PROJECT : 2021-22

CLASS –XI

PROJECT WORK (SUBMISSION DATE: 1st July 2021)

ENGLISH LANGUAGE

Written

Question 1) Hard Work puts you where good luck finds you. Narrate an incident which made you realize the truth of this statement.

(i) At the very beginning make it clear, what are you going to write about.

(ii) Support what you say with reasons that support the circumstances.

(iii) Conclude.

ENGLISH LITERATURE

'Gift of India' is poem combined with the element of pathos and Celebration

Analyse the poem as an anti-war art also explain how is the poem a tribute to the brave Indian soldiers who laid down their lives in World War I

Adhere to the following Instructions:

- Give a title to the assignment
- Keep to the question and organize a well structured treatment to question using appropriate subheadings.

HINDI

Sequence- 1 1. आत्मपरिचय 2. विषय सूची 3. प्राक्कथन–Topics to be mentioned 5. विषय विस्तार (It will include) (A) Listening skills- Aural, (B) Speaking skills- Oral (C) Writing skills- Literature / Langugae 6. संदर्भ ग्रन्थ सूची।

(A) Listening skills (Aural)-

Students need to listen carefully to an audio clip based on an Unseen passage of about 500 words or a poem (of appropriate length) may be read aloud, twice, the first time at normal reading speed and the next time at a slower speed.

The passage / poem may be taken from any book, newspaper, magazine, Journal and so on but not from an ICSE or ISC textbook by the teacher.

The 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 / poem / 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. परिश्रम का महत्त्व

अथवा

2. विद्यार्थी और अनुशासन

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

(C) Writing skills (Language / Literature)

Candidates are required to Undertake one written assignment of 600-800 words on a text / texts studied in the syllabus.

Suggested Topics-

'पाश्चात्य सभ्यता की दौड़ में हम अपनी संस्कृति को भूलते जा रहे हैं।' आधुनिक परिवेश को भूलते जा रहे हैं। आधुनिक परिवेश को देखते हुए इस टिप्पणी पर अपने विचार व्यक्त कीजिए।

अथवा

अपनी पाठ्य पुस्तक गद्यसंकलन के आधार पर 'पुत्र–प्रेम' कहानी का सारांश लिखते हुए बताइये कि 'कहानी में प्रेमचन्द्र जी ने आज के समाज की धन को महत्त्व देने की मानसिकता पर प्रहार किया है।' स्पष्ट कीजिए।

PHYSICS

Select any one for Project Work from the following:

1. Vectors, Scalars and Elementary Calculus.
2. Dynamics
3. Oscillations and Waves
4. Heat and Thermodynamics
5. Properties of Matter

Note: ***While giving the answers of the above project work, your answer should not be less than 4000 words for whole project.***

CHEMISTRY

Select any four of the project work from the following:

1. Environmental pollution (Air, water and soil pollution)
2. Ancient Indian medicine and medicinal plant
3. Preparation of potash alum, soap, detergent, shampoo and $CuSO_4$.
4. Vitamins and Hormones.
5. Chemical in medicine: Antiseptic, antibiotics, antacids, and there uses.
6. Polymers: PVC, Teflon, Rubber, Thermoplastic and thermosetting plastics: (Methods of preparation, characteristics and uses.)
7. How plastic have changed the world, both socially and economically.
8. Carbohydrate and their metabolism, blood- haemoglobin and respiration.

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

Choose anyone of the following topics-

(i) Cell cycle and cell division
(ii) Cellular respiration
(iii) Disorders of muscular and Skeletal System.
(iv) Endocrine glands.

(About 3500 to 4000 words) Pictures are required as per the requirement of the topic.

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

Using Venn diagram, verify the distributive law for three given non-empty sets A, B and C

OR

Draw the graph of quadratic function $f(x) = ax^2 + bx + c$. From the graph find maximum/minimum value of the function. Also determine the sign of the expression.

Section – B

Construct different types of Conics by Power Point Presentation, or by making a model, using the concept of double cone and a plane.

OR

Use focal property of ellipse to construct ellipse.

Section – C

Identify the purchasing power using the concept of cost of living index number.

OR

Identify the purchasing power using the concept of weighted aggregate price index number.

COMPUTER SCIENCE

Project

i. Develop a console –based application using java to find the name of the bank and branch location from IFSC.

Programming Assignment

1. Write a program in java to accept a Binary number(base 2) and convert it into its Decimal equivalent (base 10).
   Sample Input: $(110011)_2$
   Sample Output: $(51)_{10}$
2. Write a program to input a decimal number (base 10) and convert it into its Binary equivalent.
   Sample Input: 35
   Sample Output: 100011

3. Write a program in java to print all Prime Palindrome numbers between ‘m’ and ‘n’.
   Sample Execution:
   Enter the value of m: 10
   Enter the value of n: 1000
   Prime Palindrome numbers between 10 and 1000 are:
   11,101,131,151,181,191,313,353,373,383,727,757,787,797,919,929
4. Write a program in java to print ‘n’ terms of Automorphic’ numbers entered by the users.
   Enter number of terms
   6
   Automorphic numbers are:
   1,5,6,25,76,376
5. 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)
   Sample Input: - 666 **Sample Output: -** It is Smith number
   Sum of the digits 6+6+6=18
   Prime factors are 2,3,3,37
   Sum of the digits of the factors: 2+3+3+ (3+7) =18
   Thus, 666 is a 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

6. Write a Program in Java to input a number and check whether it is a Disarium Number or not. Note: A number will be called DISARIUM if sum of its digits powered with their respective position is equal to the original number.
   For example 135 is a DISARIUM
   (Workings $1^1+3^2+5^3$ = 135, some other DISARIUM are 89, 175, 518 etc)
7. 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 contain two positive integers p and q.Assume 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 number 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 less than the right part.
iii) Add both the parts together
iv) If sum obtained is equal to the original number(n),then given number is said to be Kaprekar number.

   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/
   Input
   p=1
   q=1000
   Output
   The Kaprekar Numbers are:
   1, 9,45,55,99,297,703,999

   a. Write a program in java to find the sum of the given series taking the value of a and n from the console.

i) $S=a/a+1! + a^2/ a+2! + a^3/ a+ 3! +\ldots\ldots\ldots\ldots a^n/a+n!$
ii) $S=1 + a^2/3! – a^3/4! + a^4/5! –a^5/6!+\ldots\ldots\ldots\ldots n$

8. Write a program in Java to accept a decimal number(base 10) .Convert the decimal number to a hexadecimal number and display the result.
Sample Input: $(1998)_{10}$
Sample Output: $(7CE)_{16}$

9. Write a program in java to create 4 X 4 matrixes. Now swap the elements of 1st row and 4th row. Display the result (i.e. interchange the elements of the 1st row with the 4th row).

INPUT:

22	14	23	25
81	26	31	10
58	64	17	12
55	33	26	14

OUTPUT:

55	33	26	14
81	26	31	10
58	64	17	12
22	14	23	25

10. Write a program to declare a square matrix A[ ] [ ] of order (M x M) where 'M' is the number of rows and the number of columns such that M must be greater than 2 and less than 10. Accept the value of M as user input. Display an appropriate message for an invalid input. Allow the user to input integers into this matrix. Perform the following-tasks:

(a) Display the original matrix.
(b) Check if the given matrix is Symmetric or not.
A square matrix is said to be Symmetric, if the element of the ith row and jth column is equal to the element of the jth row and ith column.
(c) Find the sum of the elements of left diagonal and the sum of the elements of right di agonal of the matrix and display them.

INPUT : M = 3

1 2 3
2 4 5
3 5 6

OUTPUT :
ORIGINAL MATRIX

1 2 3
2 4 5
3 5 6
THE GIVEN MATRIX IS SYMMETRIC
The sum of the left diagonal = 11
The sum of the right diagonal = 10

12. Write a program to accept 2 dates in the string format dd/mm/yyyy and find the difference in days between the 2 dates.
INPUT:
Date 1: 20/12/2012
Date 2: 11/02/2013
OUTPUT: Difference = 54 days
The program should include the part for validating the inputs namely the date and the day on 1st January of that year.

13. 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

14. Write a program in java to input element in a 2D array of size 5X 5. Display the sum of the elements, which are above and below the left diagonal.

Sample Input:

22	14	23	61	25
81	26	31	11	10
58	64	17	27	12
55	33	26	38	14
21	36	54	63	48

The sum of the elements above left diagonal=228

The sum of the elements below left diagonal =49

15. Design a program which accepts your date of birth in dd mm yyyy format. Check whether

the date entered is a valid date or not. If it is valid, display “VALID DATE”. Also, compute and display the day number of the year for the date of birth. If it is invalid, display “INVALID DATE”

16. And then terminate the program.

INPUT: Enter your date of birth in dd mm yyyy format

05
01
2010
OUTPUT: VALID DATE 5

17. Write a program in java to accept a string and display the new string after reversing each character of the word.
INPUT: Understanding Computer Science
OUTPUT: gnidnatrsrednU retupmoC ecneicS
18. Write a program in java to accept two strings. Display the new string by taking each character of the first string from left to right and of the second string from right to left. The letters should be taken alternatively from each string. Assume that the length of both the strings is same.
INPUT: String 1: HISTORY
String 2: SCIENCE
OUTPUT: HEICSNTEOIRCYS
19. Caesar Cipher is an encryption technique which is implemented as ROT13 (rotate by 13 places). It is a simple letter substitution cipher that replaces a letter with the letter 13 places after it in the alphabets, with the other characters remaining unchanged.

A/a	B/b	C/c	D/d	E/e	F/f	G/g	H/h	I/i	J/j	K/k	L/l	M/m
↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
N/n	O/o	P/p	Q/q	R/r	S/s	T/t	U/u	V/v	W/w	X/x	Y/y	Z/z

Write a program to accept a plain text of length Where L must be greater than 3 and less than 100.Encrypt the text if valid as per the Caesar Cipher.

INPUT: Hello! How are you?

OUTPUT: The cipher text is:

Uryyb? Ubj ner lbh?

20. Uttar Pradesh electricity board maintains a file" METER.dat" to keep the records of the consumers having name, meter number, area code, previous reading ,present reading and amount to be paid. Write a program in java to create a sequential file "METER.dat" to keep the records of n number of consumers. The program also read the records whose amount is Rs 500 or more.
21. Write a program in Java to create a binary file "TEL.dat" to accept the name, address and telephone number of N number of telephone holders. Enter a name separately and search it in the given list of names. If found print the name, address and telephone number of the person otherwise print "Name has not been enlisted".

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

ECONOMICS

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

TOPIC-I

Prepare a report on the various poverty alleviation and employment generation programmes started in India, with special focus on MNREGA. Submit a file with the detailed report.
(Paste one passport size photograph in school uniform on the cover page of the file.)

TOPIC-II

Write a Detailed report on the South Asian Association for Regional Cooperation (SAARC) and its impact on Indian economy.
Write your findings with Conclusion.

COMMERCE

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

TOPIC-I

Select a daily use consumer product. Trace its origin right from the primary industry through the secondary and tertiary industries. Draw a flow chart to include all the business activities in its path from the producer to the consumer. Prepare a report on your findings.
Make a Power Point Presentation on it and copy the same in the "Smart Class" for Class-XI.
Your one passport size photograph in school uniform should be pasted on the cover page of the file.

TOPIC-II

Identity two Public Private Partnership projects and find out:
(i) The equity participation of both the partners
(ii) Objectives of the partnership
(iii) Strengths both partners bring into the venture.

Write your findings with Conclusion.

ACCOUNTS

[SEQUENCE-: Name, Contents, Acknowledgement, Introduction of Project Work- *All the topics 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 trading organisation on the basis of a case study.

(i) Develop a case study of a sole trader starting business with a certain amount of capital. He could have got the amount from his past savings or by borrowing from a bank by mortgaging his personal assets or by winning a lottery or any other source.
(ii) Write in detail, his transactions during the year- his 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.
(iii) 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 and Balance Sheet.
(iv) The various expenses for comparison purposes, could be depicted in the form of bar diagrams and pie charts.

Topic II Prepare a Bank Reconciliation Statement and Amended Cash Book from the information given in your Cash Book and Bank Statement (Pass Book) with at least fifteen transactions. Your one passport size photograph in school uniform should be pasted on the cover page of the file.

PHYSICAL EDUCATION

Project Work- Prepare a project file containing Three Thousand words at least on any two games of your choice under following heads:

1. Brief History
2. Interpretation of Laws
3. Duties and Responsibilities of Officials and Players
4. Measurement and Dimensions Related to the Game
5. Terminologies Related to the Game
6. Fundamental Skills of the Game
7. Strategies and Formation of the Game
8. Names and Abbreviations of the National and Major International Tournaments of the Game
9. Diagrams and Dimensions of Play Area
10. Diagrams and Dimensions of Equipments of the Game
11. Governing Bodies of the Game at National and International Levels
12. Different Types of Umpire Signals of the Game

S.U.P.W

1. File Work:

Write on the following topics:
(a) Health and Hygiene
(b) First Aid
(c) Celebrating Functions and Festivals
[Minimum 500 words on each topic]

2. Community Service:

Awareness drive on ‘Adult literacy’
Students are required to visit nearby village and guide the people about adult education.
Students are required to take a gift hamper consisting of a notebook, a pencil box containg pen, pencil, erases, sharpner, ruler etc.
Students will take handmade charts to guide the people.

3. Project:

Students are required to make six table mats (handmade) using fabric colours or embroidery