Intramural tournaments.
5. What is the significance of Extramural Tournaments.
III. Answer the following questions in 150-200 words.
6. How would you plan for an Intramural Tournament? Highlight any two problems you may encounter. How will you deal with them?
7. Discuss a method you would choose to spread health awareness and harmony in your area. Support your answer with reasons.
8. Write down the difference between Intramural and Extramural Tournaments.

## SUBJECT: APPLIED MATHEMATICS

## Applied Mathematics

1. Order $3 \times 3$ find $\left|A^{-1}\right|=$ ?
2. Order $3 \times 3 ;|\mathrm{A}|=3$ and $|2 \mathrm{AB}|=120$ find $\left|\mathrm{B}^{\prime}\right|=$ ?
3. If $n=3 \times 3$ find $|\operatorname{Adj}(\operatorname{Adj} A)|$ and $|A|=5$
4. Find the value of $x$ if the area of $\Delta$ is 35 square units with vertices $(x, 4),(2,-6)$ and $(5,4)$
5. An amount of Rs 5000 is put in to three investments at the rate of interest of $6 \%, 7 \%$ and $8 \%$ per annum. The total annual income is Rs 358 . If the combined income from the first two investments is Rs 70 more than the income from the third, find the amount of each investment by matrix method.
6.An amount of Rs 5000 is put in to three investments at the rate of interest of $6 \%, 7 \%$ and $8 \%$ per annum. The total annual income is Rs 358 . If the combined income from the first two investments is Rs 70 more than the income from the third, find the amount of each investment by matrix method.
6. a) Find area of $\triangle A B C$ whose vertices are $A(3,8), B(-4,2), C(5,-1)$.
(b) Find equation of line joining $A(3,5) \& B(4,2)$ using determinants.
(c) Find value of $\lambda$ so that points $(1,-5),(-4,7)$ and $(\lambda, 7)$ are collinear.
7. Solve the equations using matrix method
$x+2 y+z=7 ; x+3 z=11 ; 2 x-3 y=1$
For each problem, use implicit differentiation to find $d y d x$ in terms of $x$ and $y$.
1) $2 \times 3=2 y 2+5$
2) $3 x^{2}+3 y^{2}=2$
3) $5 y^{2}=2 x^{3}-5 y$
4) $4 x^{2}=2 y^{3}+4 y$
5) $5 x^{3}=-3 x y+2$
6) $1=3 x+2 x^{2} y^{2}$
7) $3 x^{2} y^{2}=4 x^{2}-4 x y$
8) $5 x^{3}+x y^{2}=5 x^{3} y^{3}$
9) $2 x^{3}=(3 x y+1)^{2}$
10) $x^{2}=\left(4 x^{2} y^{3}+1\right)^{2}$

Use logarithmic differentiation to differentiate each function with respect to $x$. You do not need to simplify or substitute for $\boldsymbol{y}$.
11) $y=\frac{(5 x-4)^{4}}{\left(3 x^{2}+5\right)^{5} \cdot\left(5 x^{4}-3\right)^{3}}$
12) $y=(x+2)^{4} \cdot(2 x-5)^{2} \cdot(5 x+1)^{3}$
13) $y=\left(5 x^{5}+2\right)^{2} \cdot\left(3 x^{3}-1\right)^{3} \cdot(3 x-1)^{4}$
14) $y=\frac{\left(x^{2}+3\right)^{4}}{\left(5 x^{5}-2\right)^{5} \cdot\left(3 x^{2}-5\right)^{2}}$
15) $y=\left(3 x^{3}-4\right)^{5} \cdot(3 x-1)^{3} \cdot\left(5 x^{3}-2\right)^{2} \cdot(x+3)^{4}$
16) $y=\frac{\left(4 x^{2}-5\right)^{2}}{(2 x-3)^{4} \cdot\left(5 x^{4}-2\right)^{5} \cdot\left(3 x^{2}-4\right)^{3}}$

