REVISED

PROJECT : 2024–25
CLASS – XI

PROJECT WORK (SUBMISSION DATE: 1st July 2024)

ENGLISH LANGUAGE

Length 500 words

Topic: People often gain insight into their own personalities from stressful situations such as going through a family crisis, taking a test in school, or being the only stranger in a group of people. Describe a stressful situation you have experienced and tell what it revealed to you about yourself. Explain how this revelation has changed your perception of yourself in some aspect of your life or activities.

Note: Project to be written in a new Project file.
Write your Name, Class, Section and Subject on the cover page.
Speaking skill-5
Listening skill-5

ENGLISH LITERATURE

Length 1000-1500 words

Refer to the Book: Prism A Collection of ISC Short Stories.
Chapter: A living god
Length of the Project should be: 1000 to 1500 words.
Topic: Who was the protagonist? Describe the circumstances under which he Had to Let his Precious crops succumbed to fire.
Note: Project to be written in a new file.
Write your Name, Class, Section and Subject on the cover page.
INSTRUCTIONS TO THE CANDIDATES:

1) The Projects are for ISC Board.
2) Handwriting should be neat and clear.
3) Make these Projects separately; one for language and one for literature.
4) Write relevant matter and make it very creative.
5) Relevant pictures and quotations must be there. Pictures only on the non-ruled sheet and write on the ruled side.
6) Proper heading should be written in BOLD.
7) Significant lines, phrases and dialogues should be highlighted.
8) Do not use red and green ink.
9) Cover the projects neatly with relevant details on the cover-page itself.

HINDI

Topic to be mentioned

Sequence 1 1. आत्म परिचय 2. विषय सूची 3. प्राक्कथन
4. विषय विस्तार 5. संदर्भ ग्रन्थ सूची

It will Include

A. Listening Skill (Aural)
B. Speaking Skill (Oral)
C. Writing Skill (Literature / Language)

(A) Listening Sill (Aural) (Student need to listen)
An unseen passage of about 500 words or a poem (of appropriate length) may be read aloud, twice the first time normal reading speed and next time slower speed. The passage / poem may be taken from any book, newspaper, magazine and so on but not from ISCE or ISC text book.

(B) Speaking Skill (Oral) (Word limit 150-200)
Students are to be assessed through an individual presentation e.g. giving a speech on a selected topic.

''बेरोजगारी की समस्या''

या

विज्ञान वरदान या अभिशाप

(C) Writing Skill (Literature / Language)

Candidates will be required to understake one written assignment of 600-800 words on the following topics.

''पुत्र प्रेम'' कहानी का सारांश अपने शब्दों में लिखो।

या

''एक फूल की चाह'' कविता का शीर्षक बदलकर पुष्टि हेतु आवश्यक तर्क दीजिए।

या

शरणागत कहानी पर आधारित एक कविता लिखिये तथा उसका विश्लेषण कीजिए।

HISTORY

Prepare a project on the following topic-

Industrialisation – Impact of the growth of Industries on the life style of the people.

OR

Rabindranath Tagore

SOCIOLOGY

Prepare a project on the given two studies-

1. The problem of Child Labour in India
2. Poverty and Crime

PHYSICS

Select any one Topic for Project Work from the following

(i) Centre of mass and Rotational motion.
(ii) Heat and Thermodynamics
(iii) Oscillations and waves.

Working Model

Prepare a working model of Hydraulic brake or hydraulic lift.

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: ***Pictures are required on every pages as per given topic.***

Working Model:

Make any one working model from the following:

- Hydroelectricity working model
- Water Level Indicator
- Free energy salt water and magnet

BIOLOGY

Topic 1 Choose **any one** from the following topics-

(i) Diabetes and its types

(ii) Endocrine disorders
(iii) Economic importance of bacteria
(iv) Role of Macro and Micro nutrients in plants

Topic 2 Prepare a working model on **any one** of the following-
(i) Model of Haemodialysis
OR
(ii) Model of lungs showing breathing mechanism

BIOTECHNOLOGY

Topic 1

Choose **any one** of the following topics-
(i) Biotechnology- global and Indian scenario.
(ii) Biotechnology and its branches.
(iii) Mutation and its types
(iv) Vitamins and its types
(v) Applications of Pharmacogenomics

Topic 2

Prepare a working Model on **any one** of the following topics-
(i) DNA structure
(ii) Internal structure of Mitochondria
(iii) Spectrophotometer

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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

1. Identify distinction between a relation and a function with suitable examples and illustrate graphically.

OR

2. Construct the tree structure of the outcomes of a random experiment, when elementary events are not equally likely. Also construct a sample space by taking a suitable example.

Section – B

1. Use focal property of ellipse to construct ellipse.

OR

2. Use focal property of hyperbola to construct hyperbola.

Section – C

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

OR

2. Find median from the point of intersection of cumulative frequency curves (less than and more than cumulative frequency curves).

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

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

i) S=a/a+1! + a^2/ a+2! + a^3/ a+ 3! +…….a^n/a+n!

ii) $S=1 + a^2/3! – a^3/4! + a^4/5! –a^5/6!+……..n$

9. 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: $(7CE)_{16}$

10. 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: **OUTPUT:**

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

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

11. 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: **OUTPUT:**

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

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 =491

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” And then terminate the program.

INPUT: Enter your date of birth in dd mm yyyy format
05
01
2010

OUTPUT: VALID DATE 5

16. 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

17. 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

18. 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?

19. 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.

20. 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

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 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 Preparation of the accounts of a Not-for-Profit-Organisation on the basis of a case study.

- Develop a case study of an NPO by beginning with the primary motive of establishing it, that is, why have you decided to open a club or a library or a hospital, etc.
- Write in detail about the sources of capital fund, subscriptions, donations (ordinary and special), other receipts and payments of your NPO as well as outstanding expenses, prepaid expenses, subscription due but not received, subscription received in advance, purchase of fixed assets and depreciation charged on them, legacy received, 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 thereafter prepare the NPO's Cash Book, Receipts and Payment Account, its Income and Expenditure Account and its Balance Sheet.
- The various expenses, for comparison purposes, could be depicted in the form of bar diagrams and pie charts.

Your one passport size photograph in school uniform should be pasted on the cover page of the file.

ECONOMICS

[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

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 the Indian economy. Write your findings with Conclusion.

COMMERCE

[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

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 PowerPoint 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

Identify two Public Private Partnership projects. 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.

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PHYSICAL EDUCATION

Project - Prepare a file on any two games given in your text-book under following headings:

1. A Brief History
2. Rules and Regulations of the Game
3. Duties of the officials and players
4. Measurement and Dimensions
5. Terminologies
6. Fundamental Skills
7. Strategy and Formations
8. Names and abbreviations of National and International Agency and Tournaments
9. Diagrames and Dimensions of play area & equipment.

S.U.P.W

1. **File work:**
   Write on the following topics:
   (a) Community Service
   (b) Dyeing and Printing
   (c) Clothing and Textile

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 containing pen, pencil, eraser, sharpener, ruler etc.

3. **Project:**
   Students are required to make six table mats using fabric colours or hand embroidery.