CLASS XI PROJECT WORKS 2021-2022

(Date of Submission – 10 December 2021)

ENGLISH I

Question 1

Write a composition in approximately 500 words on:

Examinations should not be abolished in any circumstance. Give your views for or against the topic.

Question 2

Write a speech in approximately 500 words on:

You are the Head Boy/Head Girl of your school. Write a speech to be delivered at the morning assembly informing the students about the precautions to be taken for protecting themselves against corona virus. Alarming rise in the number of people suffering from Covid-19 - causes of the spread of the pandemic- measures to be taken to prevent the spread of the pandemic - the symptoms of the disease – measures to be taken in case of being affected with the disease.

ENGLISH II

Question 1

What is a 'ghost' story? How is "Fritz" an unusual ghost story? Illustrate. Comment on the ending of the story **Fritz**. **(Your answer should not exceed 750 words)**

Question 2

In 'Salvatore' Somerset Maugham voices dissatisfaction with the fact that for most people the things spoken about oneself are more important than the man himself. Do you agree? Illustrate your answer with the help of examples from the story. **(Your answer should not exceed 750 words)**

HINDI

निम्नलिखित विषयों में से किसी एक विषय पर 800 शब्दों में अपने विचार प्रस्तुत कीजिए–

1. कबीरदास का जीवन परिचय देते हुए उनकी काव्यगत विशेषताओं पर प्रकाश डालिए ।
2. प्रेमचंद जी द्वारा लिखित 'पुत्र–प्रेम' कहानी का सारांश लिखिए ।

निर्देश– शिक्षार्थी उपरोक्त परियोजना कार्य Project File में लिखें ।

MATHEMATICS

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

Mark allocation for **each** Project [10 marks]:

Overall format	1 mark
Content	4 marks
Findings	2 marks
Viva-voce based on the Project	3 marks
Total	**10 marks**

List of suggested assignments for Project Work:

Section A

1. Using a Venn diagram, find the number of subsets of a given set and verify that if a set has 'n' number of elements, the total number of subsets is 2^n.
2. Verify that for two sets A and B, n(A X B) = pq, where n(A) = p and n(B)= q, the total number of relations from A to B is 2^{pq}.
3. Using Venn diagram, verify the distributive law for three given non-empty sets A, B and C.
4. Identify distinction between a relation and a function with suitable examples and illustrate graphically.
5. Establish the relationship between the measure of an angle in degrees and in radians with suitable examples by drawing a rough sketch.
6. Illustrate with the help of a model, the values of sine and cosine functions for different angles which are multiples of $\pi/2$ and π.
7. Draw the graphs of sin x, sin 2x, 2 sin x, and sin x/2 on the same graph using same coordinate axes and interpret the same.
8. Draw the graph of cos x, cos 2x, 2 cos x, and cos x/2 on the same graph using same coordinate axes and interpret the same.
9. Using argand plane, interpret geometrically, the meaning of and its integral powers.
10. Draw the graph of quadratic function. From the graph find maximum/minimum value of the function. Also determine the sign of the expression.
11. Construct a Pascal's triangle to write a binomial expansion for a given positive integral exponent.
12. Obtain a formula for the sum of the squares/sum of cubes of 'n' natural numbers.
13. Obtain the equation of the straight line in the normal form, for (the angle between the perpendicular to the line from the origin and the x-axis) for each of the following, on the same graph:

(i) $\alpha < 90°$

(ii) $90° < \alpha < 180°$

(iii) $180° < \alpha < 270°$

(iv) $270° < \alpha < 360°$

14. Identify the variability and consistency of two sets of statistical data using the concept of coefficient of variation.

15. 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

16. Construct different types of conics by PowerPoint Presentation, or by making a model, using the concept of double cone and a plane.
17. Use focal property of ellipse to construct ellipse.
18. Use focal property of hyperbola to construct hyperbola.
19. Write geometrical significance of X coordinate, Y coordinate, and Z coordinate in space. Using the above, find the distance of the point in space from x-axis/y-axis/z-axis. Explain the above using a three-dimensional model/ power point presentation.
20. Obtain truth values of compound statements of the type by using switch connection in series.
21. Obtain truth values of compound statements of the type by using switch connection in parallel.

Section C

22. Explain the statistical significance of percentile and draw inferences of percentile for a given data.
23. Find median from the point of intersection of cumulative frequency curves (less than and more than cumulative frequency curves).
24. Describe the limitations of Spearman's rank correlation coefficient and illustrate with suitable examples.
25. Identify the purchasing power using the concept of cost of living index number.
26. Identify the purchasing power using the concept of weighted aggregate price index number.
27. Calculate moving averages with the given even Periodicity. Plot them and as well as the original data on the same graph.

PHYSICS

1) Describe general vectors and their notations.
2) Describe Vector operations. (Addition, subtraction, dot product, cross production, resolution). Explain with examples.

CHEMISTRY

Topic: How plastics have changed the world both socially and economically.

The project should be in the pattern mentioned below.

a) Preface
b) Index
c) Topic {one full page can be used for writing the topic in a neat and artistic manner}
d) Introduction of the topic
e) Explanation/ Content [use topic related diagrams and charts, graphs, pie charts etc. Explanation should be of minimum 15 pages. Devote one side of the paper for diagrams and charts and the other side for writing]
f) Conclusion
g) Bibliography

BIOLOGY

Prepare and Write a detailed project report with the help of datas, pictures and diagrams on **Any one** of the following topics:

1) Vermi composting its role in modern agriculture

OR

2) Role of mineral nutrition in the development and yield of a plant.

OR

3) Photorespiration and its significance.

ACCOUNTANCY

The project work is:

1) To make accounting record of all the transactions from very start of the business of Mr. Tushar.
2) To prepare the Trading and Profit and Loss account of the business to ascertain the net profit for the period;
3) To prepare the Balance sheet of the business to ascertain the financial position.

The necessary data is taken and is used for the purpose of project work (take at least 15 transactions)

COMMERCE

PROJECT 1

Select one consumer cooperative and one housing cooperative.

For each of the cooperatives.

1) State the objectives and the organizational structure.
2) Details of surplus distribution and the form of government support.

PROJECT 2

Visit a company which is involved In e- business (which offers online service) or a consultancy, which helps in developing websites for such companies. Study different aspects they keep in mind while preparing business plans for e- business transactions the risks involved in e-business should also be covered. Also include the steps they follow while implementing the plan and starting the business.

ECONOMICS

1) Study in detail the South Asian Association for Regional Cooperation (SAARC) and its impact on Indian economy.
2) Prepare a report on the forest cover in India.

(Use diagrams, data, pictures, newspaper cuttings etc. wherever required in both the projects)

SUPW

Discuss on the emerging trends in modern society. (organic foods, vegetarianism, feminism, netizens etc.)