PROJECT WORK – 2022–23

CLASS – XII

PROJECT WORK (SUBMISSION DATE: 1st July 2022

ENGLISH LANGUAGE

Question 1) Punctuality and Discipline are often confused together.
Prepare a write up narrating how these two are poles apart when it comes to work ethics.

Adhere to the following topic while planning your narration:

(i) Provide a suitable title
(ii) Give data & picture to strengthen your write up.
(iii) Conclude.

ENGLISH LITERATURE

Question 1) What is the allegorical interpretation of 'The Tempest'.

Question 2) Describe Miranda's role in the whole villainy of Caliban. Elucidate.

Adhere to the following topics:

(i) Why do you think Miranda's role was Scandalous considering the whole women portrayal in 'Shakespeare's' career.
(ii) Was the use of supernatural element really necessary.
(iii) Conclude.

HINDI

Sequence- 1. आत्म परिचय 2. विषय सूची 3. प्राक्कथन Topic to be mentioned 5. विषय विस्तार It will Include (A) Listening Skills – Aural, (B) Speaking Skills – Oral (C) Writing Skills – Literature 6. सन्दर्भग्रन्थ सूची।

(A) Listening Skill (Aural)
Students need to listen carefully to an audio clip based on a unseen passage of about 500 words or a poem (of appropriate length) May be read aloud, twice, the first time at moral reading speed. The passage / poem may be taken from any book, newspaper, magazine, Journal and so on but not from an ICSE or ISC text book by the teacher.
Teacher will use an audio clip for listening skills (Aural) examination.

Students may make brief notes during the reading / playing of the audio clips, followed by answering objective type questions based on the passage / open / audio clip on the project paper which is to be attached to the project file.

(B) Speaking Skills (Oral)
Record a video with clear audio of minimum 3 minutes, giving a speech on a selected topic in Hindi
Suggested topics:

1. प्रदूषण एक विकराल समस्या

अथवा

जीवन की सर्वश्रेष्ठ वस्तुएँ खरीदी नही जा सकती।

Note:- While recoding video, you must wear a grey school uniform. Mention the topic which is selected by you in project file.

(C) Writing Skills (Literature)
Candidates are required to under take one written assignment to 1000-1500 words on a text / texts studied in the literature syllabus.

Suggested Topics:

1. 'एक फूल की चाह' कविता पर आधारित एक लघु कथा लिखिए।

अथवा

2. 'पुत्र–प्रेम' कहानी पर आधारित एक कविता लिखिए तथा उसका विश्लेषण कीजिए।

अथवा

3. 'भक्तिन'शीर्षक कहानी का नाट्य रूपान्तरण कीजिए।

PHYSICS

Select any one for project work from the following:

1. Current Electricity
2. Electrostatics
3. Magnetic Effects of Currents and Magnetism
4. Dual Nature of Radiation and Matter
5. Electromagnetic Induction and Alternating Currents

Note: (i) While giving the answers of the above project work, your answer should not be less than 4000 words for whole project.
(ii) Pictures are required on every pages as per given topics.

CHEMISTRY

Select any one project work from the following assignment:

1. (a) Chemicals in food and medicines; Preservatives, artificial sweetening agents, antioxidants, analgesics, tranquilizers, antiseptics, antimicrobials, antifertility, antibiotics, antacids, antihistamines, vitamins and hormones.
   (b) Preparation of soap, nail polish, boot polish, varnish, nail polish remover, shampoo and perfumes.

2. (a) Polymers: Classification, Preparation, uses, Structure and properties of:
   (i) P.V.C. (ii) Polythene (iii) PTFE (iv) Nylone6 (v) Nylon66 (vi) Biodegradable polymer (vii) Buna- N (viii) Buna-S (ix) Natural rubber (x) Bakelite
   Amino acids: Peptides, structure and classification, Proteins structure and there role in the growth of living beings.
   (b) Vitamins: Classification and functions. Vitamin A, B, C, D and K. Deficiency diseases.

3. (a) Nucleic acid: DNA and RNA
   Basic unit: Purines and pyrimidine bases, double helix structure of DNA.
   (b) Carbohydrate and their metabolism, blood- haemoglobin and respiration.
   (c) Chemicals and chemical process in forensic studies.
   (d) How plastic have changed the world, both socially and economically.
   (e) Organic chemistry in Nutrition, Food science and Biotechnology.

Note: **(i)** ***While giving the answers of the above project work, your answer should not be less than 4000 words for whole project.***
(ii) ***Pictures are required on every pages as per given topic.***

BIOLOGY

Question 1) Choose any one of the following topics-
(i) Genetic disorders
(ii) DNA fingerprinting
(iii) Role of microbes in household food processing, industrial production and sewage treatment.
(iv) AIDS / Hepatitis.
(Written pages should be about 25-30 pages)

MATHEMATICS

Candidates will be expected to have completed two projects, one from Section A and one from either Section B or Section C.

Section-A

- Explain the concept of increasing and decreasing functions, using geometrical significance of *dy/dx*. Illustrate with proper examples.

OR

- Explore the principal value of the function $\sin^{-1} x$ (or any other inverse trigonometric function) using a unit circle.

Section-B

- Using vector algebra,find the area of a parallelogram/triangle. Also derive the area analytically and verify the same.

OR

- Find the image of a line with respect to a given plane.

Section-C

- Using any suitable data, find the Optimum Cost by formulating a linear programming problem (LPP).

OR

- Draw a rough sketch of Cost (C), Average Cost (AC) and Marginal cost (MC) Or Revenue (R), Average revenue (AR) and marginal revenue(MR).

COMPUTER SCIENCE

Question 1) Given the two positive integers p and q where p<q .Write a program to determine how many Smith numbers are there in the range between p and q (both inclusive) and output them. The input contains two positive integers p and q.Assume that p<5000 and q<5000.You are to output the number of Smith numbers in the specified range along with their values in the format specified below.
The following steps can be used to check whether a number is Smith number or not:
A Smith number is a composite number, the sum of whose digits is the sum of the digits of its prime factors obtained as a result of prime factorization (excluding 1)
Input: - 666
Sum of the digits 6+6+6=18
Prime factors are 2,3,37
Sum of the digits of the factors: 2+3+3+ (3+7) =18
Thus, 666 is a Smith number.
Output: - It is Smith number

Example 1:
INPUT: p=1
q=100
Output:
The Smith Numbers are:
4, 22, 27,58,85,94
Frequency of Smith number is: 6

Example 2:
INPUT: p=100
q=500
Output:
The Smith Numbers are:
121,166,202,265,274,319,346,355,378,382,391,438,454,483
Frequency of Smith number is: 14

Question 2) The consecutive prime numbers are known as Prime Triplets if they satisfy the following condition:

(n,n+2,n+6) are all prime numbers OR (n,n+4,n+6) are all prime numbers. Where n is an integer number >0 if(n=5 then 5,7(5+2=7),11(5+6=11).Here 5,7, and 11 all are prime numbers so(5,7,11) are prime triplets.

If n=7, then 7, 9(7+2=9), 13(7+6=13) are prime numbers. Hence 7, 9 and 13 all are not prime numbers so (7, 9, 13) are not the prime triplets.

But, if n=7 then 11(7+4=11|) and 13(7+6=13) are primer numbers. Here 7, 11 and 13 all are prime numbers so (7, 11, 13) are the prime triplets.

Write a program to input a start limits (>0) and a last limit (>0).Print all prime triplets between S and L with suitable error message. The prime triplets may be greater or be less than L depending upon the conditions used for generating prime numbers combination .Print the total number of prime triplets at the end. Check your program for the following sample data and some random data.

Input:
S=3
L=15
Output

• Prime triplets		
• 5	• 7	• 11
• 7	• 11	• 13
• 11	• 13	• 17
• 13	• 17	• 19
• Total prime triplet combinations are =4		

Question 3) An Evil number is a positive whole number which has even number of 1's in its binary equivalent.
Example:
Binary of 9 is 1001 which contains even number of 1's.
Design a program to accept a positive numbers p and q.Find and print all the evil numbers between p and q (Both inclusive)
Input: p=1
q=10
Evil no's are: 3, 5, 6,9,10

Question 4) For adding two binary numbers, the following rule is applied:
0+0=0

0+1=1

1+0=1

1+1=0 and 1(carry)

Write a program to input decimal numbers m, n (m>0, n>0 and they are long integer type).Convert these decimal numbers into its equivalent binary numbers. Add these binary numbers and print their sum in binary form .Your program should run on following sample data and some other random data.

The output should be exactly in the same form as given.

Sample Input:

Enter Decimal Integers

M=14

N=10

Sample Output:

Binary of 14=1110

Binary of 10=1010

Sum of 1110 and 1010=11000

Question 5) A company manufacturing packing cartons in four sizes, i.e. cartons to

accommodate 6 boxes, 12 boxes, 24 boxes and 48 boxes. Design a program to accept the number of boxes to be packed (N) by the user (maximum up to 1000 boxes) and display the breakup of the cartons used in descending order of capacity (i.e. preference should be given to the highest capacity available, and if boxes left are less than 6, an extra carton of capacity 6 should be used.)

Example 1:

INPUT: N=726

OUTPUT:

	48 X 15	=	720
	6 X 1	=	6
Remaining Boxes		=	0
Total number of boxes		=	726
Total number of cartons		=	16

Example 2:

INPUT: N=140

OUTPUT:

	48 X 2	=	96
	24 X 1	=	24
	12 X 1	=	12
	6 X 1	=	6
Remaining Boxes	2 X1	=	2
Total number of boxes		=	140

Total number of cartons = 6

Question 6) The computer department of the agency of International Espionage is trying to decode intercepted messages. The agency's spices have determined that the enemy decodes messages by first converting all characters to their ASCII values and then reversing the string.
For example, consider A_z (the underscore is just to highlight the space).

The ASCII value of A. <space>, z are 65, 32,122 respectively. Concatenate them to get 65532122 then reverse this to get 2212356 as the coded message.
Write a program which reads a coded message and decodes it. The coded message will not exceed 200 character .It will contain only alphabets (A ……Z and a……z) and spaces.ASCII values of A……..z are 65……90 and those of a…….z are 97……122.
Test your program for the following data and some random data
Input Encoded Message
2 3 1 2 1 7 9 8 6 2 3 1 0 1 9 9 5 0 1 8 7 2 3 7 9 2 3 1 0 1 8 1 17 9 2 7
Output: The decoded message
Have a Nice Day

Question 7) Given two positive numbers M and N such that m is between 100 and 10000 and N is less than 100.Find the smallest integer that is greater than M and whose digits add up to N.For example, if M=100 and N=11, then the smallest integer greater than 100 whose digits add up to 11 is 119.
Write a program to accept the numbers M and N from the user and print the smallest required number whose sum of all the digits is equal to N.Also print the total number of digits presents in the required number. The program should check for the validity of the inputs and display an appropriate message for an invalid input.

Example 1
INPUT: M=100
N=11
OUTPUT: The required number=119
Total Number of digits=3

Example 2:
INPUT: M=1500
N=25
OUTPUT: The required number=1699
Total Number of digits=4

Question 8) Write a program which first inputs two integers, the first between 1 to 12 (both inclusive) and second between 0 to 59(both inclusive) and prints out the time they represent, in words. Your program should follow the format of the above examples.
Sample data
Input: 3, 0
Output: 3:00 Three O'clock
Input: 12, 1
Output: One minute past Twelve.
Input: 6:34
Output: Twenty six minutes to Seven

Question 9) Write a program to input a natural number less than 10000 and then output it in words. Test your program for the following set of data:
Input: 29 Output: TWENTY NINE
Input: 17 Output: SEVENTEEN
Input: 119 Output: ONE HUNDRED NINETEEN

Question 10) Write a program to input two valid dates, each comprising of Day (2 digits), Months (2 digits) and Year (4 digits) and calculate the days elapsed between the two dates. Test your program for the following data values:

First Date : DAY : 24
MONTH : 09
YEAR : 1960
Second Date : DAY : 8
MONTH : 12
YEAR : 1978
OUTPUT: XXXX (These are actual number of days elapsed)

Question 11) Design a program to accept the amount from the user and display the break-up in descending order of denomination. (i.e. preference should be given to the highest denomination available) along with the total number of notes. [Note: Only the denomination used, should be displayed].

Example:

INPUT: 14788
OUTPUT:
DENOMINATIONS:

1000	x	14	=	14000
500	x	1	=	500
100	x	2	=	200
50	x	1	=	50
20	x	1	=	20
10	x	1	=	10
5	x	1	=	5
2	x	1	=	2
1	x	1	=	1
TOTAL			=	14788

Total Number of Notes = 23

Question 12) Write a program in Java to display all magic umbers from m to n. When the successive sum of all the digit of a number gives 1 then that number is called magic number.
For example 298 = 2+9+8 =19
1+9 =10
1+0= 1 so 298 is a magic number
INPUT m: 6
INPUT n: 4
OUTPUT: Wrong input (n can not be smaller than m);
INPUT m: 1
INPUT n: 5
OUTPUT: Wrong input (no magic number exists');
INPUT m: 100
INPUT n: 200
OUTPUT: 100,109,118,127,136,145,154,163,172,181,190,199

Question 13) A prime palindrome integer is a positive integer which is a prime as well as palindrome. Given two positive integers m and n where m<n write a program to determine how many prime palindrome integers are there in the range between m and n (both inclusive) and output them.
The input contains two positive integers m and n where m<3000 and n<3000.Display the number of prime palindrome integers in the specified range along with their values in the format specified below.
Example:
INPUT:
m=100
n=1000
Output: 101,131,151,181,191,313,353,373,383,727,787,797,919,929
Frequency: 15

Question 14) Write a program to accept a sentence which may be terminated by either '.', '?' or '!' only. The words may be separated by more than one blank space and are in UPPER CASE. Perform the following task

(a) Find the number of words beginning and ending with a vowel.
(b) Place the words which begin and end with a vowel at the beginning ,followed by the remaining words as they occur in the sentence.

Example 1
Input: ANAMIKA AND SUSAN ARE NEVER GOING TO QUARREL.
Output: NUMBER OF WORDS BEGINNING AND ENDING WITH A VOWEL=3
ANAMIKA ARE ANYMORE AND SUSAN NEVER GOING TO QUARREL
Example 2
Input: LOOK BEFORE YOU LEAP.

Output: NUMBER OF WORDS BEGINNING AND ENDING WITH A VOWEL=0
LOOK BEFORE YOU LEAP.

Question 15) Given the two positive integers p and q where p<q .Write a program to determine how many Kaprekar numbers are there in the range between p and q (both inclusive) and output them. The input contains two positive integers p and q.Assume that p<5000 and q<5000.You are to output the number of Kaprekar numbers in the specified range along

with their values in the format specified below. The following steps can be used to check whether a number is Kaprekar number or not:

i) Find square of the number (n).
ii) Divide the square of the number (n) in two parts in such a way that both the parts have equal number of digits (if square has even number of digits).In case, square of the number has odd number of digits then divide the number in two parts such that left part may have the number of digits one less than the right part.
iii) Add both the parts together.
iv) If sum obtained is equal to the original number (n), then the given number is said to be Kaprekar number.

Example 1:
INPUT NUMBER=45
SQUARE OF THE NUMBER=2025
DIVIDING SQUARE IN TWO PARTS:
LEFT PART=20
RIGHT PART=25
SUM OF BOTH THE PARTS=45;
HENCE, 45 IS A KAPREKAR NUMBER
Example 2:
INPUT:
p=1
q=1000
Output:
The Kaprekar Numbers are:
1, 9,45,55,99,297,703,999
Frequency of Kaprekar number is: 8

Question 16) Write a program to declare a square matrix A [] [] of order N (N<20)
Allow the user to input positive integers into this matrix. Perform the following tasks on the matrix:

a) Output the original matrix.
b) Find the Saddle point for the matrix. A saddle point is an element of the matrix such that it is the minimum element for the row to which it belongs and the maximum element for the column to which it belongs .Saddle point for a given matrix is always unique. If the matrix has no saddle point, show the message “NO SADDLE POINT”.

4	**6**	**12**
2	**8**	**14**
1	**3**	**6**

SADDLE POINT=4

Question 17)
Write a program in java to create 4 X 4 matrices. Display the greatest element of the matrix .Replace the greatest element with the elements of left and right diagonal of the matrix. Display the new matrix.

INPUT:

5	8	2	3
7	4	6	2
8	1	3	7
9	2	6	5

OUTPUT:

9	8	2	9
7	9	9	2
8	9	9	7
9	2	6	9

Question 18) Write a program to accept a sentence which may be terminated by either **‘.’** Or **‘?’** only. The words are to be separated by a single blank space. Print an error message if the input does not terminate with **‘.’** Or’**?’**.Perform the following task

I. Convert the sentence in UPPERCASE.
ii. Print the length of the sentence word wise.
iii. Sort each word of the sentence in alphabetical order without using any standard sorting technique.
iv. Print the UPPER CASE sentence and the new sentence having each word in sorted form without the terminating character.

Example 1: INPUT: March is the month of ISC and ICSE Examinations.
OUTPUT: MARCH IS TH EMONTH OF ISC AND ICSE EXAMINATIONS.
Length of the sentence word wise=9
ACHMR IS EHT HMNOT FO CIS CEIS AAEIIMNNOSTX

Question 19) Encryption is a technique of coding message to maintain their secrecy. A string array of size 'n' where n is greater than 1 and less than 10, stores single sentences (each sentence ends with a full stop) in each row of the array.
Write a program to accept the size of the array. Display an appropriate message if the size is not satisfying the given condition. Define a string array of the inputted size and fill it with sentences row –wise. Change the sentence of the odd rows with an encryption of two characters ahead of the original characters. Also change the sentence of the even rows by storing the sentence in reverse order. Display the encrypted sentences as per the sample data given below:

Example 1:

INPUT: **n=4**
IT IS CLOUDY.
IT MAY RAIN.
THE WEATHER IS FINE.
IT IS COOL.

OUTPUT: KV KU ENQWFA.
RAIN MAY IT
VJG YGCVJGT KU HKPG.
COOL IS IT.

Question 20) A palindrome is word that may be read the same in either direction .Accept a sentence in UPPER CASE which is terminated by either ".","?" or "!". Each word of the sentence is separated by a single blank space.
Perform the following
i) Display the count of palindrome words in the sentence.
ii) Display the palindrome words in the sentence.
Example:
Input: MOM AND DAD ARE COMING AT NOON
Output: MOM DAD
Number of Palindrome Words=2

Question 21) Write a program to declare a matrix A[][] of order (MxN) where 'M' is the number of rows and 'N' is the number of columns such that the value of 'M' must be greater than 0 and less than 10 and the value of 'N' must be greater than 2 and less than 6. Allow the user to input digits (0-7) only at each location, such that that each row represents an octal number.

Example

2 3 1 (decimal equivalent of 1st row =153 i.e. $2x8^2 + 3x8^1 + 1x8^0$)
4 0 5 (decimal equivalent of 1st row =261 i.e. $4x8^2 + 0x8^1 + 5x8^0$)
1 5 6 (decimal equivalent of 1st row =110 i.e. $1x8^2 + 5x8^1 + 6x8^0$)

Perform the following tasks on the matrix
a. Display the original matrix.
b. Calculate the decimal equivalent for each row and display as per the format given below

Example 1

Input: M=3
N=4
Enter elements for row 1: 1 1 3 7
Enter elements for row 2: 2 1 0 6
Enter elements for row 3: 0 2 4 5

OUTPUT:

FILLED MATRIX				DECIMAL EQUIVALENT
1	1	3	7	607
2	1	0	6	1094
0	2	4	5	165

Question 22) Write a program to accept a sentence which may be terminated by either '. ,'?' or '!' only. The words are to be separated by a single blank space and are in

UPPER CASE.

Perform the following task:

a) Check for the validity of the accepted sentence.

b) Convert the non palindrome words of the sentence into palindrome words by concatenating the word by its reverse (excluding the last character).
Example: The reverse of the word HELP would be LEH (omitting the last alphabet) and by concatenating both the new palindrome word is HELPLEH.Thus the word HELP becomes HELPLEH.
Note: The words which end with repeated alphabets, for example ABB would become ABBA and XAZZZ becomes XAZZZAX.
[Palindrome word: Spells same from either side. Example DADMADAM etc].

c) Display the original sentence along with the converted sentence

Example 1:

INPUT: THE BIRD IS FLYING.
OUTPUT: THE BIRD IS FLYING
THEHT BIRDRIB ISI FLYINGNIYLF.

Example 2:

INPUT: IS THE WATER LEVEL RISING?
OUTPUT: IS THE WATER LEVEL RISING?
ISI THEHT WATERETAW LEVEL RISINGNISIR

Example 3:

INPUT: YOU MUST BE CRAZY#
OUTPUT: INVALID INPUT

Question 23) The result of a quiz competition is to be prepared as follows.
The quiz has five questions with four multiple choices**(A,B,C,D)** with each question carrying 1 mark for the correct answer. Design a program to accept the number of participant's N such that N must be greater than 3 and less than 11. Create a double dimensional array of size **(NX5)** to store the answers of each participant row-wise. Calculate the marks for each participant by matching the correct answer stored in a single dimensional array of size 5.Display the scores for each participant and also the participants having the highest score.
Example 1: If the value of N=4 then the array would be

	Q1	**Q2**	**Q3**	**Q4**	**Q5**
Participant 1	A	B	B	C	A
Participant 2	D	A	D	C	B
Participant 3	A	A	A	A	C
Participant 4	A	A	B	A	C

Key to the Question

D	C	C	A	B

OUTPUT: **Scores**
Participant 1=0
Participant 2=2
Participant 3=1
Participant 4=1
Highest Scorer is Participant 2

Question 24) Write a Program in Java to input a 2-D square matrix and check whether it is a Lower Triangular Matrix or not.
Lower Triangular Matrix: A Lower Triangular matrix is a square matrix in which all the entries above the main diagonal (↘) are zero. The entries below or on the main diagonal themselves may or may not be zero.
Example:

5	0	0	0
3	1	0	0
4	9	4	0
6	8	7	2

Question 25)

The names of the teams participating in a competition should be displayed on a banner vertically, to accommodate as many teams as possible in a single banner. Design a program to accept the names of N teams, where 2< N <9 and display them in vertical order, side by side with a horizontal tab (i.e. eight spaces).

Example 1:

INPUT: **N=3**

Team 1: Emus

Team 2: Road Rols

Team 3: Coyote

OUTPUT:

E	**R**	**C**
m	**o**	**o**
u	**a**	**y**
s	**d**	**o**
		t
		e
	R	
	o	
	l	
	s	

Guidelines:

i) Students have to work on project regularly through out the year according to instructions of the teacher.

ii) Use comments in the program wherever it is required.

iii) Mention the output of each program after execution of it at right place.

PHYSICAL EDUCATION

Project Work: Prepare a file on any two games of your textbook under following heads:

(i) Brief History
(ii) Interpretation of Laws
(iii) Duties & Responsibilities of Officials and Players
(iv) Measurement and Dimensions Related to the Game
(v) Terminologies Related to the Game
(vi) Fundamental Skills
(vii) Strategies and Formation
(viii) Names and Abbreviations of the National and Major International Tournaments Linked with the Game.
(ix) Diagrams and Dimensions of Play Area
(x) Diagrams and Dimensions of Equipments
(xi) National and International Governing Bodies
(xii) National and International Tournaments

ECONOMICS

[SEQUENCE-: Name, Contents, Acknowledgement, Introduction of Project Work- *All the topics are to be mentioned***, Objectives of Project Work, Detailed Matter, Conclusion, Bibliography-Word Limit-Minimum 750 words for each topic.]**

TOPIC-I

Explain Cardinal and Ordinal Utility Analysis covering the following points in detail:-

(i) Cardinal Utility Analysis:- meaning of utility, total utility, marginal utility, their formulas, relationship of TU and MU, Law of Diminishing Marginal Utility, it's assumptions (schedule and diagram), Consumer's equilibrium-one commodity model (schedule and diagram), Law of Equimarginal Utility (statement and schedule) and conditions of consumer's equilibrium using marginal utility.

(ii) Ordinal Utility Analysis:- Indifference Curve - its meaning and properties (including MRS and DMRS), indifference map, consumer's budget line, Consumer's equilibrium- condition (to be explained with the help of diagram).

(iii) Each topic must be supported with the necessary schedule and diagram. Your one passport size photograph in school uniform should be pasted on the cover page of the file.

TOPIC-II

Prepare a report on the basic understanding of the functions of Commercial Banks, high powered money, credit creation process with limitation. The regulatory role of the Central Bank, its functions and the way it controls the flow of credit needs to be explained. A brief mention may be made of Quantitative (CRR, SLR, Bank Rate Policy, Repo Rate and Reverse Repo Rate and Open Market Operations) and Qualitative Methods.

Make a comparative analysis of lending performance of five Commercial Banks in the past six years with reference to the changing CRR and SLR.

ACCOUNTS

[SEQUENCE-: Name, Contents, Acknowledgement, Introduction of Project Work- *All the topics are to be mentioned***, Objectives of Project Work, Detailed Matter, Conclusion, Bibliography]**

TOPIC-I

Preparation of Journal / sub-division of Journal, Ledger, Trial Balance and Financial Statements of a partnership form of business on the basis of a case study.

- Develop a case study showing how two or more friends decide to come together and start a business with a certain amount of capital.
- Prepare their Partnership Deed including interest on capital, partner's salary, commission, interest on drawings, interest on partner's loan and rent paid to a partner.
- Write in detail their transactions during the year: purchases - cash and credit, sales - cash and credit, expenses, purchase of fixed assets and depreciation charged on them, any outstanding expenses, prepaid expenses, accrued income, drawing bills of exchange, accepting bills payable etc.
- From this case study developed (which should have at least 15 transactions) pass the journal entries, post them into the ledger, prepare a Trial Balance and the Trading and Profit and Loss Account, Profit and Loss Appropriation Account and Balance Sheet.

- The various expenses, for comparison purposes, could be depicted in the form of bar diagrams and pie charts.
- Calculate relevant accounting ratios like liquidity, solvency, activity and profitability giving their formulae and computation (all this could be part of the viva-voce).
- The ratios could also be shown graphically and/ or pictorially (bar diagrams and pie charts) and if possible, could be compared with the ratios of the industry.

TOPIC-II

- Preparation of a Cash Flow Statement with the help of audited / unaudited / imaginary Balance Sheets of a company for two consecutive accounting years or two consecutive quarters of an accounting year could be taken along with at least five additional information (depreciation, purchase/ sale of fixed assets, dividend paid/ proposed, tax paid/ proposed, amortization of intangible assets, profit or loss on sale of fixed assets including provision for depreciation on them and profit or loss on sale of investment).
- The results of the operating, investing and financing activities could be shown graphically and/ or pictorially (bar diagrams and pie charts).
- Your one passport size photograph in school uniform should be pasted on the cover page of the file.

COMMERCE

[SEQUENCE-: Name, Contents, Acknowledgement, Introduction of Project Work- *All the topics are to be mentioned***, Objectives of Project Work, Detailed Matter, Conclusion, Bibliography-Word Limit-Minimum 750 words for each topic.]**

TOPIC-I

Visit a Commercial Bank. Find out the procedure to open a savings account. Find out the details of various Agency and General utility services provided by the bank.

Write a report on Banking – latest trends.

Online services- transfer of funds through Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT), Immediate Payment Service (IMPS), issue of demand drafts online meaning and features.

Online Payments, e-Banking – meaning and features, advantages and disadvantages.

Mobile Banking – SMS alerts, transfer of funds, making payments – advantages and disadvantages. Debit Cards vs Credit Cards, ATM (Automated Teller Machine) – Meaning; Debit Card and Credit Card: features and differences.

Your Photograph in the organisation should be pasted on the cover page of your file (Date and time must be mentioned on it).

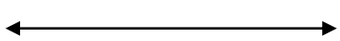
TOPIC-II

Write a report on the need for consumer protection; methods of consumer protection - self-help, legislative measures and consumer associations/NGOs, Consumer Protection Act, 2019 - Rights of consumers. The Consumer Disputes Redressal Commissions (National, State and District). Difference between Consumer Protection Act, 1986 and Consumer Protection Act, 2019.

Collect newspaper/magazine/internet clippings of five cases filed by consumers in the Consumer Court.

Find out the rights violated, and the redressal mechanism used.

What was the outcome of each case?



S.U.P.W

1. **File Work:**
   Write on the following topics:
   (a) Photography
   (b) Tie and Dye
   (c) Leather Work
   [Minimum 500 words on each topic]

2. **Community Service:**
   Awareness drive on 'Small Savings'.
   Students are required to visit nearby village and contact the village leaders and people and guide them different methods of savings.
   Students are required to take one Piggy Bank to endorse and educate people about small savings.

3. **Project:**
   Students are required to make a decorative piece using Plaster of Paris