



SYNA INTERNATIONAL SCHOOL, KATNI
SUMMER ASSIGNMENT (2024-25)
GRADE-XII

ENGLISH

Design a comprehensive POWER POINT PRESENTATION on-

1. The Last Lesson by Alphonse Daudet
2. My Mother at Sixty Six by Kamala Das

Procedure

Include following

- a) Short description of the Author, title, setting, theme, characters and summary
- b) Key points of the story/poem
- c) Figures of speech used in the poem
- d) Use relevant and attractive pictures to make the PPT elaborate and appealing.
- e) Minimum 25 slides should be used.

Send the PPT on the official Email ID of your English teacher latest by 15 June 2024.

HINDI

1. प्रेमचंद के प्रसिद्ध उपन्यास 'रंगभूमि' का सारांश पढ़िए।
2. गोस्वामी तुलसीदास का जीवन परिचय लिखकर उनकी रचनाओं का उल्लेख करते हुए 'गीतावली' की समीक्षा कीजिए।

MATHEMATICS

Q. 1 if $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ a & b & -1 \end{bmatrix}$ then $A^2 = ?$

Q. 2 if $A = \begin{bmatrix} \alpha & 0 \\ 1 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 0 \\ 5 & 1 \end{bmatrix}$ where $A^2 = B$ then the value of α is

Q. 3 If $A^2 - A + I = 0$ then the inverse of A

Q. 4 if A is a square matrix such that $A^2 = I$, then $(A - I)^3 + (A + I)^3 - 7A = ?$

Q. 5 if $\begin{bmatrix} 2x + y & 4x \\ 5x - 7 & 4x \end{bmatrix} = \begin{bmatrix} 7 & 7y - 13 \\ y & x + 6 \end{bmatrix}$ then the value of x, y is

Q. 6 if $A = \begin{bmatrix} 2 & 2 & 1 \\ 1 & 3 & 1 \\ 1 & 2 & 2 \end{bmatrix}$ then $A^3 - 7A^2 + 10A = ?$

Q. 7 The area of a triangle with vertices $(-3, 0)$ $(3, 0)$ and $(0, k)$ is 9 sq. units. The value of k will be

Q. 8 Express the sum of a symmetric and skew symmetric matrix: if $A = \begin{bmatrix} 2 & 2 & 1 \\ 1 & 3 & 1 \\ 1 & 2 & 2 \end{bmatrix}$

Q. 9 Evaluate the determinants $\begin{vmatrix} a + ib & c + id \\ -c + id & a - ib \end{vmatrix}$

Q. 10 In each of the following questions, an Assertion (A) and a corresponding Reason (R) supporting it are given. Study both.

Assertion (A) :

If the matrix $P = \begin{bmatrix} 0 & 2b & -2 \\ 3 & 1 & 3 \\ 3a & 3 & 3 \end{bmatrix}$

is a symmetric matrix, then $a = -2/3$ and $b = a/2$

Reason(R) :

If P is a symmetric matrix, then $P^T = P$

- A Both A and R are true and R is the correct explanation of A
- B Both A and R are true but R is NOT the correct explanation of A.
- C A is true but R is false
- D A is false but R is true
- E Both A and R are false

Q. 11 CASE STUDY

Amit, Biraj and Chirag were given the task of creating a square matrix of order 2. Below are the matrices created by them. A, B, C are the matrices created by Amit, Biraj and Chirag respectively.

$$A = \begin{bmatrix} 1 & 2 \\ -1 & 3 \end{bmatrix}, B = \begin{bmatrix} 4 & 0 \\ 1 & 5 \end{bmatrix}, C = \begin{bmatrix} 2 & 0 \\ 1 & -2 \end{bmatrix}$$

If $a = 4$ and $b = -2$, based on the above information answer the following:

1. Sum of the matrices A, B and C, $A+(B+C)$ is
2. $(A^T)^T$ is equal to
3. $(bA)^T$ is equal to
4. $(a+b)B$ is equal to

Q. 12 PROJECT WORK : Write about matrix. (CHART PAPER)

PHYSICS

1. Stationary model on AC generator and transformer.
2. Stationary model on rectifier and P-N junction diod.
3. stationary model on electrical capacitance and capacitor.
4. chart on paramagnetic diamagnetic and ferromagnetic substance.
5. chart on microscope and telescope.

CHEMISTRY

1. prepare a stationary model on a periodic table using wooden blocks and wooden case.
2. prepare chart of DNA and RNA.

BIOLOGY

Prepare one investigatory as mentioned in the cbse curriculum. Topics are already allotted to each student.

ACCOUNTANCY

Do all question of chapters:

- Fundamental of partnership
- Goodwill

Project Work One specific project based on financial statement analysis of a company covering any two aspects from the following:

1. Comparative and common size financial statements
2. Accounting Ratios
3. Segment Reports
4. Cash Flow Statements

COMPUTER SCIENCE

“Computer science empowers students to create the world of tomorrow.”—that’s our principal capital asset .

For your holiday break just try to execute these few programs and write the min your practical file.

1. Write a Python program to multiply all the items in a list.
2. Write a Python program to get the smallest number from a list.
3. Write a Python program to convert a string to a list.
4. Write a Python script to concatenate the following dictionaries to create a new one:
5. Write a Python program to find the highest 3 values in a dictionary.
6. Write a Python program to sort a list alphabetically in a dictionary.
7. Create a dictionary with the roll number, name and marks of n students in a class and display the names of students who have scored marks above 75.
8. Write a function DigitSum() that takes a number and returns its digit sum.

9. Write a function Div3and5() that takes a 10 elements numeric tuple and returns the sum of elements which are divisible by 3 and 5.

10. WAP to print a string and the number of vowels present in it.

Note:-

1. Submit your Holiday Home work physically after summer vacation. Your submission will carry 4 marks. (2 marks-Subject Relevance & Research, 2 marks-Handwriting).

2. Practical execution of your Homework (5-6mins) to be held in offline mode after holidays. It will carry 6 marks.

(2 marks-Confidence, 2 marks - Subject Clarity, 2 marks-Presentation Skills)

3. The teacher may ask 1 or 2 questions during the practical execution of the programs.

BUSINESS STUDIES

Learn and write self assessment of chapters :

- Nature and significance of Management.
- Principle of Management.

Project Topics 2.

- Marketing Management
- Elements of Business Environment
- Principles of Management Project in Business Studies
- Stock Exchange
- Consumer Protection

ENTREPRENEURSHIP

Prepare a project on 5 Indian entrepreneurs and their startups.

Political Science

(Strictly Based on as per the CBSE guidelines) : A pen paper project need to be prepare on the following Topics :

(i) Challenges of Nation Building with the role of Sardar Patel , Merger of following states should be cover : Kashmir, Junagarh, Manipur , Hyderabad and Travancore.

(ii) End of Bipolarity : Basic about Cold War Era , Bipolarism , Soviet System , Rise of USSR , Important leaders, Causes of falling the USSR and its impact .

India and Its Multilateral Relation

History

TOPIC

1. Town planning and Artifacts of the Harappan civilization
2. Mahabharata through a reader's eye.
3. The History and Legacy of Mauryan Empire
4. The History and Culture of the Vedic period
5. Buddha Charita
6. A Comprehensive History of Jainism
7. Bhakti Movement- Multiple interpretations and commentaries.
8. "The Mystical Dimensions of Sufism
9. Global legacy of Gandhian ideas

10. The Architectural Culture of the Vijayanagar Empire
11. Comparative Analysis of the Land Revenue Systems introduced by the Britishers in India
12. The Revolt of 1857- Causes; Planning & Coordination; Leadership, Vision of Unity
13. The Philosophy of Guru Nanak Dev or The Vision of Kabir
14. An insight into the Indian Constitution

Note:- (The above given topic any one need to complete in handwritten form)

- a) The project should be a minimum of 15-20 pages each.
- b) Use colorful sheets for the work .
- c) Each one has to prepare a Power point presentation related to their topic.
- d) You can present role play, drama, songs, bulletin board, poem related to the topic.
- e) The project should be totally research and survey based.
- f) The project must be neat and well presented and must be completely handwritten.
- g) The project should be done on inter leaf A-4 sized sheets.

PHY. EDUCATION

Practical-1: Fitness tests administration. (SAI Khelo India Test)

Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.

Practical-3: Any one IOA recognized Sport/Game of choice. Labelled diagram of field & Equipment. Also, mention its Rules, Terminologies & Skills.

PAINTING

1) Still Life painting - 2

2) Painting Composition: TOPIC-Indian Festival-1

Material: Half Size Cartridge paper, Poster Colour

ECONOMICS

Prepare a project based on the topics assigned (Individual).

INFORMATICS PRACTICE

Que 1 Answer the following questions:

1. PANDAS has derived its name from?
2. Can we use pandas directly to python or we need to install it. If yes, then how to install it.
3. Write a program to create a series using a list.
4. What is the significance of Pandas library?
5. Write the output of the following code fragment:

```
import pandas as pd
s2 = pd.Series(["I","am","a","student"])
```

print(s2)

6. State whether True or False

1. A series object is size mutable.

2. A series is a heterogeneous combination of elements.

7. Name two data structures of Python pandas.

8. Write a program to create a series from the given dictionary . D = {"Jan": 31, "Feb" : 28, "Mar" : 31}

9. Who developed the module pandas?

10. What was the main motive behind developing the pandas module?

NOTE: you must answer all the questions in your fair copy.

Que 2. Create a powerpoint presentation on a topic " **THE IMPACT OF ARTIFICIAL INTELLIGENCE ON SOCIETY**" with a minimum of 10 slides and detailed overview.

You can share the presentation on my email

id: lakchana.nigam@synainternational.edu.in