S.B.P. D.A.V. Centenary Public School, Fatehabad.

Holidays' Assignments for Summer Vacations, June-2023
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. *The summer break for class VI-XII will be from 01.06.2023 to 02.07.2023 (Both days inclusive). School will reopen on 03.07.2023.*
3. *Revise the syllabus of all subjects done before summer vacations for Unit Tests to be started from 04.07.2023.*
4. *Try to make your handwriting better by practicing and do your HW in good handwriting.*
5. **Register & Participate in 1ˢᵗ stage of 9ᵗʰ Online International Humanity Olympiad by accessing through our 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 : FATE103.**

English Core

Revise following syllabus for U.T.

Hornbill :
1-The Portrait Of A Lady
Snapshot:
1.The Summer of The Beautiful White Horse
2.The Address
3.Mother's Day
Grammar: Tenses, Prepositions, Unseen Passage

1. **Do worksheets from BBC in neat and clean handwriting (Use pencil only)**
   Worksheet 1to 5(Reading Comprehensions)
   First five worksheets of Tenses, Prepositions
2. **Write the review of any motivational book written by Mr. Robin Sharma.**

   Complete it using these points- Title, Author's name, Publisher, Number of pages, Price, Target, Brief summary, some quotes from the book

3.On account of Father's Day, write a letter to your father expressing your love, respect and gratitude towards him by using an A4 sheet.
   (A)Give this letter to him on Father's Day.
   (B)Click a picture of his expression on receiving the letter. Get his comment noted on the letter and paste the letter on your scrapbook.

4. Yoga was originated in India from Hindu scriptures and practised world wide. People have understood how yoga helps to exercise and calm the body. In this context , write a few lines about Indian Yoga Guru Baba Ram Dev who is famous personality of Haryana.

4. Write 30 new words following the below given format.

Word	Synonym	Antonym	Derived from	Usage

Physical Education

Learn Chapter 1 to 3 for July Unit Test :-
- ➢ Make a list of various career options in Physical education
- ➢ Make a list of rule and regulations of International Olympic Committee and Modern Olympic Games.
- ➢ Draw the Pictures of Yogic Kriyas (Shat Karma) and describe its benefits.
  - Neti Kriya
  - Dhouti Kriya
  - Nouli Kriya
  - Kapalbhati Kriya
  - Tratak Kriya

Music

Q 1. Play and sing the notation of Gayatri Mantra with different scale or note.

Q 2. Make a video of any classical or semi classical song, and send video through WhatsApp on 9416726190.

Q 3. Make a composition of Raga Bhairav with following words-

प्रभुवर हमारे मन को , भक्ति का दान देना,

सबके मैं काम आऊ, बुद्धि का दान देना |

जीवन में मेरे दाता, तेरा ही नाम गाऊं,

तुम्हें छोड़ कर मैं दाता, कहीं और कैसे जाऊं |

सुख में तुझे न भूलूं , शक्ति का दान देना |

Syllabus for UT:

Teen tala and Ek Tala with single and double, Short noes on Nada, Saptak, Swara, Detailed description of Drupad, Music elements in Natyashastra.

Geography

1. Prepare a beautiful project with pictures on the topic forest as a natural resources under the following headings:
   - Map of India showing the distribution of different types of forest
   - Economic importance
   - Historical account of conservation of forest in India with focus on-
   - Chipko movement in Rajasthan and Uttrakhand

2. Prepare the following lesson for unit test- 1examination:
   Fundamentals of physical geography
   L-: 1, 2, 3, 4.

History

1. Prepare a project on the topic social, economic, cultural and religious life of the Roman empire with beautiful pictures.
2. Prepare a timeline chart on the theme- II
3. Prepare the following chapters for unit test-1
   Ch 1. Writing and the city life.
   Ch 2. An Empire across three continents
   Ch 3. The Nomadic Empire

Political Science

A) Learn chapters 1 to 6 (Book: Indian Constitution at work) and prepare for July Unit Test.

B) Prepare a detailed project on the theme- Indian Constitution
 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 25 to 30 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 preparing the project.
   https://youtu.be/02iWG8YZ4Ho

HINDI -

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 हैंइनसे संबंधित एक आकर्षक कोलाज तथ्यार करें।

2. 'लड़कियाँ हो वह घास- फूस की तरह बढ़ती चली जाती हैं।' कथन के आधार पर समाज में लड़कियों की वास्तविक स्थिति को स्पष्ट करते हुए केन्द्र सरकार की बेटी बचाओ बेटी पढ़ाओ योजना का उल्लेख एक आकर्षक चित्रात्मक परियोजना द्वारा कीजिए ।

3. निम्नलिखित विषयों पर लेख लिखें -

∗ फाशन की होड़ में बिगड़ता बजट

∗ वश्वीकरण (ग्लोबलाइजेशन) के प्रभाव

∗'स्टार्टअप इंडिया, स्टैंडअप इंडिया' अभियान युवाओं के लिए एक वरदान

4. अपने आस पास बिगड़ती कानून व्यवस्था एवं भ्रष्टाचार पर चिंता व्यक्त करते हुए संपादक के नाम पत्र लिखो|

5.टीवी चन्नेलों पर दिखाए जाने वाले भ्रामक विज्ञापनों के युवा पीढ़ी पर बढ़ते दुष्प्रभावों के प्रति चिंता व्यक्त करते हुए संपादक के नाम पत्र लिखो |

6. प्रथम इकाई परीक्षा संबंधी पाठ्यक्रम

 आरोह गद्य खंड पाठ- नमक का दरोगा एवं मियां नसीरुद्दीन

 काव्य खंड - कबीर, मीरा , घर की याद एवं चंपा काले अक्षर नहीं चीह्नती

अभिव्यक्ति और माध्यम पाठ 1 एवं 2

Economics -

1. Prepare for Unit test Chapter - 1 to 9 of Statistics.
2. Conduct a survey with the help of a questionnaire about consumer awareness in your locality. Survey should be conducted on 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.

Psychology

Revise chapter 1 & 2 for unit test.
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 like the 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.

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) Fibbonacci 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, At least five Real Life Applications Different from your book, Conclusion)

Elective Maths

Revise Chapter 1,2,3 and 4 for unit test.

Sets

1. If A={ x : x∈N, x≤6} and B= {x : x∈N, $2<x^2<26$}, then A ∩ B is equal to :

  [a] {3,4,5,6}   [b]{3,4,5}   [c] {2,3,4,5}   [d] {4,5,6,7,}

4

2. The set builder form of A = {2,7,12,17,22}

   [a] A={ 5n-3, n∈N, n≤5}   [b] A={ 27-5n, n∈N, n<5}

   [c] A={ 5n-3, n∈N, n<5}   [d] A={ 27-5n, n∈N, n≥5}

3. The set builder form of A = {-12, -7,-2,3,8,13}

   [a] A={ 5n-17, n∈N, n≤6}   [b] A={ 17-5n, n∈N, n<6}

   [c] A={ 18-5n, n∈N, n<6}   [d] A={ 18-5n, n∈N, n≥6}

4. In a class of 50 students, 30 students like Maths, 25 like Bio and 16 like both

   Maths and Bio. Find the number of students who like neither Maths nor Bio.

   [a] 12   [b] 10   [c]11   [d] 13

5. 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∩C)∪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}

6. 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'UB) 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}

7. If A={2,3,4,5,6}, then the number of proper subsets of A is :

  [a] 120   [b] 30   **[c] 31**   [d] 32

8. 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.

9. 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.

10. 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

1. The value of a and b if (3a,4) and (2b,-1) belong to the set {(x,y) : x-5y=13}

   [a] a=11, b=4   [b] a=5 b=11   [c] a=11,b=5   [d] a=4, b=11

2. If f(x) =$2x^2$-5x -3, then the value of f{f(2)} is

   [a] 18   [b] 22   [c] 72   [d] -72

3. Find the domain of : f(x) = 7x / (x^2-2x-24)

   [a] {-4,6}   [b] R- {-4,6}   [c] R- (-4,6)   [d] R- {-4,6)

4. If A={x: x^2-10x+21=0} ; , B={8,10} ; C={7,10}then AX(B∩C)

   [a] (10,3), (10,7)   [b] (6,7), (2,9)   [c] (7,10),(3,10)   [d] (2,10),(2,10)

5. Let A={2,3,8}, B={2,3,5}, C={2,5,8,9} then (A-B)X(B-C) is

   [a] {(1,2),(1,5),(2,5)}   [b]{(1,4)}   [c] {(4,5)}   [d] {8,3}

6. Find the range of : y= (2x+3)/ (3x+4)

   [a] R- {-3/2}   [b] R- {2/3}   [c] R- {-2/3}   [d] R- {3/2}

7. Find the domain of : $f(x) = (x^2-x-3/ (2x^2+11x+9)$

[a] {1,9/2}   [b] R- { -9/2}   [c] R- {-1,-9/2}   [d] R- {-9/2,1)

8. Let A={1,2,3,4,5,6,7,8,9,10}. Define a relation R from A to A by R={(x,y) : y=2x+1}. The range of R is

[a] {1,2,3,4,5,6,7,8,9}   [b] {1,2,3,4,5}

[c] {3,4,5,6,7,8}   **[d] {3,5,7,9,11}**

[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.

9. Asssertion : 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.

10. 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

1. If x=3+2i and y=3-2i, find the value of $5(x^2+y^2)+7(x+y)+8xy$.

   [a] 196   [b] 225   [c] 265   [d] 256

2. If $(5x -8) - (7y+2)i = 17 - 44i$, then the value of $x + y$:

   [a] 11   [b] 4   [c] -4   [d] 8

3. The value of $(4i^6 +14i^{11} +14i^{12} +16i^{17})$

   [a]10 + 6i   [b] 10 - 6i   [c] 10 +2i   [d] 10 – 2i

4. The value of (2+8i) / (1+i)

   [a](3+4i)   [b] (5+3i)   [c] (5-6i)   [d] (3-2i)

5. The number $\frac{(1+i)^3}{1-i^5}$ is equal to :

   [a]i   [b] –i   [c] -1   [d]-2

6. If $x -iy=\frac{(1+3i)^2}{2+i}$, then the value $(x + y)$ are :

   [a] 2   [b] -2   [c] 6   [d] -6

7. If $x +iy=\frac{(2+i)(1-3i)}{(1+2i)(3+i)}$, 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

8. 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.

9. 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.

10. 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 sin(3735°)

  [a] Sin45°   [b] -Sin45°   [c] Sin60°   [d] Sin30°

2. The value of cos(1770°)

  [a] cos45°   [b] -cos45°   [c] cos60°   [d] cos30°

3. The value of cos(1680°) + sin(1290°)

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

4. If cosA=-20/29, A lies in second quadrant, then the value of (1+cosecA)

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

5. If sinA=-5/13, A lies in 4th quadrant, then the value of (secA- tanA)

  [a] 18/5   [b] 17/5   [c] 3/2   [d] -3/2

6. If A lies in II quadrant and 3tanA+4=0, then the value of (2cotA-5cosA+sinA) is

  [a] -53//10   [b] -7/10   [c] 7/10   [d] 23/10

7. If $x \sin135°\cos^2 120° = \dfrac{\tan^2 120° \, \csc 150°}{\cot^2 30° \, \sec^2 135°}$, then x is :

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

8. Evaluate : cosA +sin(270°+A) –sin(270°-A) + cos(180°+A)

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

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

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

10. The value of $\dfrac{\cos(\pi+x)\cos(-x)}{\sin(\pi-x)\cos\left(\frac{\pi}{2}+x\right)}$ is equal to :

  [a] $1-\cot^2 A$ [b] $\cot^2 A-1$ [c] $1-\csc^2 A$ [d] $\csc^2 A-1$

11. The value of $3\cos^2\frac{\pi}{4}+\sec\frac{2\pi}{3} + 5\tan^2\frac{\pi}{3}$ is

  [a] 29/3   [b] 29/4   [c] 29/2   [d] 29/5

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

  [a] 0   [b] -1   [c] 1   [d] ½

13. If cosA=4/5, $0 < A < \frac{\pi}{2}$, and sinB= -5/13, $\pi < A < \frac{3\pi}{2}$, then the value of cos(A-B)

  [a] 33/65   [b] -33/65   [c] -63/65   [d] 63/65

14. If x= secA-tanA and y= cosecA + cotA, then the value of x –y +1 +xy is

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

15. 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

16. If sinA=1/2, then the value of sin3A is :

  [a] ½   [b] 1/3   [c] 0   [d] 1

17. The value of cos68° + cos52°-cos8° is :

  [a]2   [b] 3   [c] 0   [d] 1

18. If cos(A-B) = 3 cos(A+B), then cotA.CotB is equal to

  [a] 1   [b] 2   [c] 3   [d] -2

[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.

19. Assertion : Tan8A- tan6A +tan2A = Tan8ATan6ATan2A

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

20. 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 $\tan x = \dfrac{-1}{2}$ and $\csc x = \dfrac{3}{2}$ then in which quadrant they lie.

[ii] The value of $2\sin^2 x$ is equal to :

[iii] If $\cot x = -1/\sqrt{3}$ and x lies in 2nd quadrant the value of $(1+\sec x)$

[iv] The degree measures of $\left(\dfrac{8\pi}{9}\right)^c$ is :

[v] The value of cot75°

Activities

1. Draw the graph of the function $f(x) = \begin{cases} 3-x, & \text{if } x > 1 \\ 1, & \text{if } x = 1 \\ 2x, & \text{if } x < 1 \end{cases}$

2. Represent the given complex number on Arganda plane : $\dfrac{2+i}{(1+i)(1-2i)}$

3. Draw the graph of cosx such that the value of x lies between -180° to 180°