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Holidays' Assignments for Summer Vacations (2024-25) for Class XI ARTS



General Instructions:

1. *Get up early in the morning and go out for a walk daily. Do yoga daily for healthy living.*
2. *Make a Bird feeder and add seeds (wheat & rice) for birds daily and also place water for them.*
3. *Raise a small kitchen garden by planting seeds of vegetables.*
4. *The summer break for classes IX-XII will be from 28.05.2024 to 30.06.2024 (Both days inclusive). School will reopen on 01.07.2024.*
5. *Revise the syllabus of all subjects done before summer vacations for Unit Tests to be started from 02.07.2024.*
6. *Do assignments in holidays homework notebook and activities/projects on A4 sheets for each subject and make a portfolio & submit it for assessment to your class teacher on July 10, 2024. There will be assessment of these portfolios and marks will be awarded in half yearly/annual exams.*
7. ***Register & Participate in 1st stage of 10th Online International Humanity Olympiad by accessing through web portal – <http://www.humanityolympiad.org> or Android App - Awake Humanity (play store). Every individual passing the exam (i.e. scoring minimum 40%) will get an e-certificate through e-mail immediately on their emails. School code is : FATE100. This certificate and certificates of courses earned by you during holidays should be part of your portfolio.***

English

Revise syllabus for U.T.

Unseen passages for comprehension

Grammar: Tenses, Narration, Clauses, Preposition

Hornbill :

1-The Portrait Of A Lady

2.We're Not Afraid to Die if We Can All be Together

A Photograph(Poem)

Snapshot:

1.The Summer of The Beautiful White Horse

2.The Address

Do worksheets from Insight in neat and clean handwriting (Use pencil only)

Worksheet 1 to 5(Reading Comprehensions)

Do worksheets of Tenses, Narration

Project Work-(Use A4 Sheets only)

- 1.You have read the lesson 'The Portrait of a Lady' by Khushwant Singh. Relating to the topic, share your real life experience about the bond that you share with your grandparents .What would be that one skill you would like to teach them and how ?Your answer should be penned in 150 words.
- 2.On the occasion of Father's Day, take an interview of your father,in which he is sharing his childhood memories.
- 3.Compose a poem on the time gone by when you were young. Mention all that you miss of the yesteryears keeping in mind the poem-'A Photograph'(Represent with images and photographs)
- 4.Government has decided to introduce regional language in Educational Curriculum. Do you think it is regressive or retrograde. Express your opinion in favour or against the topic.
- 5.During this break, download following app to improve your speaking skills.

English Conversation Practise

हिंदी

1. संचार एवं जनसंचार के माध्यमों का विकास देश के विकास में किस प्रकार सहयोगात्मक रहा? यह माध्यम कौन -कौन से हैं, तथा किस किस क्षेत्र में अपना योगदान निभा रहे हैं इनसे संबंधित एक आकर्षक कोलाज तैयार करें।
2. 'लड़कियाँ है, वह घास-फूस की तरह बढ़ती चली जाती हैं।' कथन के आधार पर समाज में लड़कियों की वास्तविक स्थिति को स्पष्ट करते हुए केंद्र सरकार की बेटी बचाओ बेटी पढ़ाओ योजना का उल्लेख एक आकर्षक चित्रात्मक परियोजना द्वारा कीजिए। परियोजना कापहला पृष्ठ- विद्यार्थी का नाम, कक्षा, वर्ग, अनुक्रमांक, विद्यालय का नाम एवं विद्यालय का प्रतीक चिह्न (लोगो)
दूसरा पृष्ठ-आभार ज्ञापन
तीसरा पृष्ठ- प्रमाण-पत्र
चौथा पृष्ठ- अनुक्रमणिका
पाँचवा पृष्ठ- भूमिका/प्रस्तावना
छठे पृष्ठ से - संपूर्ण चित्राकर्षक
3. निम्नलिखित विषयों पर लेख लिखें-
 - * फैशन की होड़ में बिगड़ता बजट
 - * वैश्वीकरण (ग्लोबलाइजेशन) के प्रभाव
4. कोई दो संपादक के नाम पत्र लिखें।
5. प्रथम इकाई परीक्षा संबंधी पाठ्यक्रम
अपठित गद्यांश अपठित काव्यांश
आरोह गद्य खंड पाठ नमक का दरोगा एवं मियाँ नसीरुद्दीन काव्य खंड कबीर, मीरा, घर की याद एवं चंपा काले अक्षर नहीं चीहनी
अभिव्यक्ति और माध्यम पाठ 1 एवं 2

Applied Mathematics

- **Prepare yourself for Unit Test**
Unit-1 Numbers , Quantification and Numerical Applications (Binary Number, Indices, Numerical Applications)
Unit-2 Algebra (Sets & Relation, Permutation & Combinations, Sequence & Series)
- **Make mind map of each topic given below : Sets & Relation , Sequence & Series ,Permutation & Combination, Quantification & Numerical Applications.**
- **Project Work: Do any one of the following projects**
 - (i) **Fibonacci Sequence (Objective, Introduction, history, Presence in nature, Real life Applications, Importance ,Fun facts , Conclusion)**
 - (ii) **Investigating Graphs of Functions for their Properties.(Objective, Introduction, Domain, Range , graphs and real life applications of different kind of functions)**
 - (iii) **Use of Venn Diagrams in solving Practical Problems (Objective , Introduction, Atleast five Real Life Applications Different from your book, Conclusion)**

Points to Remember while making Project: -

- The project should consist of 15- 20 pages with proper and relevant information.
- Be as creative and innovative as you can in doing your project.
- The project should be handwritten.
- The work has to be done on A4 size sheets.
- Paste the relevant pictures and draw the graph to make the project attractive.
- The project should be maintained in a neat File.

GEOGRAPHY

A. Select forest as a natural resource:

- i. Prepare a map of India showing the distribution of different types of forests.
- ii. Write write about the economic importance of forest for the country.
- ii. Prepare a historical account of conservation of forest in India with focus on chipko movement in Rajasthan and Uttarakhand.

B. Prepare a report related to damages caused by an earthquake with pictures.

C. Prepare the following chapters from book fundamentals of Physical Geography:

Ch. 1 Geography as a discipline

Ch. 2 The origin and evaluation of Earth

Ch. 3 Interior of the earth

Ch. 4. Distributions of oceans and continents

POLITICAL SCIENCE

A) Learn chapters 1 to 7 & complete notes (Book: Indian Constitution at work) and prepare for July Unit Test.

Learn the names of the countries related to different incidents mentioned in the chapters, write statements related to them and mark their location on map of India/World (1 to 7 chapters).

B) Prepare a detailed project on the following theme:

Indian Constitution

i) Content 's idea-

- Mention about Preamble
- Civilizational ethos, which got culminated into our Constitution
- Make detail illustrations of ancient pictures, folk lores, stories of Puranas and art work mentioned in our Constitution by artists from Shantiniketan Shri Nand Lal Bose & Beohar Rammanohar Sinha, Prem Bihari Narain Raizada and others. (minimum three to five pages including original illustrations)
- Constituent Assembly
- Provisions borrowed from constitutions of different countries

>The following essentials are required to be fulfilled for its preparation and submission:

The total length of the project will be of 30 to 35 pages.

1 Cover Page (Printed)

2 Certificate

3 Acknowledgement

4 Preface

5 Index

6 Preamble of India (printed)

7 Content presentation

8 Flag(printed)

9 Pictures(printed)

10 Map(printed)

11 Conclusion

12 Bibliography

Note: Use the following link for more guidance and help for the project.

<https://youtu.be/02iWG8YZ4Ho>

Psychology

Q.1) Identify the personality trait of any person Introvert or Extrovert. Write down the qualities that you have observed.

Q.2) Activity Self-Awareness. Write a paragraph on your living style in about 150-200 words. What do you think about you?

Q.3) According to Chapter-1 which field of Psychology you would like most and why? Write in about 100-150 word.

Q.4) Write down the case- study of any person suffering from any psychological disorder.

Q.5) Introspect your areas of improvement and take resolution in summer break to improve it.

For example:- I have observed that sometimes my anger is uncontrollable and it affects my relationships. And I need to work on the same.

Q.6) Learn and write question answers of chapter-1,2 and 3 from NCERT Book.

Economics

1. Prepare Chapter - 1 to 9 of Statistics for Unit Test. Do practice of textual questions thoroughly.
2. Write an article on Sustainable Development.(200 – 250 words)
3. Conduct a survey with the help of a questionnaire about consumer awareness in your locality. Survey should be conducted in 20 persons including 10 males and 10 females. You have to find out which one in society is more aware, MALE or FEMALE.

Points to Remember while making Project: -

1. It should be maintained in Proper file.
2. 20 Questionnaire should be attached in file.
3. Project should show the statistical stages: Collection of data, Organisation of data, Presentation of data, Analysis and Interpretation.
4. Collection of data includes Questionnaire.
5. Organisation includes Table of data presenting Absolute data.
6. Presentation of data includes Graph showing absolute data of every question. Question should be shown on X-axis & Values should be on Y-Axis.
7. Analysis of data includes Table of data showing Relative data in percentage form.
8. Interpretation of data includes results or conclusions of study.

Elective Maths

Sets

1. If $A = \{x : x \in \mathbb{N}, x \leq 6\}$ and $B = \{x : x \in \mathbb{N}, 2 < x^2 < 26\}$, then $A \cap B$ is equal to :
[a] $\{3,4,5,6\}$ [b] $\{3,4,5\}$ [c] $\{2,3,4,5\}$ [d] $\{4,5,6,7\}$
2. The set builder form of $A = \{2,7,12,17,22\}$
[a] $A = \{5n-3, n \in \mathbb{N}, n \leq 5\}$ [b] $A = \{27-5n, n \in \mathbb{N}, n < 5\}$
[c] $A = \{5n-3, n \in \mathbb{N}, n < 5\}$ [d] $A = \{27-5n, n \in \mathbb{N}, n \geq 5\}$
3. Let $A = \{2,3,4,5,7,8\}$, $B = \{4,5,6,7,8\}$ and $C = \{1,3,5,6,7,8,9\}$, then $\{(A \cap C) \cup B\}$ equals to
[a] $\{3,4,5,6,7,8,9\}$ [b] $\{3,4,5,6,7,8\}$ [c] $\{2,3,4,5,6,7\}$ [d] $\{3,4,6,7,8,9\}$
4. Let $U = \{1,2,3,4,5,6,7,8\}$, $A = \{1,2,3,5,6\}$, $B = \{2,3,4,7,8\}$ then the value of $(A' \cup B)$ is equal to
[a] $\{1,2,3,4,5\}$ [b] $\{2,3,4,7,8\}$ [c] $\{1,2,4,7,8\}$ [d] $\{2,3,5,6,8\}$
5. In a school, there are 20 teachers who teach Mathematics or Physics. Of these 12 teachers teach Mathematics and 4 teach Mathematics and Physics. How many teach Physics?
[a] 10 [b] 11 [c] 8 [d] 12

[a] A is false and R is true.

[b] A is true and R is false.

[c] Both A and R are true and R is the correct explanation of A.

[d] Both A and R are true but R is not the correct explanation of A.

6. Assertion : the number of non-empty subsets of the set $\{a,b,c,d,e,f\}$ is 63.

Reason : The number of proper subsets of the set A when $n(A) = 2^k - 1$.

7. Assertion : The collection of ten most talented writers of India form a set.

Reason : A set is a collection of well defined of distinct objects.

Relations & Functions

- The value of a and b if $(5a, 4)$ and $(b, -1)$ belong to the set $\{(x, y) : x-11y=16\}$
[a] $a=11, b=4$ [b] $a=12, b=11$ [c] $a=12, b=5$ [d] $a=12, b=11$
- If $f(x) = 2x^2 - 7x + 8$, then the value of $f\{f(2)\}$ is
[a] 4 [b] 2 [c] 7 [d] 3
- Find the domain of : $f(x) = 7x / (x^2 - 8x - 20)$
[a] $\{-2, 10\}$ [b] $R - \{-2, 10\}$ [c] $R - (-2, 10)$ [d] $R - \{-2, 10\}$
- If $A = \{x : x^2 - 10x + 21 = 0\}$; , $B = \{6, 12\}$; $C = \{7, 12\}$ then $A \times (B \cap C)$
[a] $(10, 3), (12, 7)$ [b] $(6, 12), (2, 12)$ [c] $(7, 12), (3, 12)$ [d] $(2, 12), (2, 12)$
- Let $A = \{2, 3, 8\}$, $B = \{2, 3, 5\}$, $C = \{2, 5, 8, 9\}$ then $(A - B) \times (B - C)$ is
[a] $\{(1, 2), (1, 5), (2, 5)\}$ [b] $\{(1, 4)\}$ [c] $\{(4, 5)\}$ [d] $\{8, 3\}$
- Find the range of : $y = (4x + 3) / (5x + 4)$
[a] $R - \{5/4\}$ [b] $R - \{4/5\}$ [c] $R - \{-5/4\}$ [d] $R - \{-4/5\}$
[a] A is false and R is true.
[b] A is true and R is false.
[c] Both A and R are true and R is the correct explanation of A.
[d] Both A and R are true but R is not the correct explanation of A.
- Assertion : If $(2x + 1, x + 5y - 2) = (9, 18)$, then $x = 5$ and $y = 3$.
Reason : Two ordered pairs are equal if their corresponding elements are equal.
- Assertion : A relation $R = \{(1, 3), (2, 2), (3, 1)\}$ defined on the set $A = \{1, 2, 3\}$ is a function.
Reason : A relation from set A to set B is a function if every element of A is related to a unique element of B.

Complex Numbers

- The value of $(4i^6 + 14i^{11} + 14i^{12} + 16i^{17})$
[a] $10 + 6i$ [b] $10 - 6i$ [c] $10 + 2i$ [d] $10 - 2i$
- The value of $(2 + 8i) / (1 + i)$
[a] $(3 + 4i)$ [b] $(5 + 3i)$ [c] $(5 - 6i)$ [d] $(3 - 2i)$
- The number $\frac{(1+i)^2}{1-i^2}$ is equal to :
[a] i [b] $-i$ [c] -1 [d] -2
- If $x + iy = \frac{(2+i)(1-8i)}{(1+2i)(3+i)}$, then the value of x and y :
[a] $x = 3/5, y = 4/5$ [b] $y = -3/5, x = -4/5$ [c] $x = -3/5, y = -4/5$ [d] $y = 3/5, x = 4/5$
- If $(4x + 1) + (6y - 8)i = (-7 - 2i)^2$ then the value of x and y :
[a] $x = 11, y = -6$ [b] $x = 11, y = 6$ [c] $x = -11, y = 6$ [d] $x = -11, y = -6$
[a] A is false and R is true.
[b] A is true and R is false.
[c] Both A and R are true and R is the correct explanation of A.
[d] Both A and R are true but R is not the correct explanation of A.
- Assertion : If $4x + i(3x + 4y) = 15 + 11i$, then $x = 15/4$ and $y = 1/16$.

Reason : Two complex numbers are equal if their corresponding real and imaginary parts are equal.

7. Assertion : If $Z = \frac{1}{5+12i}$, then $|Z| = \frac{1}{17}$

Reason : If $Z=a+ib$ then $|Z| = \sqrt{a^2 + b^2}$

Trigonometry

1. The value of $\cos(1680^\circ) + \sin(1290^\circ)$

- [a] 2 [b] -1 [c] 0 [d] 1

2. If $\cos A = -20/29$, A lies in second quadrant, then the value of $(1 + \operatorname{cosec} A)$

- [a] 49/20 [b] -5/2 [c] 50/21 [d] -50/21

3. If $x \sin 135^\circ \cos^2 120^\circ = \frac{\tan^2 120^\circ \operatorname{cosec} 150^\circ}{\cot^2 30^\circ \sec^2 135^\circ}$, then x is :

- [a] 2 [b] 4 [c] 8 [d] 16

4. Evaluate : $\cos A + \sin(270^\circ + A) - \sin(270^\circ - A) + \cos(180^\circ + A)$

- [a] -1 [b] 0 [c] 1 [d] none of these

5. $\tan A \sin\left(\frac{\pi}{2} + A\right) \cos\left(\frac{\pi}{2} - A\right)$ is equal to

- [a] 1 [b] 0 [c] $\frac{1}{\sqrt{2}}$ [d] none of these

6. The value of $\left(3 \cos \frac{\pi}{3} \operatorname{cosec} \frac{\pi}{6} - 4 \sin \frac{5\pi}{6} \tan \frac{\pi}{4}\right) \cos 2\pi$

- [a] 0 [b] -1 [c] 1 [d] $\frac{1}{2}$

7. If $x = \sec A - \tan A$ and $y = \operatorname{cosec} A + \cot A$, then the value of $x - y + 1 + xy$ is

- [a] 2 [b] 0 [c] 1 [d] -1

8. If $\cos(a+b) = 4/5$, and $\sin(a-b) = 5/13$, then the value of $\tan(2a)$ is

- [a] 24/25 [b] 33/56 [c] 56/33 [d] 25/24

9. If $\sin A = 1/2$, then the value of $\sin 3A$ is :

- [a] $\frac{1}{2}$ [b] $1/3$ [c] 0 [d] 1

[a] A is false and R is true.

[b] A is true and R is false.

[c] Both A and R are true and R is the correct explanation of A.

[d] Both A and R are true but R is not the correct explanation of A.

10. Assertion : $\tan 8A - \tan 6A + \tan 2A = \tan 8A \tan 6A \tan 2A$

Reason : $\tan(A + B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$

11. Assertion : If two equal arcs of different circles subtend angles of 36° and 45° at the centre respectively, then the ratio of their radii is 5 : 4.

Reason : In a circle of radius r, an arc of length m subtends an angle of m/r radians at the centre.

Case Study

1. In a survey of 25 students, it was found that 21 had taken Mathematics, 26 had taken Physics and 29 had taken Chemistry, 14 had taken Mathematics and Physics, 12 had taken Mathematics and Chemistry, 14 had taken Physics and Chemistry and 8 had taken all the

three subjects. Based on the above information, answer the following questions.

- [i] The number of students who had taken only Mathematics is
 [a] 8 [b] 3 [c] 4 [d] 5
- [ii] The number of students who had taken at least one of the three subjects is
 [a] 45 [b] 48 [c] 44 [d] 50
- [iii] The number of students who had taken only one of the subjects is
 [a] 20 [b] 19 [c] 15 [d] 25
- [iv] The number of students who had taken Mathematics and Physics but not Chemistry is
 [a] 8 [b] 9 [c] 6 [d] 11
- [v] The number of students who had taken Chemistry and Physics but not Mathematics is
 [a] 4 [b] 3 [c] 8 [d] 6

2. The mathematics teacher was teaching the students of class XI the following concepts of trigonometric equations. An equation involving trigonometric functions of an unknown angle or angles is called a trigonometric equation. The solution in the interval $[0, 2\pi]$ is called the principal solution of the given equation.

Based on the above information, answer the following questions.

- [i] If $\tan x = \frac{-1}{2}$ and $\operatorname{cosec} x = \frac{3}{2}$ then in which quadrant they lie.
 [a] I [b] II [c] III [d] IV
- [ii] The value of $2\sin^2 x$ is equal to :
 [a] $(1 - \cos x)$ [b] $(1 + \cos x)$ [c] $(1 + \cos 2x)$ [d] $(1 - \cos 2x)$
- [iii] If $\cot x = -1/\sqrt{3}$ and x lies in 2nd quadrant the value of $(1 + \sec x)$
 [a] 1 [b] 3 [c] -1 [d] 0
- [iv] The degree measures of $\left(\frac{8\pi}{9}\right)^c$ is :
 [a] 320° [b] 340° [c] 280° [d] 160°
- [v] The value of $\cot 75^\circ$
 [a] $3 + \sqrt{2}$ [b] $2 + \sqrt{3}$ [c] $2 - \sqrt{3}$ [d] $3 - \sqrt{2}$

Activities

- Draw the graph of the function $f(x) = \begin{cases} 3 - x, & \text{if } x > 1 \\ 1, & \text{if } x = 1 \\ 2x, & \text{if } x < 1 \end{cases}$
- Represent the given complex number on Arganda plane : $\frac{2+i}{(1+i)(1-2i)}$
- Write the definition of the following given below in practical file.
(Note : Students may integrate different forms of art in the project work)

