CLASS-XII Sci.

BANASTHALI PUBLIC SCHOOL
Holiday Home Work, SESSION 2019-20
☺ ☺ ***Let us start with a smile*** ☺ ☺

Subj.	TOPIC
English	**1. Literature: (a) Flamingo** : **(i)** Read all the lessons of Ist Term. **(ii)** Revise Ques. Ans. of Ch. 1, 2, 3 and Poem 1, 2. **(b) Vistas: (i)** Read all the lessons of Ist Term. **(ii)** Revise Ques. Ans. of Ch. 1, 2, 4. **(c)** Prepare a chart of writers and poets of all the chapters of Flamingo and Vistas and learn it. **(d)** Watch all the writing skills videos on You tube - Article, Debate, Report, Speech, Note Making, Letter Writing, Advertisements (Classifieds and Commercial), Poster, Invitations and replies. **(e)** Solve CBSE question paper, section A & B in your Writing Skill Register. **II Reading: Reading:** Test Assignment 7 to 15. **Note Making:** Test Assignment 16 to 21. **Notice Writing:** Test Assignment 4. **Poster Making:** Test Assignment 5, 6. **Letter Writing:** Test Assignment 10 to 14. **Speech Writing:** Test Assignment 34. **Debate Writing:** Test Assignment 39. **Report Writing:** Test Assignment 10.
Phy. Edu.	**Practical -1.** Modified **AAHPERD** administration for all items. **Practical -2.** Conduct Barrow three items test on 10 Student. **Do all the following questions in class register:** **Q1.** Write the differences between intra-murals and extra-murals. **Q2.** What do you mean by knock-out tournament? Draw the fixtures of 21 teams on knockout basis. **Q3.** What are the nutritive and non-nutritive components of diet? Explain. **Q4.** What do you mean by "Healthy weight" Explain the methods to control healthy body weight to lead healthy living.
Hindi	• परियोजना कार्य। सभी कार्य गृहकार्य कॉपी में करें। 1. आरोह (काव्य खंड) पाठ 1–3 पुनरावर्तन करें तथा सभी कविताओं के प्रतिपाद्य याद करके लिखें। 2. आरोह (गद्य खंड) पाठ 1–3 पुनरावर्तन करें तथा निम्नलिखित प्रश्नों के उत्तर दें :– **(क)** मॉल की संस्कृति और सामान्य बाजार तथा हाट की संस्कृति में अंतर स्पष्ट करें। **(ख)** बाजारूपन से क्या तात्पर्य है? आप इससे कैसे बच सकते हैं ? **(ग)** निबन्ध लिखे : - **(1) ''विज्ञापन की दुनियाँ'' (2)** "**मज़हब नहीं सखाता आपस में बैर रखना**" **3** पत्र: **क)** दैनिक समाचार पत्र के संपादक को पत्र :–राजनीति में होने वाले परिवर्तनों पर प्रतिक्रिया व्यक्त करते हुए। **ख)** शिमला यात्रा या अन्य किसी पर्वतीय स्थल की यात्रा के कार्यक्रम की सूचना देते हुए मित्र को पत्र। **4**. अभिव्यक्ति और माध्यम – पाठ–1 के सभी संक्षिप्त प्रश्नोत्तर याद करें।
Chemistry	• Make a Model on given topic? • Make a project on given topic? **Answer the following questions in class register: -** **Q1.** Define, solution, Molarity? **Q2.** Calculate the mass percentage of all the elements present in $MgSO_4$? **Q3.** Calculate number of moles of 5 g of NaOH. **Q4.** Calculate molarity of 25% solution of salt in 400 ml of H_2O. **Q5.** Calculate molarity and mole fraction of 30% solution of urea in water (Mm of Urea = 60 gmole). **Q6.** Define electrochemical series. **Q7.** How does dilution effects conductivity? **Q8.** What do you mean by limiting molar conductivity?

Physics

- Make a working model on given topic?
- Make a project on given topics?

Answer the following questions in class register: -

Q1. Solve all numerical of L-1, 2, 3 from NCERT exercise.

Q2. The following material are cooled down. How will it affect their conductivity?

(a) Copper **(b)** Silicon **(c)** Mercury

Q3. The resistance of copper wire at 27^0C was found to be 100Ω and at 127^0C was found to be 105Ω. Find the temperature coefficient of resistance?

Q4. The voltage across a wire is increased by 10%. What is the % change in its :

(a) Current **(b)** Resistance **(c)** Power.

Q5. A proton and an α particle are accelerated by the same potential difference. Find the ration of their kinetic energy.

Q6. A drop of radius R breaks into n small drops. How does it affect its potential and capacitance?

Q7. Give proper reasoning for the following:-

(a) The electron drift speed is estimated to be only a few mm/sec for currents in the range of a few amperes? How then is current established almost the instant a circuit is closed?

(b) If the drift speed is so small and the electron's charge is small and can we still obtain large amounts of current in a conductor?

(c) A low voltage supply from which one needs high currents must have very low internal resistance. Why?

Biology

- Make a project on a given topic.
- Make a model on a given topic. (in a group of Four students)

Answer the following questions in class register: -

Q1. Describe in sequence the events that leads to the development of a 3 celled pollen grain from microspore.

Q2. List any four characteristics of an ideal contraceptive.

Q3. Name two intrauterine devices that affect the motility of sperm.

Q4. Draw a diagram of Female Reproduction system and describe it.

Q5. .**i)** How and where the placenta form?

ii) Name the Hormones secretarial by it.

Q6. Explain the process of replication of retrovirus after gain entry in the human body.

Q7. Describe the asexual & sexual phases of the life cycle of plasmodium that causes malaria.

Q8. Define totipoteney of a cell.

Q9. Write the given expt. in lab manual.

Computer Science

Note: Do all given work in class register:

Q1. Define a class ITEM in C++ with following :

Private members:

a. Code of type integer (item code) Iname of type string (Item name)
b. Price of type float Qty of type integer (quantity)
c. Offer of type float (percentage discount if offered)
d. A member function GetOffer() to calculate offer as follows :

Qty	Offer
<=50	0
50<&&<=100	5
>100	10

Public members: **(a)** A function getstock() to input information from user and invoke GetOffer()
(b) A function showitem() to output content of all data members.

Q2. Define a class HOTEL in C++ with following :

Private members:

a. Rno of type integer (Room no) Name of type string (Customer name)
b. Tariff of type float (charges per day) NOD of type integer (no. of days of stay)
c. A member function CALC() to calculate and return amount as NOD*Tariff and if the value of NOD*Tariff is more than 10,000 then as 1.05*NOD*Tariff

Public members:

a. A function Checkin() to input information from user and invoke CALC()
b. A function Checkout() to output content of all data members.

Q3. (a) Write the names of the header files which are not necessary to execute the following C++ code.

```
#include<iostream.h> #include<stdio.h> #include<string.h> #include<ctype.h> #include<math.h>
void main()
        { char c, String[ ] = " System Design ";
        for(int i=0; String[i]!='\0' ;i++)
        if (isdigit(String[i]) cout<<endl;
        else {c=toupper(String[i]);cout<<c;}}
```

(b) Rewrite the corrected code for the following program, underline each correction (if any) :

```
#include<iostream.h>
void main() { int a[10];
        a=[3,2,5,4,7,12,14];
        for(p = 0;p<=6 ;p++)
       { if(a[p]%2=0) int s=s+a[p]; } cout<<s;
```

(c) Find the output of the following program, assuming that all required header files have been included:

```
void change(int x[4], int i) { x[I] = x[I] * i;    }
void main() {
        int x[] = {11, 21, 31, 41};
        for(int i =0;i<4;i++) { change(x, i); cout<<x[i]<<"\n"; } }
```

Q4. Consider the following class definitions and answer the questions following it :

```
class Base {      int A1;          void BF1( );
   protected :    int B1;          void BF2( );
   public:        int C1;          void BF3 ( );
} ob1;
class Middle : private Base {      int A2;
    protected :       int B2;      void MF1( );
    public:           int C2;     void MF3;
} ob2;
class Derived : protected Middle {
  void DF1;    int A3;
public:    int B3;    void DF2( );
} ob3;
```

(i) Name the member functions accessible to the objects of Derived.
(ii) Name the members that are accessible in function DF1( ).
(iii) What would be the size of class derived objects ?
(iv) Name the data members that are accessible in object of class middle( ).

Do Q1. and Q2 from CBSE sample papers given in your book.

Maths

Note: Do all given work in assignment register:

Q1. (a) Find values of x and y , $\begin{bmatrix} 3x+7 & 5 \\ y+1 & 2-3x \end{bmatrix} = \begin{bmatrix} 0 & y-2 \\ 8 & 4 \end{bmatrix}$

(b) If A = $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 1 \end{bmatrix}$, B = $\begin{bmatrix} 3 & -1 & 3 \\ -1 & 0 & 2 \end{bmatrix}$, find 2A –B.

(c) Express as the sum of symmetric and skew symmetric , A= $\begin{bmatrix} 3 & 5 \\ 1 & -1 \end{bmatrix}$

(d) Find the area of triangle using determinant with vertices (1,0) ,(6,0) , (4,3)

Q2. If A=$\begin{bmatrix} 3 & -5 \\ -4 & 2 \end{bmatrix}$, show that A^2-5A+14 I = 0, hence find A^{-1}.

Q3. If A= $\begin{bmatrix} 1 & -1 & 2 \\ 0 & 2 & -3 \\ 3 & -2 & 4 \end{bmatrix}$, Find A^{-1}using ERT

Q4. Using matrix ,solve the following system of linear equations x+ 2y- 3z =- 4 ,2x +3y +2z =2 , 3x-3y-4z=11 .

Q5. If A= $\begin{bmatrix} 2 & -1 \\ 3 & 4 \end{bmatrix}$, B = $\begin{bmatrix} 5 & 2 \\ 7 & 4 \end{bmatrix}$,C= $\begin{bmatrix} 2 & 5 \\ 3 & 8 \end{bmatrix}$ find a matrix D such that CD-AB =O

Q6. Verify that A (adj A) = (adj A). A = A I , A=$\begin{bmatrix} 2 & 3 \\ -4 & -6 \end{bmatrix}$

Q7. Let A= $\begin{bmatrix} 0 & 1 \\ 0 & 0 \end{bmatrix}$, Show that $(aI+bA)^n = a^n$ I+na^{n-1}bA ,where I is the identity matrix.

Q8. If A= $\begin{bmatrix} 0 & 6 & 7 \\ -6 & 0 & 8 \\ 7 & -8 & 0 \end{bmatrix}$, B =$\begin{bmatrix} 0 & 1 & 1 \\ 1 & 0 & 2 \\ 1 & 2 & 0 \end{bmatrix}$ and C=$\begin{bmatrix} 2 \\ -2 \\ 3 \end{bmatrix}$ verify $(A+B)$ C =AC+BC.

Q9. a. Find x, if $\begin{bmatrix} 3 & 4 \\ 2 & x \end{bmatrix} \begin{bmatrix} x \\ 1 \end{bmatrix} = \begin{bmatrix} 19 \\ 15 \end{bmatrix}$ **b.** Evaluate $\begin{vmatrix} a+ib & c+id \\ -c+id & a-ib \end{vmatrix}$

c. Find value of K , if area of triangle is 4 square unit , when its vertices are (k,o) , (4,0) , (0,2)

Q10. Express the following matrix as the sum of symmetric and skew symmetric matrix $\begin{bmatrix} 3 & 2 & 5 \\ 4 & 1 & 3 \\ 0 & 6 & 7 \end{bmatrix}$

Q11. Find a matrix A such that $\begin{bmatrix} 2 & -1 \\ 1 & 0 \\ 3 & 4 \end{bmatrix}$A= $\begin{bmatrix} -1 & -8 \\ 1 & -2 \\ 9 & 22 \end{bmatrix}$

Q12. Using properties of determinants prove that: $\begin{bmatrix} x & x^2 & 1+px^2 \\ y & y^2 & 1+py^2 \\ z & z^2 & 1+pz^2 \end{bmatrix}$ = (1+pxyz) (x-y) (y-z) (z-x) .

Q13. Find A^2 -5A + 6 I = 0 , if A= $\begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$

Q14. Using ERT find universe of matrix $\begin{bmatrix} 2 & -1 & 4 \\ 4 & 0 & 2 \\ 3 & -2 & 7 \end{bmatrix}$

Q15. Using matrix solve the following system of linear equation x+y+z=6 , x+2z=7 , 3x+y+z=12.

Q16. Using properties of determinants prove that

$$\begin{vmatrix} a+b+2c & a & b \\ c & b+c+2a & b \\ c & a & c+a+2b \end{vmatrix} = 2(a+b+c)^3$$

Q17. Using properties of determinant, prove that $\begin{vmatrix} b+c & a-b & a \\ c+a & b-c & b \\ a+b & c-a & c \end{vmatrix}$ = 3abc-a^3 – b^3 – c^3

Q18. Solve the following system of equation using matrix method: 2x-3y+5z=11, $3x+2y-4z=-5$, $x+y-2z=-3$.

Q19. Determine the product $\begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix} \begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$ and use it to solve the system of equation

x-y+z=4 , x-2y-2z=9 and 2x+y+3z=1

"Wish you a happy and enjoyable Holidays"