"Success is the sum of small efforts repeated day in and day out."

Dear Parents,

Summer Vacation is a time for the children to enjoy and relax. These days are precious and valuable and can be made most from if judiciously used. We should always remind ourselves that children will not remember us for the gifts we shower upon them but will always cherish the time we spent with them. It is time to nurture young minds, inculcate moral values and narrate family anecdotes to keep them in touch with their roots.

It's summertime again! The time to strengthen family bond, tying threads of family tree, sharing joys and sorrows and having a good time together.
Here are a few tips to make the vacation a fruitful time for your child:

- Look for interesting books and read as much as you can about the places and people. Take good care of your health and hygiene. Avoid heavy and oily food and increase intake of fresh fruits and water to keep yourself well hydrated and energetic.
- Use Holiday Homework as an opportunity to spend quality time together. The role of the parent is to be a facilitator and guide to steer the child in the right direction.
- Encourage your child to take up yoga or any other form of healthy activity during the vacation.
- Involve children in household chores.
- Enjoy walking with them in parks and appreciate nature.

General instructions:

In order to keep our students well engaged and to revise and be thorough with the portions we have completed so far, we are sending the Summer Holiday Homework. We request parents to encourage the kids to finish their homework during the summer holidays. This will help them to have a revision of all the portions without over burdening them. Original work by the child shall be acknowledged and assessed.

Follow the guidelines given by teachers to complete specific activities.

Happy holidays!

ENGLISH

Select any one topic of your choice and prepare the Project Work for CBSE Practical Exam.

1.The impact of globalization on the economy and society.

2.Exploring the role of technology in education.

3..Climate change: Causes, effects, and solutions.

4Gender equality and women empowerment.

5.Mental health awareness and strategies for coping with stress.

6The future of work: Automation, AI, and employment trends.

7.The role of media in shaping public opinion and democracy.

8..The impact of social media on interpersonal relationships.

9.Urbanization: Opportunities and challenges in developing countries.

10.Cybersecurity: Threats and preventive measures.

11.Present a brief report on the life and works of any ONE of the poets/authors of your choice.(from the prescribed texts)

12.Child Labour -a stumbling block on the road to development.

INFORMATICS PRACTICES

Q.1. Answer the following based on the series given below.

import pandas as pd

list1=[1,2,3,4,5,6,7,8]

list2=['swimming','tt','skating','khokho', 'bb', 'chess', 'football',"cricket"]
school=pd.Series(list1,index=list2)

school.name=("little")

print (school*2) #statement 1

 print (school.tail(3)) # statement 2

print (school["tt"]) # statement 3

 print (school[2:4]) # statement 4

print (school[school<3]) #5

l3=[3,4,5]

s2=pd.Series(data=l3*2)

print(s2) # 6

i. Choose the correct name of the series object given above.

  a) list1 b) list2 c) school d) little

 ii. Write the correct output for the six print statements above

iii Give the output of the following program

import pandas as pd

s =pd.Series([10,20,30,40,50,60,70,80],index =['a','b','c','d','e','f','g','h'])

print(s[1:4])

print(s[:7:3])

iv Fill the missing statement to retrieve the first three elements in the Series

import pandas as pd

s =pd.Series([1,2,3,4,5],index =['a','b','c','d','e'])

print(s[_])

Its output is as follows −

a 1

b 2

c 3

v Fill the missing values to get the desired output.

import pandas as pd

name=['Harsh','Arun','Ankur','Harpahul','Divya','Jeet']

empno=[101,102,103,104,105,106]

p=pd.Series(_____,index=_____)

print ('name of empno 103 is',p[_____])

Output

name of empno 103 is Ankur

vi Write code to show rows of those empno which are greater than 103

import pandas as pd

empno=[101,102,103,104,105,106,107]

p=pd.Series(empno)

(vii) Write python code to create the following series

101 Harsh

102 Arun

103 Ankur

104 Harpahul

105 Divya

106 Jeet

    a. show details of 1st 3 employees using head command

    b. show details of last 3 employees using tail command

    c. show details of 1st 3 employees without using head command

    d. show details of last 3 employee without using tail command

    e. show value of index no 102

    f. show 2nd to 4th records

    g. show values of index no=101,103,105

    h. show details of "Arun"

Q.2 DATAFRAME

Consider the given dataframe STOCK and answer the following questions:

	item	manf	qty	price
l1	laptop	dell	5	45000
m1	mobile	samsung	2	12000
l2	laptop	acer	3	30000
ms1	mouse	hp	10	1000

    a. Wrtie the code to create the above dataframe

    b. Display the details of all the laptops (use boolean indexing)

    c. Display the details of manufacturers with prices

    d. Insert a column named "color" with the following values (black, black, grey, white)

    e. Insert the given rows to store the following details

	item	manf	qty	Price	color
m2	mobile	oppo	15	15000	blue
sp1	speaker	Bose	4	20000	red

f. Display the details of those items which have price less than 15000

g. Remove the column color permanently

h. Display the items of Samsung company in the stock

i. Add a column named "rating' with the following values ("A+","A","B","B+","A","A+")

j. Delete row with index label l2 temporarily.

k. Display first two rows

l. Display shape, size of the dataframe

Q.3 SQL (revision xi class)

A Departmental store 'Iconic' is planning to automate its system so that they can store all the records on computer. They contacted a Software Company to make the software for the same. The company suggested that there is need of a front end and back-end software. The major challenge was to keep the record of all the items available in the store. To overcome the problem, the software company has shown the glimpses of the database and table required to resolve their problem:

Database Name: Iconic

Table Name: Garment

Attributes of the table: Gcode – Numeric Primary key, Gname – Character 25, Size - Character 5, Colour – Character 10, Price – Numeric

    a) Write the statement to create the Garment Table

Consider the following records in 'Garment' table and answer the given questions:

    b) Write the statement to insert any one record

    c) Write the statement To delete the record with GCode as 116

    d) Give the output of : Select GName, Price from GARMENT order by Price Desc;

    e) Write the statement To change the colour of GARMENT with code as 116 to "Orange"

    f) What is the degree and cardinality of 'GARMENT' table?

    g) Write the statement to display size without duplicate

    h) Write the statement to display records in the price range 1100 to 1500

Q.4 Complete practical file questions of Python Pandas Q 1 to 10 and mail the soft copy to mail id pdpswork@gmail.com .

Q.5 Project work

  The aim of the class project is to create tangible and useful IT applications. The learner may identify a real-world problem by exploring the environment. e.g. Students can visit shops/business ,places, communities or other organizations in their localities and enquire about the functioning of the organization, and how data are generated, stored, and managed. The learner can take data stored in csv or database file and analyze using Python libraries and generate appropriate charts to visualize.

Data can be imported in Pandas for analysis and visualization. Learners can use Python libraries of their choice to develop software for their school or any other social good. Learners should be sensitized to avoid plagiarism and violation of copyright issues while working on projects.

Q.6 Design a beautiful A4 SIZE POSTER on any of the given topics

1. Python   XII E

2. SQL   XIIE

3. Computer Network   XII E

4. Cyber Safety   -----XII C

5. Digital Society ,Law and Ethics --- XII C

REVISE THE SYLLABUS FOR PWT1

*NOTE: Q 1 TO 4 to be done in IP register

PHYSICAL EDUCATION

Practical -2 Procedure for Asanas, Benefits and Contradiction for any two Asanas for each Lifestyle Disease
Practical -3 Anyone One IOS recognised sports/game of your choice, Labelled diagram of field and equipment. Also mention its rules, terminology and skills

ACCOUNTANCY

1: Radha and Raman are partners in a firm sharing profits and losses in the ratio of 5:2. Capital contributed by them is Rs. 50,000 and Rs. 20,000 respectively. Radha was given salary of Rs. 10,000 and Raman Rs. 7,000 per annum. Radha advanced loan of Rs. 20,000 to firm without any agreement to rate of interest in deed while in deed rate of interest on capital was mentioned as 6% p.a. Profits for the year are Rs. 29,400. Prepare Profit and Loss Appropriation Account for the year ending 31st March 2015.

2: Ram & Sham are partners sharing profits & losses in ratio of 3:2. Ram being non-working partner contributes Rs. 20,00,000 as his capital &Shyam being a working partner, gets a salary of Rs. 8000 per month. As per partnership deed interest is paid @ 8% p.a. & salary is allowed. Profits before providing that for year ending 31st March 2015 were Rs. 80,000. Show the distribution of profits.

3: Amit and Sumit commenced business as partners on 01.04.2014. Amit contributed Rs. 40,000 and Sumit Rs. 25, 000 as their share of capital. The partners decided to share their profits in the ratio of 2:1. Amit was entitled to salary of Rs. 6,000 p.a. Interest on capital was to be provided @

6% p.a. The drawings of Rs. 4, 000 was made by Amit and Rs. 8,000 was made by Sumit. The profits after providing salary and interest on capital for the year ended 31ˢᵗ March, 2015 were Rs. 12,000.

Draw up the capital accounts of the partners

1. When capitals are fluctuating

2. When capitals are Fixed

4: X and Y invested Rs. 20,000 & Rs. 10,000. Interest on capital is allowed @ 6% per annum. Profits are shared in ratio of 2 : 3. Profit for year ending 11.3.2015 is Rs. 1,500. Show allocation of profits when partnership deed.

(a) Allows interest on capital & deed is silent on treating interest as charge.

(b) Interest is charge against profit.

5: A and B are partners in business. Their capitals at the end of year were Rs. 48,000 & Rs. 36,000 respectively. During the year ended March 31st 2015 A's Drawings and B's drawings were Rs. 8, 000 & Rs. 12, 000 respectively. Profits before charging interest on capital during the year were Rs. 32, 000. Calculate Interest on partners' capitals @ 10% p.a.

6: Aarushi and Simran are partners in a firm. During the year ended on 1st March, 2015 Aarushi makes the drawings as under:

Date of Drawing	Amount (Rs.)
01-08-2015	5,000
31-12-2014	10,000
31-03-2015	15,000

Partnership Deed provided that partners are to be charged interest on drawing @ 12% p.a. Calculate the interest chargeable to Aarushi Drawing by using Simple Interest Method and Product Method.

7: Calculate interest on drawings of Mr. X @ 10% p.a. if he has withdrawn Rs. 1000 per month (i) in the beginning of each Month (ii) In the middle each of month (iii) at end of each month.

Total Amount with withdrawn = Rs. =12, 000.

8: Calculate interest on drawing of Vimal if he withdrew Rs. 48000 evenly (i) at beginning of each Quarter (ii) in the middle of each Quarter (iii) At the end of each Quarter. Rate of interest is 10% p.a.

9: A and B entered into partnership on 1st April, 2014 without any partnership deed. They introduced capitals of Rs. 5,00,000 and Rs. 3,00,000 respectively. On 31st October, 2014, A advanced Rs. 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 31-03-2015 showed a profit of Rs. 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 the Profits between the partners and prepare the Capital A/cs of both the partners and Loan A/c of 'A'.

10: Manoj, Sahil and Dipankar are partners in a firm sharing profit and losses equally.

They have omitted interest on Capital @ 10% per annum for the year ended on 31st March, 2015. Their fixed Capital on which interest was to be calculated throughout were:

Manoj Rs. 3,00,000

Sahil Rs. 2,00,000

Dipankar Rs. 1,00,000

Give the necessary adjusting journal entry with working notes.

11: Ram, Shyam & Mohan are partners in a firm sharing profit & losses in the ratio of 2:1:2. Their fixed capitals were Rs. 3,00,000, Rs. 1,00,000 an Rs. 2,00,000 respectively. Interest on capital for the year ending 31st March, 201 was credited to them @ 9% p.a. instead of 10% p.a. The profits for the year before charging interest was Rs. 2,50,000. Prepare necessary adjustment entry.

12: A, B & C are partners in a firm sharing profits & losses in ratio of 2:3:5. Their fixed capitals were Rs. 15,00,000, Rs.30,00,000 & Rs. 60,00,000 reactively. For the year ended 31st March 2015, interest was credited 12% instead of 10%. Pass the necessary adjustment entry.

13: A and B were partners in a firm sharing profits and losses in the ratio of 3:2. They admit C for 1/6th share in profits and guaranteed that his share of profits will not be less than Rs. 25,000. Total profits of the firm for the year ended 1st March, 2015 were Rs. 90,000. Calculate share of profits for each partner when.

1. Guarantee is given by firm.

2. Guarantee is given by A

3. Guarantee is given by A and B equally.

BUSINESS STUDIES

PART – I

WRITTEN WORK (Case based Questions-To be done in Class notebook)

Ch -1 NATURE AND SIGNIFICANCE OF MANAGEMENT

Q1. Delhi CM Mr. Arvind Kejriwal launched Odd Even rule for cars in Delhi to cut pollution by restricting the number of cars running on city roads. Identify and explain the objective of Management highlighted by the Chief Minister in the above case.

Q2. Shiv Nadar, chairman and CEO of HCL attributes the success of the group to its management team and their entrepreneurial spirit which together have enabled it to handle rapid changes in the environment and technologies. At HCL management believes that happy, satisfied, and self-motivated employees help in reducing costs and increase productivity. It also has a strong sense of social responsibility and has set up educational institutions in the field of management, engineering, computers etc.

Identify and explain the significance of understanding management by quoting relevant lines from the case study.

Q3. Raman agreed to be an employee of a company on the condition that he will be given a project offering competitive salary, career advancement opportunity, promotion, and recognition. Mr. John, (general manager) puts Raman in a project in which promotion is not possible. Raman gets disheartened and feels frustrated all the time. Such frustration also reflected in his work and he could not bring desired results.

(a) Which objective of management Raman could not achieve? Explain.

(b) Identify the other two objectives.

Chapter 2 (Principles of Management)

Q4.   Mr. Neeraj, the salesman in Progress Ltd., designed a new cost saving advertisement technique 'through his personal experience and suggested the same to his sales manager but it was not appreciated by his sales manager, and he also warned him not to come with

any suggestions in future. Which principle of Fayol is being overlooked by the sales manager? What should have been the appropriate way of response by the sales manager?

Q5. The production manager assigned a target of producing 1,000 TV sets in the month of April to, group of 10 workers. They mutually decided to produce 100 TV sets each. Among them, Vishal (one of the workers in the group) falls sick. The other workers refused to divide his work among themselves and concentrated only on the production of their own individual target of production. As a result, the target of 1,000 TV sets could not be achieved.

  (a) Name the principle of Fayol which is violated in the given case.

  (b) What does it state?

  (c) What should have been the appropriate course of action.

Q6. Rama Ltd. was engaged in the business of manufacturing auto components. Lately, its business was expanding due to increased demand for cars. The competition was also increasing. In order to keep its market share intact, the company directed its workforce to work overtime. But this resulted in a lot of problems. Due to increased pressure of work the efficiency of workers declined. Sometimes the subordinates had to work for more than one superior. The workers were becoming indisciplined. The spirit of teamwork, which had characterised the company previously, had begun to wane.

Identify any three principles of management which were being violated, quoting the lines from the above case.

Q7. 'New Delhi Ltd.' is a famous services providing company. Mr. Aman Malhotra is its Managing Director. He continuously motivates his Research and Development department that new and latest methods of doing work be explored. The provisions have also been made to give reward to those employees who will participate in a particular exploration. He also believes that two groups working on managerial and non-managerial posts are similar to two wheels of an organisational vehicle. If this vehicle (organisation) is to be driven in a right way then both the wheels should be property aligned. Mr. Aman is a successful leader. Among his employees, he has instilled the feeling that no decision will be taken without consulting the subordinates. To excel in this field, is the main motive of Mr. Aman and he paid a lot of attention to training of employees.

Identify the principles of scientific management discussed above by quoting the lines.

Q8. Arun and Sonia, having the same educational qualifications are working as managers in Alfa Ltd. Arun belongs to rural areas where employment opportunities are very less whereas Sonia

belongs to urban areas. Ignoring many other differences between the two, management of Alfa Ltd. appointed them as manager, on the same salary package of Rs. 40,000 per month.

Name and explain the principle of management being followed in the above case.

CH-3(BUSINESS ENVIRONMENT)

Q9. A recent rate cut in the interest on loans announced by the Banks encouraged Amit, a science student of Progressive School to take a loan from State Bank of India to experiment and develop cars to be powered by fuel produced from garbage. He developed such a car and exhibited it in the Science Fair organized by the Directorate of Education. He was awarded first prize for his invention. Identify and explain the dimensions of the business environment discussed in the above case.

Q10. With change in the consumption habits of people, Neelesh, who was running a sweet shop, shifted to the chocolate business. On the eve of Diwali, he offered chocolates in attractive packages at reasonable prices. He anticipated huge demand and created a website chocolove.com for taking orders online. He got a lot of orders online and earned huge profit by selling chocolates. Identify and explain the dimensions of the business environment discussed in the above case.

Q11. Accent Electronics Ltd.' was operating its business in Malaysia. The company started exporting its products to India when the Prime Minister announced relaxation in import duties on electronic items. The company appointed retailers in India who had direct online links with the suppliers to replenish stocks when needed. Identify and explain the dimensions of the business environment discussed in the above case.

Q12. The court passed an order that all schools must have water purifier for the school children as:

      (i)   Society in general is more concerned about quality of life;

      (ii)   Innovative techniques are being developed to manufacture water purifier at competitive rates;

      (iii)   Incomes are rising and children at home are also drinking purified water. The Government is also showing a positive attitude towards the water purifier business.

Identify the different dimensions of the business environment by quoting from the above details.

PART – II

Learn all the concepts of chapters 1 to 3. Periodic Written Test will be conducted after holidays.

Syllabus for Periodic Written Test

Chapter 1 – Nature and significance of management

Chapter 2 – Principles of management

Chapter 3 – Business Environment

Happy Learning!

ECONOMICS (030)

1. Practice the following numerical questions:

*Practise any 10 numerical of national income. Show your workings clearly.

*Questions are to be done in your class registers only.

2.   Prepare a project as per CBSE guidelines as briefed in the class. You have to abide by the topic allotted to you only.

GUIDELINES -

*Use a ring file as your project file and cover it neatly. Write your particulars on the project file

which include- Name, Board Roll. No, Subject, Class & Section, Session: 2024-25 and Topic.

* Project should be of 25-30 (excluding graphs and diagrams) covering the entire

content and should be hand written only.

*You can include newspaper articles, IMF/World bank reports, NITI Aayog reports, Government

policies etc.

* Plagiarism is not allowed and you must mention the source of the information to ensure

authenticity of the research work.

*Presentation of the project should be in the following manner-

1. Topic

2. Acknowledgement

3. Certificate

4. Index

5. Introduction of topic

6. Causes, Consequences and remedies

7. Various stakeholders and effect on each of them

8. Advantages and disadvantages of situations or issues identified.

9. Short-term and long-term implications of economic strategies suggested in the course of research.

10. A case study or real life application of the topic is a must.

11. Conclusion

12. Bibliography – Citation of materials referred to should be included.

13. Thank you sheet

MATHEMATICS

Q.1 Let A={1,2,3,4..........9} and relation R on AXA defined a by(a,b) R (c,d) if a+d=b+c for all (a,b),(c,d) ∈ AXA, show that R is an equivalence relation. Also find the equivalence class of (2,5).

Q2. If R be the relation defined on Q (set of rational numbers) as aRb ⟺ |a-b| $\leq \frac{1}{2}$ then show that R is not transitive.

Q3. Is the function f : N → N, where N is the set of natural numbers is defined by

$$f(x) = \begin{cases} n^2 & , n \ is \ odd \\ n^2 + 1, & n \ is \ even \end{cases} \quad \text{onto?}$$

Q4. Let R be a relation on the set A of real numbers be defined as $(a,b) \in R \Rightarrow 1 + ab > 0$ for all a , b ∈ A . Show that R is not transitive.

Q.5 Let A=R-{2} ,B=R-{1} , if f:A→B , f(x)=$\frac{x-1}{x-2}$ then f is a bijective function.

Q-6 A function f is defined on all real numbers except 2/3 as f(x)=$\frac{4x+3}{6x-4}$, $then \ show \ that f$ is one-one and onto function.

Q-7 Solve for x, $(\tan^{-1} x)^2 + (\cot^{-1} x)^2) = \frac{5\pi^2}{8}$

Q-8 Prove that $2 \tan^{-1} \left(\frac{1}{5}\right) + \sec^{-1} \left(\frac{5\sqrt{2}}{7}\right) + 2 \tan^{-1} \left(\frac{1}{8}\right) = \pi/4$

Q9 Draw the graphs of $\sin^{-1} x , \cos^{-1} x \ and \ \tan^{-1} x$.

Q-10 Solve for x, $\cos^{-1} \left(\frac{x^2-1}{x^2+1}\right) + \frac{1}{2} \tan^{-1} \left(\frac{2x}{1-x^2}\right) = 2\pi/3$

Q.11 Find the minimum and maximum value of $(\sin^{-1} x)^2 + (\cos^{-1} x)^2$

Q-12 Write in simplest form $\sin^{-1} \left(\frac{12x+5\sqrt{1-x^2}}{13}\right)$

Q.13 f:R→ R,f(x)=|x| , show that f is neither one-one nor on to function.

Q.14 A=$\begin{bmatrix} 1 & 2 & 1 \\ 1 & 0 & 3 \\ 2 & -3 & 0 \end{bmatrix} and \ B = \begin{bmatrix} 9 & -3 & 6 \\ 6 & -2 & -2 \\ -3 & 7 & -2 \end{bmatrix}$, find AB , hence solve the equations.   X+2y+z=7, x+3z=11, 2x-3y=1

Q.15If A=$\begin{bmatrix} 1 & -2 & 0 \\ 2 & 1 & 3 \\ 0 & -2 & 1 \end{bmatrix}$, find A^{-1}, hence solve the system of equations

X+2y=3 , 2x-y+2z=1, 3y+z=3

Q.16 If $\begin{bmatrix} 1 & 2 \\ 2 & 5 \end{bmatrix} A \begin{bmatrix} 1 & -2 \\ 1 & 1 \end{bmatrix} = \begin{bmatrix} 3 & 1 \\ 4 & 2 \end{bmatrix}$ .find matrix A.

Q17. If A and B are skew symmetric matrices of same order then nature of AB+BA?

Q18. Using matrix, solve the equations: 2/x-3/y+3/z=10 ; 1/x+1/y+1/z =10 ; 3/x-1/y+2/z=13

Q19. Prove that diagonal elements of a skew symmetric matrix are zero.

Q20. Express given matrix as a sum of symmetric and skew symmetric matrix

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 5 & 6 & 7 \\ -1 & 0 & 1 \end{bmatrix}$$