PRABHU DAYAL PUBLIC SCHOOL
Holidays Homework 2025
Class XII

English

The **Project - Portfolios** is a compilation of the work that the students produce during the process of working on their ALS project
The Project- Portfolio may include the following
1. Cover page, with title of project, school details / details of students.
2. Statement of purpose /objectives /goals
3. Certificate of completion under the guidance of the teacher.
4. Action plan for the completion of assigned tasks.
5. Materials such as scripts for the survey, questionnaires for interview and other material evidence of learning progress and academic accomplishment
6. The 800 -1000 words essay / script /report
7. Student reflections
8. If possible, paragraphs that capture the positive learning experiences of the students
9. Lists of resources / bibliography

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.
13. Terroism and its impacts.
14. Use of Artificial Intelligence and its pros and cones
15. Contributions made by anonymous Indians to the freedom movement. OR the unsung heroes of freedom movement. (Indigo)

Economics

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: 2025-26 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

Accountancy

I.   Write the company's profile (as discussed in class) for the Cbse project.
II.   Do the following questions in your register.

Q1. Anthony, a partner was being guaranteed that his share of profits will not be less than Rs. 60,000 p.a. Deficiency, if any was to be borne by other partners Amar and Akbar equally. For the year ended 31st March, 2024 the firm incurred loss of Rs. 1,80,000. What amount will be debited to Amar's Capital Account in total at the end of the year?
   a) Rs. 60,000   b) Rs. 1,20,000   c) Rs. 90,000   d) Rs. 80,000

Q2. Ram and Shyam were partners sharing profits and losses in the ratio of 3:2. Their balance sheet shows building at Rs. 1,60,000. They admitted Mohan as a new partner for 1/4th share. In additional information it is given that building is undervalued by

20%. The share of loss/gain of revaluation of Shyam is _____ & current value of building shown in new balance sheet is _____.

a) Gain Rs. 12,800, Value Rs. 1,92,000 c) Loss Rs. 12,800, Value Rs. 1,28,000

b) Gain Rs. 16,000, Value Rs. 2,00,000 d) Gain Rs. 40,000,Value Rs. 2,00,000

Q3. Amit and Kartik are partners sharing profits and losses equally. They decided to admit Saurabh for an equal share in the profits. For this purpose, the goodwill of the firm was to be valued at four years' purchase of super profits.

The Balance Sheet of the firm on Saurabh's admission was as follows:

Liabilities		Rs.	Assets	Rs.
Capitals:			Fixed assets (Tangible)	75,000
Amit	90,000		Furniture	15,000
Kartik	50,000	1,40,000	Stock	30,000
General Reserve		20,000	Debtors	20,000
Creditors		5,000	Cash	50,000
Bills payable		25,000		
		1,90,000		1,90,000

The normal rate of return is 12% p.a. Average profit of the firm for the last four years was Rs. 30,000. Calculate Saurabh's share of goodwill.

Q4. Bat, Cat and Rat were partners sharing profits and losses in the ratio 5:3:2. Cat retired and on that date there was a balance of Investment of Rs. 4,00,000 and Investment Fluctuation Reserve of Rs. 1,00,000 was appearing in the balance sheet. Pass necessary journal entries for Investment Fluctuation reserve in the following cases.

(i) Market Value of Investments was Rs. 4,80,000.

(ii) Market Value of Investments was Rs. 3,80,000.

(iii) Market Value of Investments was Rs. 2,90,000

Q5. Varun and Vivek were partners in a firm sharing profits in the ratio of 3:2. The balance in their capital and current accounts as on 1st April, 2022 were as under:

Particulars	Varun	Vivek
Capital accounts	3,00,000 (Cr.)	2,00,000 (Cr.)
Current accounts	1,00,000 (Cr.)	28,000 (Dr.)

The partnership deed provided that Varun was to be paid a salary of Rs. 5,000 p.m. whereas Vivek was to get a commission of Rs. 30,000 for the year. Interest on capital was to be allowed @ 8% p.a. whereas interest on drawings was to be charged @ 6% p.a. The drawings of Varun were Rs. 3,000 at the beginning of each quarter while Vivek withdrew Rs. 30,000 on 1st September, 2022. The net profit of the firm for the year, 2022-23, before making the above adjustments was Rs. 1,20,000. Prepare Profit and Loss Appropriation Account and Partners' Capital and Current Accounts

Business Studies

Q1) Real Alliance Ltd. is a well-known cement company in India. It is able to earn adequate revenues to cover costs. Its capital base, number of employees and production turnover has increased manifolds over the years. The rate of profitability of the business is also creditable. The employees of the company are happy and

satisfied with their remuneration, working conditions, promotion policy etc. As a part of its moral obligation, the company has taken many initiatives for providing employment to especially abled persons and promoting literacy in the villages adopted by it.In the context of the above case:
1. Identify and explain the various types of objectives of management being fulfilled by Real Alliance Ltd by quoting lines from the paragraph.
2. List any two values that Real Alliance Ltd. wants to communicate to the society.

Q2) Josh Enterprises decides to have a meeting of all the key employees of different departments in the organisation. The main motive is to tell the employees to keep the target of 20% increase in sales as the main objective when they work throughout the year. The meeting is full of ideas regarding the employees and processes involved. Various plans are made to harness the potential of the employees and streamline the processes. However with the passage of a few days the external business environment checks the capability of the organisation to adapt to the situations. The company successfully comes out at the end of the year with flying colours.

What are the various characteristics of management you can find highlighted here? Also identify the lines in which these characteristics have been highlighted.

Q3) Bhatkaav Enterprises is facing huge losses. The owner of the company is an MBA pass out. Even then many things in the organisation are happening which are indicative of lack of proper management in the company. First of all there is no specific sharing of work and any time any employee is asked to do anything. This has lead to wastage of efforts. Further due to negligence in proper work sharing there has been no specialisation development in the nature of the jobs done by the employees.

There are no clear and fair agreements between the workers and the management. This has led to a lot of frustration in the workers. Management has quite often been found to be ignorant of not fulfilling promises done by it. There are also no strict rules and regulations binding on the conduct of the workers.

The departmental heads who are the middle level managers in the company and hold key positions always favour their relatives. They quite often don't turn up for job on time. They are always looking for special relaxations from the top management. This has led to feeling of resentment among the employees who are also demanding special favours and threatening strike in the coming days. Identify the three principles of Fayol violated in the above case.

Q4) Suresh works in a bulb manufacturing company. Each bulb which is manufactured is of standard size and quality. Further if there is any unrequired type of bulb manufactured then its production is stopped. Last month when the company came to know that 10 watt bulbs were no more liked by customers, their production was stopped. He works in the purchase department. His job is to purchase the filaments required to make bulbs. This time when he purchases the filament he gets the instruction from the seller that some special care needs to be taken in the first hour of fixing the filaments inside the bulb. Suresh knows this information should be given immediately to the production department before the assembling process starts. However he finds that his company's policies only allow him to give the message to

his immediate boss who will further pass this message to his boss. The passing of this message will continue till it reaches the desired person in the production department.

Which technique of management is followed here? Also name the principle of management followed here by the company? Which option is now available to Suresh since the company is not allowing him to interact with the concerned worker in the production department?

Q5) Mamta Rice Food Ltd.' is as well known rice producing company. The sales have been falling down from the beginning of the year. The managing director Mr. Bhuvan is worried about this situation. With a view to find out the solution of this problem he made a team to find out the reasons for downfall of sales. the team conducted the survey and gave following four reasons for the downfall of company's sale.
(i) On account of increase in export duty made by the government, the foreign demand has gone down.
(ii) Due to availability of other eatable substitute the taste of people is diverted from rice.
(iii) The competitor's importance new technology machine and are producing better quality rice.
(iv) Due to strain with neighbouring country's government and our country's government export is effected. Identify the dimension of business environment discussed in the above case.

Q6) Naman and Govind after finishing their graduation under vocational stream decided to start their own travel a agency which will book rail Tickets and Air tickets on commission basis. They also thought of providing tickets within ten minutes through the use of internet. they discussed the idea with their professor Mr. Mehta who liked the idea and suggested then to first analyse the business environment whic consists of investors, competitors and other farces like social, political, etc. that may affect thier business directly of indirectly. he further told them about the technological improvements and shifts in consumer preference that were taking place and hence they should be aware of the environmental trends and change which may hinder their business performance. he emphasised on making plans keeping in mind the threate posed by the competition, so that they can deal with the situation effectively. this alignment of business operations with the business environment will result in better performance.
(i) State any two features of business environment as discussed by professor mehta with Naman and Govind.
(ii) State any two importance of business environment in above para.

Q7) Suhasini, a home science graduate from a reputed college, has recently done a cookery course. She wished to start her own venture with a goal to provide 'health food' at reasonable prices. She discussed her idea with her teacher (mentor) who encouraged her. After analysing various options for starting her business venture, they short listed the option to sell ready made and 'ready to make' vegetable shakes and sattu milk shakes. Then, they weighed the pros and cons of both the short listed options.

Name the function of management being discussed above and give any one of its characteristics. Also briefly discuss any three limitations of the function discussed in the case.

Q8) Identify the types of plans:

1. Ramesh is a senior middle level manager. He is busy in allocating resources to his staff, he has also finalised the objectives and decided the course of action to be followed. He is expecting energy in his staff for the whole season but he will have to be cautious.
2. Suresh is giving a speech to the workers of his factory. He is the owner of a toy manufacturing factory and has 123 workers. He tells them that this year's target of production is 7.5 lakh toys.
3. On the wall of 'Health is Wealth' hospital a board is hanging. On this board. It is written 'We care for the health of senior citizens as our topmost priority'. This hospital is known for treating people aged more than 60 years.
4. Rakesh calls his new subordinates for a meeting. He is a top level manager. He arranges for a power point presentation to train his subordinates who are all middle level managers. He tells them the way of doing task of treating suppliers through a new software system to be installed within next 30 days.
5. Dinesh takes a meeting and guide his employees in a type of plan, which is chronological in nature and is a situation specific. It is a collection of various methods in a stepwise sequence?
6. Amit has given a detailed statement of expected result in numerical terms. This plan is conveyed to his subordinates by him in a special meeting.

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) $\in$ 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 $\iff$ |a-b| $\leq \frac{1}{2}$ then show that R is not transitive.

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

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

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

Q.5 Let A=R-{2} ,B=R-{1} , if f:A$\rightarrow$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$\rightarrow$ 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

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

Q.21 if $f(x) = \begin{cases} \dfrac{1-\sin^3 x}{3\cos^2 x}, & x < \pi/2 \\ a, & x = \pi/2 \\ \dfrac{b(1-\sin\ )}{(\pi-2x)^2}, & x > \pi/2 \end{cases}$, is continuous function, then find the value of a and b.

Q.22 Show that the function(x) is continuous at x=2 but not differentiable at x=2

$$F(x) = \begin{cases} 3x-2, & 0 < x \le 1 \\ 2x^2 - x, & 1 < x \le 2 \\ 5x-4, & x > 2 \end{cases}$$

Q.23 If $y = e^{a\cos^{-1} x}$, prov that $(1-x^2)y_2 - xy_1 - a^2 y = 0$

Q.24 If $x = 2\cos t - \cos 2t, y = 2\sin t - \sin 2t$, find $\dfrac{d^2 y}{dx^2}$ at $t = \dfrac{\pi}{2}$.

Q.25 If $y = x^x$, showthat $\dfrac{d^2 y}{dx^2} - \dfrac{1}{y}\left(\dfrac{dy}{dx}\right)^2 - \dfrac{y}{x} = 0$.

Informatic 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:

Table: GARMENT

GCODE	GNAME	SIZE	COLOUR	PRICE
111	Tshirt	XL	Red	1400.00
112	Jeans	L	Blue	1600.00
113	Skirt	M	Black	1100.00
114	Jacket	XL	Blue	4000.00
115	Trousers	L	Brown	1500.00
116	LadiesTop	L	Pink	1200.00

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. 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

1. Project over three lifestyle disease with procedure of five asanas, benefits and contradiction for each liefstyle disease.
2. Project of physical fitness test – Sai Khelo India Fitness Test
3. Explain in detail female athlete triad