

DTEA SR. SEC SCHOOL, LAXMI BAI NAGAR

Class XII (2017-18)

Holiday Homework

ENGLISH

ANSWER THE FOLLOWING QUESTIONS:-

1. P.K. International School is looking for a receptionist for the school. Write an advertisement on behalf of

the administrative officer in the classified columns of the local newspaper giving necessary details. Draft the advertisement in not more than 50 words.

2. Suman / Suresh has topped the CBSE 12th Board examination. The family is elated at the achievement and

they decide to have a get-together for all friends. Draft an informal invitation for the get-together.

3. You are the President of your school Cultural club. Your club is organizing a programme to help the victims of an earthquake. Design a poster informing the students about this play.

4. The students' council of your school has organized an excursion to Goa for students of class XII during the

summer vacation. As President of the council, write a notice in not more than fifty words informing the students about this excursion. Sign yourself as Ravi / Raveena.

5. You have been asked to participate in a debate competition on the topic "Community service once a week should be introduced in all schools and should be graded". Write the speech in about 200 words either for or against the motion.

6. You are Nitin / Natasha a student of class XII at K.P.N. Public School, Faridabad. The student is required to

cope with lot of pressure in today's competitive environment. Write a letter to the editor of a national daily highlighting the increasing stress faced by students and suggest ways to combat the same.

7. You are Suresh / Sumita. You come across the following advertisement in a national daily. You consider

yourself suitable and eligible for the post. Write an application in response to the advertisement.

Applications are invited for the post of a Nursery teacher in a reputed school of Delhi. The candidate must have at least 5 years' experience of teaching tiny - tots. The applicant must have a pleasant personality. He / she should be creative and innovative. Attractive salary. Interested candidates should apply to The Principal, AKS International, Indirapuram, Newdelhi within 10 days with detailed resume.

8. some colleges conduct entrance test for admission to under-graduate courses like English (Hons.) and

Journalism (Hons.). Do you think the entrance test is the right method of selecting students? Write an article in

about 150-200 words. You are Rohan / Rachita, a student of class XII at A.P.International School, Agra.

9. you are Rahul, the Headboy of Creative Public School, Delhi. Recently your school hosted the Regional Level CBSE Science Exhibition. Write a report of this event for your school newsletter in about 120 words.

10. You are Suraj/Sandhya of Gargi Senior Secondary School Delhi. Games and Sports should be made compulsory in schools. Write a speech for morning assembly on the Importance of Games and Sports in Personalit y Development in about 150 -200 words.

Read the novel ' INVISIBLEMAN' Chapters 1 – 14.

MATHS

1mark

1. Using elementary transformations find the inverse of each:

(1) $\begin{bmatrix} 2 & 5 \\ 1 & 3 \end{bmatrix}$ (2) $\begin{bmatrix} 2 & 3 \\ 5 & 7 \end{bmatrix}$ (3) $\begin{bmatrix} 3 & 1 \\ 2 & 7 \end{bmatrix}$ (4) $\begin{bmatrix} 2 & -6 \\ 1 & -2 \end{bmatrix}$

2. Find the number of all possible matrices of order 2×3 with each entry 0,1 or 3.

3. Find two non- zero matrices A and B such that their product $AB=0$.

4. If $A = \begin{bmatrix} -2 \\ 4 \\ 5 \end{bmatrix}$ $B = [1 \quad 3 \quad -6]$ find $B'A'$.

5. Find the values of x and y from the following equation:

$$2 \begin{bmatrix} x & 5 \\ 7 & y - 3 \end{bmatrix} + \begin{bmatrix} 3 & -4 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 7 & 6 \\ 15 & 4 \end{bmatrix}.$$

6. If $A = \begin{bmatrix} 1 & 3 \\ 2 & 1 \\ 3 & -1 \end{bmatrix}$ $B = \begin{bmatrix} 2 & 1 \\ 1 & 2 \\ -1 & 0 \end{bmatrix}$ Find the matrix C such that $A+B+C=0$.

7. If $A = \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix}$ find A^2 .

8. Construct a 2×2 matrix $A = [a_{ij}]$ whose elements are given by $\frac{1}{2} |-3i + j|$.

9. Find the value of k for which the matrix $\begin{bmatrix} 1 & 2 & 3 \\ 4 & k & 6 \\ 7 & 8 & 9 \end{bmatrix}$ is singular.

10. Evaluate the determinant: $\begin{vmatrix} x^2 & -x+1 \\ x+1 & x+1 \end{vmatrix}$.

4 marks

11. If $f(x)=x^2-5x+6$ find $F(A)$ if $A=\begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$.

12. Express the matrix $\begin{bmatrix} -1 & 7 & 1 \\ 2 & 3 & 4 \\ 5 & 0 & 5 \end{bmatrix}$ as a sum of a symmetric and a skew-symmetric matrices.

13. Find X and Y such that $2X + Y = \begin{bmatrix} 4 & 4 & 7 \\ 7 & 3 & 4 \end{bmatrix}$

$$X - 2Y = \begin{bmatrix} -3 & 2 & 1 \\ 1 & -1 & 2 \end{bmatrix}$$

14. If $A=\begin{bmatrix} 3 & 2 & 0 \\ 1 & 4 & 0 \\ 0 & 0 & 5 \end{bmatrix}$ show that $A^2 - 7A + 10I = 0$.

15. If $A=\begin{bmatrix} -2 \\ 4 \\ 5 \end{bmatrix}$ $B=\begin{bmatrix} 1 & 3 & -6 \end{bmatrix}$ show that $(AB)' = B' \cdot A'$.

16. Solve the equation: $\begin{vmatrix} 2x-8 & 3 & 3 \\ 3 & 3x-8 & 3 \\ 3 & 3 & 3x-8 \end{vmatrix} = 0$.

17. Prove that $\begin{vmatrix} a^2+1 & ab & ac \\ ab & b^2+1 & bc \\ ac & bc & c^2+1 \end{vmatrix} = 1 + a^2 + b^2 + c^2$

18. Find the matrix X such that, $\begin{bmatrix} 1 & -4 \\ 3 & -2 \end{bmatrix} X = \begin{bmatrix} -16 & -6 \\ 7 & 2 \end{bmatrix}$.

19. Using properties of determinants prove the following:

a) $\begin{vmatrix} -a^2 & ab & ac \\ ba & -b^2 & bc \\ ca & cb & -c^2 \end{vmatrix} = 4a^2b^2c^2$

b) $\begin{vmatrix} x+4 & 2x & 2x \\ 2x & x+4 & 2x \\ 2x & 2x & x+4 \end{vmatrix} = (5x+4)(4-x)^2$

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

20. Find the area of the triangle whose vertices are $(-2, -3)$, $(3, 2)$ and $(-1, -8)$.
21. Find the equation of the line joining the points $(2, 3)$ and $(-1, 2)$ using determinant.
22. Find the value of λ so that the points $(1, -5)$, $(-4, 5)$ and $(\lambda, 7)$ are collinear.

6 marks

23. Solve using matrix method:

$$1) 12x - y + 3z = 5$$

$$3x + 2y - z = 7$$

$$4x + 5y - 5z = 9$$

24. If $A = \begin{bmatrix} 1 & -1 & 1 \\ 2 & 1 & -3 \\ 1 & 1 & 1 \end{bmatrix}$ find A^{-1} and hence solve the following equations:

$$x + 2y + z = 4$$

$$x + y + z = 0$$

$$x - 3y + z = 0$$

25. Given $A = \begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix}$ find AB and hence solve the following equations: $x - y + z = 4$

$$x - 2y - 2z = 9$$

$$2x + y + 2z = 1$$

26. By using elementary transformations, find the inverse of the matrix:

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

27. Find the value of x if $\begin{bmatrix} 1 & x & 1 \end{bmatrix} \begin{bmatrix} 1 & 3 & 2 \\ 2 & 5 & 1 \\ 15 & 3 & 2 \end{bmatrix} \begin{bmatrix} 1 \\ 2 \\ x \end{bmatrix} = 0$

28. Using properties of determinants, prove:

$$\begin{vmatrix} x & x^2 & 1 + px^3 \\ y & y^2 & 1 + py^3 \\ z & z^2 & 1 + pz^3 \end{vmatrix} = (1 + pxyz)(x - y)(y - z)(z - x)$$

29. If $A = \begin{bmatrix} 2 & 3 \\ 1 & -4 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & -2 \\ -1 & 3 \end{bmatrix}$ show that $(AB)^{-1} = B^{-1}A^{-1}$

30. If $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$ then show that $A^2 - 5A + 7I = 0$ and hence find A^{-1} .

31. If $f(x)=x+7$ and $g(x)=x-7, x \in R$ find $f \circ g(7)$

32. The binary operation $*$ on the set of integers Z is defined by $a*b = a+3b^2$ then find the value of $2*4$

33. What is the range of the function $f(x) = \frac{|x-1|}{x-1}, x \neq 1$

34. If f is an invertible function defined as $f(x) = \frac{3x-4}{5}$ write $f^{-1}(x)$

35. Let $R = \{(a, a^3) : a \text{ is a prime number } < 5\}$ be a relation. Find the range of R .

36. Show that the relation R defined by $(a, b) R (c, d) \Rightarrow a + d = b + c$ on the set $N \times N$ is an equivalence relation.

37. Let $A = R - \{3\}$ and $B = R - \{1\}$ consider the $f : A \rightarrow B$ defined by $f(x) = \frac{x-2}{x-3}$. Show that f is one - one and onto and hence find f^{-1} .

38. Let $f : N \rightarrow N$ be a function defined as $f(x) = 4x^2 + 12x + 15$. Show that $f : N \rightarrow S$ is invertible (where S is range of f) Find the inverse of f and hence find $f^{-1}(31)$ and $f^{-1}(87)$.

39. Let $A = Q \times Q$ where Q is the set of all rational numbers and $*$ be a binary operation defined on A by $(a,b) * (c,d) = (ac, b+ad)$ for all $(a,b), (c,d) \in A$ Find (1) the identity element in A (2) the invertible element of A .

40. Find x if $[1 \ x \ 1] \begin{bmatrix} 1 & 3 & 2 \\ 2 & 5 & 1 \\ 15 & 3 & 2 \end{bmatrix} \begin{bmatrix} 1 \\ 2 \\ x \end{bmatrix} = 0$

PHYSICS

1. Do all the assigned investigatory projects.
2. Complete the record files and activities.
3. Answer the following questions from Electrostatics and Current Electricity.

1. Three identical charges each $+q$ are placed at the corners of an equilateral triangle of side d cm. Calculate the force on a $+ve$ charge $+2q$ at the centroid of the triangle.

2. A point charge placed at any point on the axis of an electric dipole at some large distance experiences a force F . Find the force acting on the point charge when its distance from the dipole is quadrupled.

3. N identical spherical drops charged to the same potential ' V ' is combined to form a big drop. Find the potential of the new big drop formed.

4. An electron is projected with an initial speed of 25×10^5 m/s directly towards a proton which is at rest. Initially the electron is supposed to be at a fairly large distance from the proton. Find the distance of the electron from the proton when its instantaneous speed becomes twice the initial speed.

5. Two conducting spheres one of radius 6 cm and the other of radius 12 cm each carrying 3×10^{-8} C are placed very far apart. If these spheres are connected by a conducting wire, find the direction of motion and the magnitude of charge transferred.

6. Can a metal sphere of radius 1 cm hold a charge of 1 coulomb? Justify your answer.

7. When two capacitors are connected in series, the effective capacitance is $2.4 \mu F$ and when connected in parallel, the effective capacitance is $10 \mu F$.

Calculate the individual capacitances

8. You are given three capacitors of value $2\mu\text{F}$, $3\mu\text{F}$, $6\mu\text{F}$. How will you connect them to a resultant capacity of $4\mu\text{F}$?

9. An inflated balloon is charged by rubbing with fur. Will it stick readily to a conducting wall or to an insulating wall? Give reason.

10. An electron moves a distance of 6cm when accelerated from rest by an electric field of strength $2 \times 10^{-4} \text{ N/C}$. Calculate the time of travel. Given $m_e = 9 \times 10^{-31} \text{ kg}$, $e = 1.6 \times 10^{-19} \text{ C}$.

11. Is the capacitance of a capacitor proportional to the charge Q ? Sketch a graph to show how the capacitance C of a capacitor varies with the charge Q given to it.

12. In a hydrogen atom, an electron moves in an orbit of radius $4.8 \times 10^{-11} \text{ m}$ with a speed of $2.5 \times 10^6 \text{ m/s}$. Find the equivalent current.

13. One metre long metallic wire is broken into two equal parts P and Q . The part ' P ' is uniformly extended into another wire R . Length of R is twice the length of P and the resistance of R is equal to that of Q . Find the ratio of the resistances of P and R and also the ratio of lengths of P and Q .

14. The area of cross section, length and density of a piece of a metal of atomic weight 60 are 10^{-6} m^2 , 1.0 m and $5 \times 10^3 \text{ kg/m}^3$ respectively. Find the number of free electrons per unit volume of every atom that contributes one free electron. Also find the drift velocity of electron in the metal when a current of 16 A passes through it. Avogadro no. = 6×10^{23} per gram per mole.

15. The length and radii of 3 wires of same metal are in the ratios $2:3:4$ and $3:4:5$ respectively. They are joined in parallel and included in a circuit having 5 A current. Find the current in each case.

16. An electric bulb rated for 500 Watt at 100 V is used in circuit having a 200 V supply. Calculate the resistance R that must be put in series with the bulb so that the bulb delivers 500 watt .

17. A potentiometer wire of length 100 cm has a resistance of 100Ω , connected in series with a resistance and a battery of emf 2 V and of negligible internal resistance. A source of emf 10 mV is balanced against a length of 40 cm of the potentiometer. What is the value of the external resistance?

18. Two wires A and B of the same material and having same length have their cross sectional area in the ratio $1:4$. What would be the ratio of heat produced in these wires when same voltage is applied across each?

19. Two wires of the same material having lengths in the ratio $1:2$ and diameters in the ratio $2:3$ are connected in series with an accumulator. Compute the ratio of p.d across the two wires.

20. Observations on a given device yielded the following current – voltage data.

Current (A) Voltage(V)

1	19.7
2	39.4
3	59.1
4	78.8

5 98.5

Draw V-I graph using this data. What conclusion can you draw from the graph with regard to ohmic or non-ohmic nature of device?

CHEMISTRY

I. Investigatory Project

Prepare an investigatory project of chemistry which should be experiment based. It should be a research based project where every aspect of the topic selected should be discussed in terms of chemistry. The project should have the following key aspects:

- ☐ Certificate
- ☐ Acknowledgement
- ☐ Why this was selected? (related to daily life)
- ☐ Introduction
- ☐ Details of the project (research related to the topic)
- ☐ Experiment (detailed manner including procedure)
- ☐ Observations
- ☐ Analysis
- ☐ Result
- ☐ Bibliography (mention the links)

II. Complete the assignment and back exercise questions of the chapters 1-3.

III. Define F - centers.

What type of stoichiometric defect is shown by

ZnS

AgBr

What are the differences between Frenkel and Schottky defect?

Define the following terms with suitable examples

Ferromagnetism

Paramagnetism

Ferrimagnetism

12-16 and 13-15 compounds

In terms of band theory what is the difference

Between conductor and an insulator

Between a conductor and a semi-conductor

IV. A cubic solid is made of two elements X and Y. Atom Y are at the corners of the cube and X at the body centers. What is the formula of the compound?

Silver forms ccp lattice and X –ray studies of its crystal show that the edge length of its unit cell is 408.6 pm. Calculate the density of silver (Atomic wt= 107.9u).

A cubic solid is made up of two elements P and Q. Atoms of the Q are present at the corners of the cube and atoms of P at the body centre. What is the formula of the compound? What are the co-ordination number of P and Q.

V. What do you mean by Henry's Law? The Henry's Law constant for oxygen dissolved in water is

$4.34 \times 10^4 \text{ atm}$ at 25o C. If the partial pressure of oxygen in air is 0.2 atm, under atmospheric pressure conditions. Calculate the concentration in moles per Litre of dissolved oxygen in water in equilibrium with water air at 25o C.

Value based questions:

We have many types of water purifiers. Zero-B is based on disinfecting properties of iodine. UV purifier is based on killing of bacteria by UV light. These R.O. Purifiers are being used

What is the full form of R.O. Purifier?

What is the function of Porous membrane ?

Which method of purification is more economical for countries using sea water, flash distillation or reverse osmosis for getting portable water. Why?

Water is used as coolant in vehicles. In cars, ethylene glycol is used as coolant. In cold countries, water gets frozen so it cannot act as coolant. Ethylene glycol is added to water so that its freezing point is lower and it does not freeze. At hill station snow fall takes place. Clearing the snow from the road is essential for smooth running of traffic-

What is the role of ethylene glycol when added to water?

Why does sprinkling of salt help in clearing snow covered roads in hilly areas? Explain the phenomenon involved in the process.

How is life of people affected by snow fall?

VI. For the standard cell $\text{Cu(s)}/\text{Cu}^{2+}(\text{aq}) \parallel \text{Ag}^{+}(\text{aq})/\text{Ag(s)}$

$E^{\circ} \text{Cu}^{2+}/\text{Cu} = +0.34 \text{ V}$

$E^{\circ} \text{Ag}^{+}/\text{Ag} = +0.80 \text{ V}$

Identify the cathode and the anode as the current is drawn from the cell.

Write the reaction taking place at the electrodes.

Calculate the standard cell potential.

VII. Make a project on Chapter No. 6 (General Principles & Process of Isolation of Elements).

BIOLOGY

1. Make a model which will fall into any one of the categories mentioned below:
 - a) Innovations
 - b) Health
 - c) Nutrition
 - d) Medicines
 - e) Food technology
2. Write the expanded forms of:
ZIFT,GIFT,ART,IUCD,PEN,AIDS,HIV,MTP,AI,MMC,LH,hcG,hPL,ICSI,IVF,MMR and IMR.
3. Prepare for periodical test on chapters 1,2,3,4 & 8.
4. Prepare a rough project on the biochemistry topics discussed in class.
5. Describe the lifecycle of Plasmodium with proper diagrams and labellings.
6. Write down the names of the causal organism and the symptoms of the following diseases:
 - a) Ascariasis
 - b) Filariasis
 - c) Typhoid
 - d) Amoebic dysentery
 - e) Ringworm
 - f) Malaria
 - g) Pneumonia
 - h) Common cold
7. Trace the events that occur during the menstrual cycle.
8. Differentiate between T cells and B cells. What are effector and memory cells?
9. Describe the process of gametogenesis in human beings with proper diagrams.
10. A flower of tomato plant following the process of sexual reproduction produce 240 viable seeds. Answer the following questions giving reasons:
 - a) What is the minimum number of pollen grains that must have been involved in the pollination of its pistil?
 - b) What would have been the minimum number of ovules present in the ovary?
 - c) How many megaspore mother cells were involved?
 - d) What is the minimum number of microspore mother cells involved in the above case?
 - e) How many male gametes were involved in this case?
11. Describe the progress of events after syngamy?
12. With a neat diagram explain the 7 celled, 8 nucleate nature of the female gametophyte.
13. A student on the school trip started sneezing and wheezing soon after reaching the hill station for no particular reason. On return to the plains, the symptoms disappeared. What is such a response called? How does the body produce it?
14. Why do some adolescents start taking drugs? How can the situation be avoided?
15. What is the basic principle of vaccination? How do vaccines prevent microbial infections?

COMPUTER SCIENCE

Q1. Find out the reserved keywords out of the following:

For, while, New, Istname, INT , case, include.

Q2. Which C++ header files(s) are essentially required to be included to run / execute the following C++ source

code ?

```
void main( )
{
    Char Text[ 50 ];
    Strcpy (Text, " CBSE");
    Puts(Text);
}
```

Q3. Rewrite the following program after removing the syntax error(s), if any.

Underline each correction.

Note : Assume all required header files are already being included in the program.

```
#include< iostream.h >
Void main( )
{
    One = 10, Two = 20 ;
    func (One ; Two ) ;
    func (Two) ;
}
Void fun (int a, int b = 20)
    a = a+ b ;
    Count<<a>>b ;
}
```

Q4. Find the output of the following program:

Note : Assume all the header files are already being included in the program.

```
#include<iostream.h >
Struct SPORT
{
    Int Score, Bonus;
};
Void Play(SPORT &S , int N=10)
}
Void main( )
{
    SPORT S = { 110, 50};
    Play ( S, 10 ) ;
    Cout<<S.Score<<" : "<<S.Bonus<<endl ;
    Play(S,15 ) ;
    Cout<<S.Score<<" : "<<S.Bonus<<endl ;
}
```

Q5. Write the output of the following program:

Note : Assume all the header files are already being included in the program.

```
#include<iostream.h >
Class Inc
{
    Private :
```

```

        Unsigned int count ;
Public :
    Inc ( )
    {
        Count = 0 ;
    }
    Void inc_count ( )
    {
        Count++ ;
    }
    Int get_Count ( )
    {
        return Count ;
    }
};
Void main ( )
{
    Inc C1, C2;
    Count<<"\tC1 = "<<C1.get_count( );
    Count<<"\tC2 = "<<C2.get_count( );
    C1.inc_count( );
    C2.inc_count( );
    Count<<"\tC1 = "<<C1.get_count ( );
    Count<<"\tC2 = "<<C1.get_count ( );
}

```

Q6. Differentiate between a data type struct and a data type class in C++.

Q7. Define a class Train in C++ with the following description:

Private members

- (i) A data member Trainnumber of type integer
- (ii) A member Destination of type string
- (iii) A data member Distance of type string
- (iv) A data member Fuel of type float
- (v) A member function CAL () to calculate the value of fuel as per the following criteria :

Distance	Fuel
<= 500	300
More than 500 && <= 1000	700
More than 1000	1500

Public members

- (i) A function INPUT () to allow user to enter values for Trainnumber, Destination, Distance and call function CAL () to calculate the quantity of fuel.
- (ii) A function DISPLAY () to allow user to view the content of all the data members.

Q8. Differentiate between call by value and call by reference. Give one example of each.

Q9. Which C++ header file(s) will be essentially required to be included to run/execute the following C++ code?

```

Void main ( )
{
    Char Info [ ] = "Indian Army " :
    For(int l=5; <strlen(Info) ; l++)
        Puts(Info);
}

```

Q10. Rewrite the following program after removing the syntactical errors (if any). Underline each correction.

Note : Assume all the header files are already being included in the program.

```

Include iostream.h
Main ( )
{
    Float x, y, z :
    Cout<<"Enter two numbers" ;
    Cin>>a>>b
    Cout<<"The numbers in reverse order are"<<b, a;
}

```

Q11. Find the output of the following program :

Note : Assume all the header files are already being included in the program.

```

#include<iostream.h>
Struct Play
{
    Char Arr [ 20 ]; int n ;
};
Void main ( 0
{
    Play P = { " Magic" , 500};
    P.Arr [ 4 ] = ' Q ' ;
    P.Arr [ 2] = ' L ' :
    P.n += 50;
    Cout<<P.Arr<<P.n<<endl ;
    Play R = P;
    R.n -= 120;
    Cout<<R.n<<endl ;
}

```

12. Write the MySQL Command to Create a table for CUSTOMER with follow specification :

Column Name	Data Type	Constraint
Cust_ID	INTEGER (4)	PRIMARY KEY
Cust_Name	VARCHAR (25)	NOT NULL
Cust_Address	VARCHAR (25)	
Pin_Code	BIGINT (10)	
Cust_Phone	BIGINT (10)	

13. Consider the following two tables :

Table Classes

S_No.	Class_Name
1	BCA
2	BSC
3	MSC

Table Subjects

S_No.	Sub_Name
1	ORACLE
2	JAVA
3	C ++

Give output of the following query :

```
SELECT CLASSES.CLASS_NAME, SUBJECTS.SUB_NAME
FROM CLASSES JOIN SUBJECTS
ON CLASSES.S_NO.=SUBJECTS.S_NO;
```

14. How will you drop a column from a table ?
15. Differentiate between NULL and NOTNULL.
16. What is a datatype ? Name some data types available in MySQL.
17. What do you mean by Cartesian product ?
18. What is a table alias?
19. What happens to the current transaction if a START TRANSACTION is executed ?
20. Which has "all-or-none" Property in database transaction ?
21. What is MySQL ? Discuss the components of MySQL.
22. What is a relation ? What is the different between a tuple and an attribute ?
23. What is the role of following command :
ALTER TABLE EMPLOYEE
DROP PRIMARY KEY ;
24. What happens when "ROLLBACK" Command is issued in a transaction process ?
25. Write two example of
(i) DML command
(ii) TCL command
26. What are the basic elements of MySQL ?
27. Write down the difference between table and column constraint.

ACCOUNTANCY

1. Why is it necessary to have a partnership deal?
2. List any two circumstances under which the fixed capital of partners may change.
3. X and Y are partners with the capital of rs.100,000 and 80,000 respectively. On 1st April 2013 and their profit sharing ratio is 2:1. Interest on capital is agreed at 12% p.a. Y is to be allowed an annual salary of rs.6000. The profit for the year ended 31st March 2014 amounted to rs.50,000. Manager is entitled to a commission of the profit. Prepare the profit and loss appropriation account and capital accounts.
4. A, B and C are partners in a firm. For 6 months ending 31st March 2007:
A drew regularly rs.15,000 in the beginning of every month. B drew regularly rs. 20,000 at the end of every month and C drew regularly rs. 25,000 in the middle of the every month.
Calculate interest on drawing @ 10%p.a. for 6 months ending 31st March 2007.
5. P, Q, R are partners sharing profits in the ratio of 2:1:1. Their capitals as on 1st April 2010 were rs.50,000, rs.30,000 and rs. 20,000 respectively. At the end of the year ending 31st March 2011 it was found out interest on capitals at 12% p.a. salaries to P rs.500 p.m. and R rs.1000 p.m. were not adjusted from the profits. Show adjusting entry to be made in the next year for above adjustments.
6. X, Y and Z are partners in a firm sharing profit and losses in the ratio of 5:3:2. Their fixed capitals are rs.200,000, rs.150,000, rs.125,000 respectively for the year ended 31st March 2014. Interest on capital was credited to them @8% instead of 10%.
Give adjusting journal entry.
7. S, T, W and X are partners sharing profit in the ratio of 4:3:2:1. X is given a guarantee that his share of profit in any given year would be rs.8000. Deficiency if any would be borne by other partners equally. The profit for the year ended 31st March 2014 mounted to rs.65,000. Pass necessary entries in the books of the firm.
8. A, B & C entered into a partnership on 1st April, 2011 with capitals of Rs. 80,000/-, Rs. 50,000/- and Rs. 40,000/- respectively. Each partner is entitled to interest on his capital @ 8% p.a. B is entitled to a salary of Rs. 8,000/-p.a. and C a salary of Rs. 6,000/-p.a. they decided to share profits and losses in the ratio of 5:3:2.
A guaranteed that the firm would earn a profit of Rs. 60,000/- before allowing interest of capital and partners salaries. The actual profit for the year ending 31st March, 2012 before interest and salaries amount to Rs. 56,000/-. Prepare Profit & Loss Appropriation A/c and the Partner's Capital Accounts.
9. Ashish, Manu and Naveen after completing their computer engineering decided to start the business of developing computer softwares. They entered into partnership for this purpose on 1st April, 2013. Identify any four values which according to you motivated them to form the partnership firm. (VALUE BASED QUESTION)
10. Singh and Gupta decided to start a partnership firm to manufacture low cost jute bags as plastic bags were creating many environmental problems. They contributed capitals of Rs.1,00,000/- and Rs. 50,000/- on 1st April 2012 for this. Singh expressed his willingness to admit Shakti as a partner without capital, who is specially abled but a very creative and intelligent friend of his. Gupta agreed to this.
Identify any two values which the firm wants to communicate to the society.(VALUE-BASED QUESTION).
11. Valuation of Goodwill – Average Profit Method:

Calculate Goodwill on the basis of two years' purchase of average profits of last six years. Profits are as follows:

Year	Rs.	Profit / Loss
1 st	60,000/-	Profit
2 nd	40,000/-	Loss
3 rd	30,000/-	Loss
4 th	1,00,000/-	Profit
5 th	1,70,000/-	Profit
6 th	2,20,000/-	Profit

12. The profits earned by a firm during the last four years were as follows:

Year ended 31 st March	Profits (Rs.)
2013	80,000/-
2014	1,00,000/-
2015	1,10,000/-
2016	1,50,000/-

Calculate the value of goodwill on the basis of three year's purchase of weighted average profits. Weights to be used are 1,2,3 and 4 respectively to the profits for 2013, 2014, 2015 and 2016.

13. A firm earned profits of Rs. 80,000/-, Rs.1,00,000/-, Rs.1,20,000/- and 1,80,000/- during 2010-11, 2011-12, 2012-13 and 2013-14 respectively. The firm has capital investment of Rs.5,00,000/-. A fair rate of return on investment is 15% p.a. Calculate goodwill of the firm based on three years' purchase of average super profits of last four years.
14. A,B and C are partners in a firm. Their capitals are |A Rs.2,50,000/-, B Rs.2,00,000/- and C Rs. 1,50,000/-. Their business earned average profits of Rs. 96,000/- and the normal rate of return in a similar business is 12 %. Ascertain the value of goodwill by capitalisation of average profits method.
15. A,B, and C are partners sharing profits equally. From 1st April 2008, they decided to share profits in the ratio of 3: 4: 5. On that date, Profit and Loss Account showed a credit balance of Rs. 90,000/- partners do not want to distribute the profit and Loss Account balance but perfect to record the change by an adjustment entry. You are required to give the adjusting entry.
16. P,Q and R are in partnership sharing profits and losses in the ratio of 5:4:3. On 31st March 2013, their balance sheet was as follows:-

Liabilities	Rs.	Assets	Rs.
Sundry Creditors	50,000	Cash at Bank	40,000
Outstanding Expenses	5,000	Sundry Debtors	2,10,000
General Reserve	75,000	Stock	3,00,000
Capital Accounts:		Furniture	60,000
P		Plant & Machinery	4,20,000
4,00,000			
Q			
3,00,000	9,00,000		
R			
2,00,000			
	10,30,000		10,30,000

It was decided that with effect from 1st April 2013, the profit sharing ratio will be 4:3:2. For this purpose the following revaluations were made:

- Furniture be taken at 80% of its value.
- Stock be appreciated by 20%
- Plant & Machinery be valued at Rs. 4,00,000/-
- Create provision for doubtful debts for Rs.10,000/- on debtors.

(v) Outstanding expenses be increased by Rs. 3,000/-

Partners agreed that altered values are not to be recorded in the books and they also do not want to distribute the general reserve.

You are required to post a single journal entry to give effect to the above. Also Prepare the revised Balance Sheet.

17. X, Y and Z are partners sharing profits in the ratio of 5 : 4 : 1. It is now agreed that they will share future profits in the ratio of 3 : 3 : 4. Goodwill is valued at Rs. 1,00,000/-. You are required to pass a single journal entry for the treatment of goodwill.
18. Manoj, Neeraj and Om are partners sharing profits in the firm sharing profits in the ratio of 3 : 3 : 2. Om has been the partners for the past five years. Manoj and Neeraj decided that the profit sharing ratio of the partners be made equal and that assets shall not be revalued although the market value is higher than the book value. Identify any four personal values of Om which according to you helped him to increase his share of profit
(VALUE-BASED QUESTION).
19. Prepare a comprehensive project as per CBSE guidelines.

BUSINESS STUDIES

VERY SHORT ANSWER:

CH-1

1. Name that intangible force which creates productive relationship among resources often organization.
2. Which functions of management is concerned which finding the right people for the right job?
3. What is meant by effective management?
4. List any two organizational objectives.

SHORT AND LONG ANSWER:

1. Coordination is the essence of management . Explain how?
2. Give the meaning of management and explain how it creates a dynamic organization and helps in the development of society.
3. The skillful and personal application of existing knowledge to achieve desired result is called art. In the light of the statement describe whether management is an art or not.

VALUE BASED QUESTION:

Nitisha is a marketing manager of a company selling laptops .she plans the target sale of 2000 laptops per month. she allocates necessary resources to carry out the plan. she has six salesman working under her. she works with them guiding and motivating them to achieve the target sales. At the end of the month after comparison of actual sales with target sales she found that actual sale exceeded the target sales. she rewards the efficient employees to motivate them.

a) How does Nitisha prove the importance of management? explain.

b) Also state any two values which she wants to communicate to the society by her behavior.

CH-2

VERY SHORT ANSWER:

1. Why is it said that the principles of management are universal?
2. Give one point of difference between principles and values.
3. Accurate cause and effect relationship cannot be established by principles of management. Why?
4. Principles of management are guidelines to action but do not readymade straitjacket solution to all managerial problem. Why?

SHORT AND LONG ANSWER:

1. Explain how principles of management :

(1) provide useful insight into reality and

(2) help in thoughtful decision making

2. Differentiate between "unity of command and unity of direction" principles of management on the basis of (1) meaning, (2) aim, (3) implication.

3. Which principles of management suggest that employee should not be moved from their position frequently? What are its consequences. State any two?

HOT AND VALUE BASED QUESTION

I) In your school you observe that books are kept in office, chalks in the library and office record in the staffroom.

1. Which principles of management is violated here and why?

2. How will that affect the achievement of school objectives?

3. As a manager what steps will you take to rectify the shortcomings.

II) ABC limited is engaged in producing electricity from domestic garbage. There is almost equal division of work and responsibility between workers and management. The management even takes workers into confidence before taking important decision.

All the workers are satisfied as the behavior of the management is very good.

1) State the principles of management described in the above para.

2) Identify any two values which the company wants to communicate to the society.

CH-3

VERY SHORT ANSWER:

1. "The understanding of business environment enables the firm to identify opportunities and threats".

What do opportunities and threats mean here

2.Which component of general environment of business prohibits the advertisement of alcoholic beverages?

3.Give an example how economic environment affects a business enterprise.

4.It may be difficult to know the extent of the relative impact of the social ,economical, political ,technological or legal factors on change in demand of a product in the market. Which features of business environment is highlighted by this point.

SHORT AND LONG ANSWER:

1.State the difference between general and specific environment with example.

2.Understanding of the environment by business managers enables them not only to identify and evaluate but also to react to the forces external to their firms. In the light of the statement ,explain by giving any five points why in the present day competitive market it is essential for a business enterprise to remain alert and aware of its environment.

VALUE-BASED QUESTION

Ultra paint company which is manufacturing paints had been enjoying a prominent market position as it manufacture best quality paints, made timely payment of taxes to governE ment. It assembled various inputs like finance, machines, raw materials etc from its environment. Since the last year it has been dumping its untreated poisonous waste on the river bank which has created many health problems for the people. As a result the court passed an order to seal the manufacturing unit of the company.

1)State the importance of business environment highlighted quoting the line from the above case.

2)Identify any two dimension of business environment mentioned in the above case by quoting lines from it.

3)State any two values which has been overlooked by the company.

PREPARE A PROJECT FROM THE TOPIC:PRINCIPLES OF MANAGEMENT AS PER CBSE GUIDELINES.

ECONOMICS

Q1. Learn and write Question- answer given below in a separate notebook. Are the following statements true or false? Given Reasons.

- a. Economy always operates on production possibility frontier.
- b. The opportunity cost of a machine which can produce only one product is high.
- c. Growth of resources shift the production possibility frontier towards right.
- d. Different points on an indifference curve represent different satisfaction level.
- e. Utility is directly linked with usefulness of a commodity.
- f. The slope of indifference curve is different at different points of the curve.
- g. When the marginal utility starts falling total utility also starts decreasing.

- h. Demand curve of Pepsi will not shift with rise or fall in price.
- i. Demand curve for automobiles shift towards right due to opening up of a new automobiles dealer in the town.
- j. Cross price effect occurs in case of substitute goods only.

Q2. Very short answer type questions.

- a. Give examples of growth of resources.
- b. How is economic problem , a choice making activity
- c. How will an increase in price of petrol affect the demand curve of scooter?
- d. What causes an upward movement along a demand curve of a commodity?
- e. What does a rightward shift of demand curve indicate?
- f. When is the demand of a commodity said to be inelastic.
- g. Why is demand for water inelastic?
- h. If price elasticity of demand for a product is equal to one, what will be the nature of its demand curve.

Q3. Define the following terms.

Opportunity cost, marginal rate of transformation , indifference curve, consumer's equilibrium, budget set, budget set, budget line, law of demand, substitute goods, complementary goods, market demand, expansion in demand.

Q4. Long answer type questions.

1. Explain central problems of economy
2. Define production possibility curve and explain its properties.
3. Discuss the various reasons for existence of economic problem.
4. State and explain the properties of indifference curve.
5. A consumer consumes only two goods X and Y and explain conditions of consumer equilibrium with the help of utility analysis.
6. Explain consumer's equilibrium with the help of indifference curve analysis.
7. Explain the causes behind law of demand.
8. Explain cause of leftward shift in demand curve of a commodity.

Q5. Solve these numerical problems.

- a. A person's MU schedule is given below .derive TU

Units Consumed	1	2	3	4	5	6
MU	14	10	8	6	0	-2

- b. Manish is indifferent to the bundles (4,7) and (4,8). Indicate whether has monotonic preferences or not.
- c. With the help of demand function $Q_d = 40 - 5p$, answer the following questions
- 1) Calculate demand at price of ₹ 2.
 - 2) Calculate price, when demand will be 0.
- d. When the price of good X is ₹ 5, the consumer buys 100 units of good X. At what price would he will be willing to purchase 140 units of good X The price elasticity of demand for good X is 2.
- e. A consumer buys 80 units of a good at a price of ₹ 5 per unit. Suppose, the price elasticity of demand is (-2). At what price will he buy 64 units?
- f. When price of a commodity falls by 80% the quantity demanded of it increases by 100%. Find out its price elasticity of demand.
- g. If ratio of change in quantity (ΔQ) to original quantity (Q) is 0.5 and elasticity of demand is (-) 1.25, calculate percentage change in price.bn

INFORMATICS PRACTICES

1. Name any two Indian Scripts included in UNICODE.
2. Differentiate between free software and open source software.
3. Name the factors that affect the performance of the network ?
4. Which protocols are used to send and retrieve messages via electronic mail ?
5. Koshin analyse that a switch cannot stop traffic (data packets) destined for a different LAN segment from travelling to all other LAN segments. What is the solution to above problem ?
6. What are the different font categories ?
7. Explain the purpose of domain name system.
8. Give one advantage and one disadvantage of star topology.
9. When would you prefer hubs over repeaters ?
10. Explain packet switching technique.
11. There is a numbered address (Four parts separated by periods) that identifies a website uniquely. What is it ?
12. Name any of the two encodings used for Indian computing language.
13. Write examples of one proprietary software and one open source software.
14. Ravi has set-up a network of computers. Now, he wants to prevent unwanted networking connections according to some filtering/blocking rules. Suggest him the solution.
15. Write the name of the following:
 - (i) It is a protocol/technology used to exchange files on internet.
 - (ii) It provides a set of rules to transfer files, videos, images, etc. over the World Wide Web.
16. What do you understand by network security ? Name any two common threats to it.
17. Differentiate between star topology and bus topology of network.
18. Name any two transmission mediums for networking.
19. How would you extract Manufacturer_Id and Card_No from a MAC address ?

20. What is the geographical scope of LAN, MAN and WAN ?
21. In how many ways can you type Inadian scripts on a computer ?
22. Identify the type of topology from the following:
- (i) In it, each node is connected with the help of a single co-axial cable.
- (ii) In it, each node is connected with the help of independent cable and central switching (communication controller) node.
23. Define a network. What are the different type of networks ?
24. Two neighbourhood schools at a distance of 120 m
25. Write the MySQL Command to Create a table for CUSTOMER with follow specification :

Column Name	Data Type	Constraint
Cust_ID	INTEGER (4)	PRIMARY KEY
Cust_Name	VARCHAR (25)	NOT NULL
Cust_Address	VARCHAR (25)	
Pin_Code	BIGINT (10)	
Cust_Phone	BIGINT (10)	

26. Consider the following two tables :

Table Classes

S_No.	Class_Name
1	BCA
2	BSC
3	MSC

Table Subjects

S_No.	Sub_Name
1	ORACLE
2	JAVA
3	C ++

Give output of the following query :

```
SELECT CLASSES.CLASS_NAME, SUBJECTS.SUB_NAME
FROM CLASSES JOIN SUBJECTS
ON CLASSES.S_NO.=SUBJECTS.S_NO;
```

27. How will you drop a column from a table ?
28. Differentiate between NULL and NOTNULL.
29. What is a datatype ? Name some data types available in MySQL.

30. What do you mean by Cartesian product ?
31. What is a table alias?
32. What happens to the current transaction if a START TRANSACTION is executed ?
33. Which has "all-or-none" Property in database transaction ?
34. What is MySQL ? Discuss the components of MySQL.
35. What is a relation ? What is the different between a tuple and an attribute ?
36. What is the role of following command :
ALTER TABLE EMPLOYEE
DROP PRIMARY KEY ;
37. What happens when "ROLLBACK" Command is issued in a transaction process ?
38. Write two example of
(iii) DML command
(iv) TCL command
39. What are the basic elements of MySQL ?
40. Write down the difference between table and column constraint.

ग्रीष्मकालीन हेतु गृहकार्य

कक्षा -बारहवी

1. निबंध:(i) विद्यार्थी और राजनीती (ii) मीडिया की सामाजिक जिम्मेदारियां
(iii) प्रदुषण की समस्या (iv) शहरों में असुरक्षित महिलाएं
(v) मानवता बनाम आतंकवाद (vi) नशा और युवावर्ग
2. फ्रीचर आलेख:- शहरों का दमघौंटू वातावरण, महानगरों में बढ़ते अपराध , किसानों पर कर्ज का बोझ।
3. अलग अलग विषयों पर संपादक को पत्र लिखिए (पाँच)।
4. पढाए गए पाठों के प्रश्नोत्तर स्मरण कीजिए:
5. चरित्र-चित्रण: भक्तिन यशोधर बाबू, लुइजिन सिंह पहलवान तथा 'जूस' पाठ का नायक।
नोट:विद्यालय खुलने पर कक्षा परीक्षा होगी।

TAMIL

I gpd; tUk; j i yggfspy; flLi u vGJ f/

1/ RwWggWj ; J }ai ka[k; gadfSk;

2/ , ej pakt[k; t[z btsp Muharrpak;

3/ j Rputhj Kk; mj d; tpi stfSk;

4/ ghuj papd; ghhi tapy; bgz i k

II gpd;tUk; j i yggfspy; foj k; vGJ f

1/ eP FoapUffk; gFj papy; e[j fhykhf epytptUk;
Foerj j lLgghl oi d eBfff; nfhhp khtlI MI rpah; mthfSfF xU
t[z ggk; ti uf/

2/ nti y ntz o xU t[z ggk; ti uf

3/ eP trpfFk; gFj papy; *E}yfk* mi kj ;j ; j u ntz o xU
t[z ggj j pi d khtlI MI rpahsUff ti uf/

4/ eP brdW tej *g[j ff; fz fhl r[gwwp cd; ez gDfF xU
foj k; ti uf/

III , yffz k;

gpi Hfi s ePff. tyypd bkaapl L vGJ f. TwpathW braf
, kKdWffk; gapwrp , yffz t[dh mi kj ; tpi l vGJ f

Geography

1. Write name of 30 big Countries and also name their capital Locate them in the outline map of the World .
2. Locate and mark the following objects in outline map of the World-
 - a. Page No. 9,14,32,34,35,36,38,39,40,70,71,72,74,78
3. iv) Makefollowing diagrams and table –Fig-2.1,2.3,2.5,3.4,5.19,9.3,Table-10.2
4. Q./A given at the back of the lesson 1 to 7 to be done in class note book and learn them.

5. Write the difference between 'Wholesale trading and Retail trading'
6. Write the difference between-Rural Market and Urban Market'
7. Visit 5 Persons living below Poverty line and do the survey as per questionnaire provided to the students.
8. Write a detail report on 'Poverty Survey'

POLITICAL SCIENCE

Date of Submission: 1st July 2017

Instructions: (i) Revise all the chapters which are taught in the class
(ii) Holiday Homework to be done in the assignment register.

The Cold War

1. What do you understand by theory of Deterrence?
2. "The NAM is no longer relevant", Do you agree with this view? Give reasons in support of your answer.
3. Explain Cuban Missile Crisis.
4. "NAM is neither isolation nor neutrality", Discuss.
5. Mention two reasons why India joined NAM ?

The End of Bipolarity

1. Analyze India's relation with post Communist Russia.
2. Discuss Shock Therapy and its consequences.
3. What does privatization imply?
4. The end of Soviet Block meant the emergence of many new countries. Explain the statement.

US Hegemony in World Politics

1. What is meant by 9/11 in the context of USA?
2. Describe the constraints of US Hegemony.
3. Explain Hegemony of United States as Hard Power.
4. How can American Hegemony be overcome?

Alternative Centers of Power

1. What is ASEAN way?
2. Discuss the three main pillars of ASEAN
3. Explain China and European Union as alternate power to America.

Daily Routine: Read English Newspaper, update yourself with National and International news. Make two files of all the maps and cartoons given in both the books of NCERT and explain each one of them. You can use refreshers for help.

History

1. Write assignment on—

- A. A .Harappan Civilization. (Special ref Drainage & Town Planning)
- B. Mauryan administration.
- C. Mahabharata.
- D. Principles of Buddhism and Jainism.

2. Collect illustration of ten things made of stone, metal and clay produced and used at present.

Compare these with the pictures of Harappa Civilization in chapter 1 and discuss the similarities and differences that you find.

3 .Learn Q/A of all the chapters and write it in a separate copy.

4. Collect materials (Primary & secondary sources) for Board project work.

5. Visit National Museum and write a report on any ten items, describing, how old they are, where they were found and why are they displayed.

Map Work:-

Refer History 1st 2nd and 3rd Part of N.C.E.R.T. Book and practice all maps and make it in a separate file

Poverty Survey

Questionnaire

- Name of the Head of the family_____
- Number of Family members—Male_____Female_____
- Number of Children -- Male_____Female_____
- Number of Working members-- Male_____Female_____
- Total family income_____p.m
- Total family income_____per year
- Do you have –Own House__Rented House __
- Do you live in Kaccha House _Pakka House__
- Standard of Education_____

Qualification	Male	Female
Primary		
Secondary		
Senior Secondary		
Graduate and above		
Uneducated		

- Saving p.m.----Nil 500---1000--- 1000—1500--- 1500—2000 above2000
- Expenditure on luxury p.m.-----Below 500 500--1000 1000—1500 1500—2000 above2000

- How many times you go out of station per year _____
- Vehicle you own ---2 Wheeler___ 3Wheeler__ 4Wheeler__ Bicycle___None_____
- Do you use Bank facility___P.O.Saving___Other_____
- Medical Facility used Govt___Private____Other_____
- Are you getting benefit of govt. Schemes _____ Name-1_____ 2_____ 3_____
- Do you use Public Distribution Scheme ___Name-1_____ 2_____

How many times You go for outing p.m. _____