CHRISTU JYOTI CONVENT SR SEC SCHOOL

1. Subject : English-I-

Write an essay on India's New Education Policy (NEP) envisaging the new points of holistic development, innovation, and dynamic perspectives. More than 10 pages. Take the pictorial ideas from any source but use your own language.

2. Subject : English-II

Note- Write any one of the followings. Illustrate your answer with beautiful examples and pictures: At least 10 pages are needed.

"Alfred Lord Tennyson's poem 'Tithonus' immerses deeply into the complexities of immortality, showing it more as a bane than a boon" Explain the statement.

OR

Referring closely to Act-3 of Shakespeare's Macbeth is a significant turning point in the lives of both Macbeth and Lady Macbeth. Analyse with examples.

3. Subject : Mathematics

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

SECTION –A

1. Using a graph , Demonstrate a function which is one - one but not onto,
2. Using a graph , Demonstrate a function which is invertible.
3. Draw the graph of y=$\sin^{-1}x$ (or any other inverse trigonometric function) . Using the graph of y= sin x , Demonstrate the concept of mirror line (about y=x) and find its domain and range.
4. Explain and illustrate (with suitable examples) the concept of local maxima and local minima using graph.

SECTION- B

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

2. Using vector algebra , prove sin(a+b) = (sin a) (cos b) + cos (a) sin (b)

3. Find the area bounded by a circle and a parabola .

SECTION-C

1. Draw a rough sketch of cost (C), average cost (AC) and marginal cost (MC) .
2. Using any suitable data, find the minimum cost by applying the concept of transportation problem.

4. SUBJECT: PHYSICS

prepare the model and investigatory file on any one of the given topic:

1. To study the concept of Self Induction of a coil.
2. To study the concept of Full wave or Half wave Rectifier.
3. To study the charging and discharging of capacitors in series.
4. To study the concept of Self Designed Transformer.
5. To study the P-n junction and V-I characteristics.

(a) p-n junction under forward bias.

(b) p-n junction under reverse bias.

6. To study the concept of opto- electronic junction devices.

(i) Photodiodes used for detecting optical signals.

(ii) LED that convert electrical energy into light.

(iii) Phot voltaic devices which convert optical radiation into electricity (solar cells).

7. Study the concept of astronomical telescope or compound microscope.
8. To study the concept of Bar magnet as an equivalent solenoid.
9. To study the concept of Bohr's Atomic Model with the assumption and limitation.

NOTE: Complete the Lab Manual Work . To

5. SUBJECT : CHEMISTRY

Project File (10 marks) + Lab Manual (5 marks)

Topics

1. Amino acids : peptides, structure and classification , proteins structure and their role in growth of living beings.
2. Effect of Green House Gases.
3. Nucleic Acid : DNA and RNA.
4. Vitamins and Hormones.
5. How plastics have changed the World , both socially and economically.

6.SUBJECT : HINDI

Project on:

हिंदी परियोजना कहानी भक्तिन

१० मुहावरे उनके अर्थ वाक्य

१० अशुद्ध वाक्य शुद्ध कीजिये।

7 SUBJECT: SUPW PROJECT

1. Animal and Human aggression :
   (a) Weapons devised by man for offence and Defence.
   (b) Nuclear Weapons , control on weapons.
2. Science and Technology as change agents: Effects of scientific developments on our lives.

8 SUBJECT : COMPUTER

Topic: Java Programming

Computer Science with Java Practical File				
S.No.	**Programme**	**Page No.**	**Date of practical**	**Teacher's Sign**
1	Use of Command line argument.			
2	Calculate mid-point (use of scanner class).			
3	Finding Farthest point from a point.			
4	Menu Driven program.			
5	Checking number is Smith number or not.			
6	Calculating Primorial number.			
7	Checking no is Palprime or not.			
8	Calculating Brun's constant.			
9	Checking and Generating Armstrong and ArmstrongLike numbers.			
10	Checking and Generating Mersenne number.			
11	Checking no. is Disarium or not.			
12	Creating and accessing 2D Array.			

13	Finding Longest consecutive sequence of non prime numbers			
14	Christian Goldback number.			
15	Linear Search in arrays.			
16	Sorting arrays using Selection sort technique.			
17	To Construct a Magic square of two dimensional array.			
18	To print the square matrix in spiral form.			
19	To rearrange word on the basis of vowel.			
20	To Encrypt a String using Rot13 scheme.			
21	Generating password using name and age of candidate.			
22	To Convert Decimal number to any base.			
23	Finding GCD using recursive technique.			
24	To check number is Emirp or not using recursive function.			
25	To Check number is Happy or not using recursive function.			
26	Binary search using recursive technique.			