HOLIDAYS HOME WORK (2019-20)

CLASS: XII

The School will reopen on 24.06.2019

ENGLISH

- 1. Your school is going to play a friendly cricket match with GHPS, Shahdara. Write a notice to ask the students to reach Shivaji Stadium to cheer up your team.
- 2. Write a letter to the Editor of The Hindu showing your concern over increasing incidents of road rage in your city.
- 3. You want to sell your newly constructed two storeyed house in Surya Nagar. Draft an advertisement under the column "Sale and Purchase".
- 4. Draft an advertisement for requirement of an English teacher to teach your sister who is in 10th standard.
- 5. Write an article on Increasing pollution and diseases in big cities. (175-200 words)
- 6. Write a speech on the need of providing moral education in the schools as a compulsory subject for your morning assembly school. (200 words)
- 7. Write a debate on the topic- "We are happier than our forefathers". (175-200 words)
- 8. Draft a poster to highlight need of water conservation.
- 9. You purchased an LG washing machine M/S Subhash Electricals, Gandhi Nagar. You noticed some defects in it after a month. Write a letter of complaint to the proprietor of the showroom.
- 10. There is very filthy and unhygienic condition of your street, leading to serious diseases and inconvenience for residents. Write a letter to the Sanitary Inspector of EDMC, Shahdara.

<u>MATHS</u>

1. Differentiate
$$\tan^{-1} \left[\frac{1-\cos x}{\sin x} \right]$$
 w.r. to x
2. If y=tan⁻¹x show that $(1+x^2)\frac{d^2y}{dx^2} + 2x\frac{dy}{dx} = 0$
3. If y=cotx, show that $\frac{d^2y}{dx^2} + 2y\frac{dy}{dx} = 0$
4. If x=a $(\theta - \sin\theta)$ and $y = a(1 - \cos\theta)$, find $\frac{d^2y}{dx^2}$ at $\theta = \frac{\pi}{2}$
5. If $x^p y^q = (x+y)^{p+q}$, Prove that $\frac{dy}{dx} = \frac{y}{x}$
6. For what value of k f(x) = $\frac{1-\cos 4x}{8x^2} x \neq 0$ is continuous
K x=0
7. If the function f(x)= $\begin{cases} 3ax + b & \text{if } x > 1 \\ 11 & \text{if } x = 1 & \text{is continuous at } x=1 & \text{find the value of a and b} \\ 5ax - 2b & \text{if } x < 1 & \text{solution} \end{cases}$
8. Differentiate $e^{\sin x} + (\tan x)^x$ w.r. to x.
9. Prove that $\frac{d}{dx} \left[\frac{x}{2} \sqrt{a^2 - x^2} + \frac{a^2}{2} Sin^{-1} \frac{x}{a} \right] = \sqrt{a^2 - x^2}$
10. Find $\frac{dy}{dx}$ if $y = \sin^{-1} \left[\frac{5x + 12\sqrt{\sqrt{1-x^2}}}{13} \right]$
11. If $y = (x + \sqrt{x^2 + a^2})^n$, Prove that $\frac{dy}{dx} = \frac{ny}{\sqrt{x^2 + a^2}}$
12. $x = 3 \sin t - \sin 3t$, $y = 3 \cos t - \cos 3t \sin \frac{d^2y}{dx^2} at \frac{d^2y}{dx^2}} = \frac{\pi}{4}$

14. If $y = x^x$, show that $\frac{d^2y}{dx^2} - \frac{1}{y} \left(\frac{dy}{dx}\right)^2 - \left(\frac{y}{y}\right) = 0$ **15.** If $y\sqrt{x^2+1} = log(\sqrt{x^2+1}-x)$ show that $(x^2+1)\frac{dy}{dx} + xy+1=0$ 16. If $y = \sqrt{x} + \frac{1}{\sqrt{x}}$ show that $2x\frac{dy}{dx} + y = 2\sqrt{x}$ **17.** If y=a cos (log *x*)+b (log *x*), Show $x^2y_2 + xy_1 + y = 0$ $\frac{1-Sin^{3} x}{3cos^{2} x} \qquad \text{if } x < \frac{\pi}{2}$ $a \qquad \text{if } x = \frac{\pi}{2} \text{ is continuous at } x = \frac{\pi}{2} \text{ find a and b.}$ $\frac{b(1-Sinx)}{(\pi-2x)^{2}} \qquad \text{if } x > \frac{\pi}{2}$ **18.** If f(x)= **19.** If $y = \sqrt{x^2 + 1} - \log \left[\frac{1}{x} + \sqrt{1 + \frac{1}{x^2}} \right]$, find $\frac{dy}{dx}$ **20.** If $x^{y+y^{x}=1}$, find $\frac{dy}{dx}$ **21.** If $y = \tan^{-1} \left[\frac{5ax}{a^2 - 6x^2} \right]$, then show $\frac{dy}{dx} = \frac{3a}{a^2 + 9x^2} + \frac{2a}{a^2 + 4x^2}$ **22.** Differentiate w.r. to x (a) x $\tan x + \sqrt{\frac{x^2+1}{x}}$ (b) $\sqrt{\frac{(x-3)(x^2+4)}{3x^{2+}4x+5}}$ 23. Find $\frac{dy}{dx}$ (1) $\cos xy + \frac{x}{y} = 3x$ (2) $ax^2 + 2hxy + by^2 + 2gx + 2fy + c = 0$ 24. Show that $\begin{vmatrix} (y+z)^2 & xy & zx \\ xy & (x+z)^2 & yz \\ xz & yz & (x+y)^2 \end{vmatrix} = 2(xyz) (x+y+z)^3$ 23. Find $\frac{dy}{dx}$ (1) cosxy $+\frac{x}{y} = 3x$ **25.** Using E-row transformation find inverse of $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 4 \\ 2 & 4 & c \end{bmatrix}$ **26.** Let $A = \begin{bmatrix} 1 & -2 & 1 \\ -2 & 3 & 1 \\ 1 & 1 & 5 \end{bmatrix}$ verify $(AdJA)^{-1} = AdJ(A^{-1})$ 27. Prove $\begin{bmatrix} a & b & c \\ b & c & a \\ a & a & b \end{bmatrix}$ = 3abc - a³ - b³ - c³ x<0, **28.** Let $f(x) = \frac{1 - \cos 4x}{x^2}$, x=0 $\frac{a}{\sqrt{x}}$ x > 0Determine value of a so that f(x) is continuous at x=0 **29.** Using Matrix method solve (a) x+y+z=3, x-2y+3z=2, 2x-y+z=2 (b)x+2y+z=1,2x-y+z=5, 3x+y-z=0 **30.** For the matrix $A = \begin{bmatrix} 3 & 2 \\ 1 & 1 \end{bmatrix}$ Find the numbers a and b such that $A^2 + aA + bI = 0$, hence find A^{-1} **31.** If $y=\sqrt{sinx + \sqrt{sinx + \cdots}}$ Prove that $\frac{dy}{dx} = \frac{cosx}{2y-1}$ **32.** If $y = \frac{x \sin^{-1} x}{\sqrt{1-x^2}} + \log \sqrt{1-x^2}$ prove that $\frac{dy}{dx} = \frac{\sin^{-1} x}{(1-x^2)^{3/2}}$ **33.** If *x*=*Sint*, *y*=*Sinpt* prove that $(1 - x^2) \frac{d^2 y}{dx^2} - \frac{-x \, dy}{dx} + p^2 y = 0$ **34.** Given A= $\begin{bmatrix} 5 & 0 & 4 \\ 2 & 3 & 2 \\ 1 & 2 & 1 \end{bmatrix}$ and B⁻¹ = $\begin{bmatrix} 1 & 3 & 3 \\ 1 & 4 & 3 \\ 1 & 2 & 4 \end{bmatrix}$ Compute (AB)⁻¹

35. Given A= $\begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$ and $\begin{bmatrix} 2 & 2 & -4 \\ -4 & 2 & -4 \\ 2 & -1 & 5 \end{bmatrix}$ Find AB and using AB solve x-y=3, 2x+3y+4z=17,

y+2z=7 **36.** If y= e^xtan⁻¹ x then prove that $(1+x^2)\frac{d^2y}{dx^2} - 2(1-x+x^2)\frac{dy}{dx} + (1-x)^2 y=0$

PHYSICS:

- 1. What happens to the power dissipation of the value of electric current passing through a conductor of constant resistance is doubled?
- 2. How does the drift velocity of e⁻ in metallic conductors change, if the length of the conductor is doubled by stretching it, keeping the applied potential difference constant?
- 3. A uniform wire of resistance 20 Ω is cut into two equal parts. These parts are now connected in parallel. What will be the resistance of the combination?
- 4. Which has greater resistance 1kw electric heater or a 100w filament bulb both marked for 220V?
- 5. What is the effect of heating of a conductor on the drift velocity of free $e^?$
- 6. Three identical resistance R_1 , R_2 and R_3 are connected to a battery as shown in figure, what will be the ratio of voltage across R_1 and R_2 .



7. Two cell E_1 and E_2 in the given circuit diagram have an emf of 5V and 9V and internal resistance of 0.3 Ω and 1.2 Ω respectively. Calculate the value of current flowing through the resistance of 3 Ω .



8. Potential difference across terminals of a cell were measured (in volts) against different currents (in Amp) flowing through the ell. A graph was drawn which was a straight-line ABC. Using the data given in the graph determine (i) the emf and (ii) the internal resistance of the cell.



9. V-I graph for a metallic wire at two different temperature T1 and T2 is a shown in the following figure. Which of the two temperatures is higher and why?



10. In the circuit diagram shown here, what should be the value of R so that there is no current in the branch containing 6V battery (12 Ω)



11. Find the values of the currents I_1 and I_2 .



12. In Fig. 20V potentiometer is used for the determination of Internal Resistance of a 1.5V cell. The balance point of the cell in open circuit is 76.3 cm. When a resistor of 9.5Ω is used in the external circuit of the cell, the balance point shifts to 64.8 cm length of the wire of potentiometer wire. Determine internal resistance of cell.



13. A battery E_1 of 4V and a variable resistance R_n are connected in the series with the wire AB of the potentiometer. The length of wire of potentiometer is 1m. When the cell E_2 of emf 1.5C is connected between points A and C, no current flows through E_2 . Find the length of AC.



14. Calculate the value of X and current drawn by the circuit, assuming that no current flows through the G. Assume the resistance per unit length of the wire AB to be $0.01\Omega/cm$.



15. AB is one meter long uniform wire of 10Ω resistance. The other data are shown in the circuit diagram given below. Calculate (i)Potential gradient along AB (ii) Length AO of the wire, when the galvanometer shows no reflection.



16. In the following network here, find the following (i) currents I_1 , I_2 and I_3 (ii) terminal P.D. of each battery. Consider 6 Ω to be the internal resistance of 6V battery and 4 Ω to be internal resistance 8V battery.



17. a. Complete the activity file (for the purpose of demonstration only)b. Suggested investigatory projects only one project for each student which is issued by teacher.

Note: Complete Activity file given in Syllabus. (Any five Issued)

CHEMISTRY

Chemistry Class - XII (Assignment) The p block elements (Gp-16) @1 16 gb elements ale called chalcogens why? Q2 write short note on occurrence of 16gb elements. Give reason for following (i) I.E of 16.gp elements are low than 15gb (ii) DegH of Orygen is less than sulphus (iii) ongen is O2 whereas Suppus is S8 (IV) Bipt of Sulphus is very high than on @4 Name the 16 gb elements which are metals non metal and metallofds. Give two example to show this behaviour? ab why is acidic and reducing behavPour of By Hours of 16 gb increases down the gp? By Hours is lig and Hos is gas why? the has high mipt and bipt than expected value why? SO2 is reducing whereas TEO2 is onidising why? is highly stable? Draw its Geometry and write hybridizan state of sulphus. Draw Country Q-11 Draw Geometry and hybriza May SFy and SF2 (iii) Secled A) (10) SO2+02 1205 (V) Hee to2 and (U) Alto2 -> B weste about Industrial method of prepare of 02. and any one method to prepare

03. When any se estimated 9 when 02 % a

power ful onldising agent. give two example . In which Oz show Oxidisting behaviour. Q.15 Name two Compet which depletters Oz layer Q.16 Discuss str of 03. Q17 what are acidic, basic, neutral and amphotosic and des cive two examples of each write one example to show Bonghoteric nature of mide. High cone of O3 is dangerously explosive @19 Name two allotrapic forms of sulphur. How they are prepared. Draw Str of Sg and Q-21 How 18 802 prepared in Lab and How Que are one example to show Reducingai of 502. This write preparan of H2SOY 2.24 Complete the following reactions (i) SO2+Cl2 -> (i) NaOH+SO2-> (in) Na2 SO3 + H20 + SO2 -> (IV) Fe3 + SO2 + H20 -> (V) C12 H22011 - H2SON, (VI) at H2SON -> (VII) S+H2SON-> (VIII) C+H2SOY -> (IX) NAI+ H2SOY -> (X) PbS+03-> (XI) I + 03+ H20→ (XII) SO2 + MAOy+H20→ Q.25 Write uses of O2, O3, SO2, Hesoy 626 write the characteristics of H2SOY which are responsible of its Chemical behaviour. Q-27 For Hesoy Ka, >> Kaz why? 82-28 How PS die Hosoy is prepared?

class=XII (Assignment) Unit -7 (cp 17) Chemistry Why 17 gb elemente are called halogens. 02 waite note on occurrence of Halogens. as why halogens are coloused? F has less -ve Deg H Than ce why? \$5 Comment on the O.'s shown by Halogens. Q16 why halogens are coloused? Et Arrange halogens in increasing order of bond = dissociation enthalpy. Explain the Cause of abnasmality if any. § F has less -ve BegH yet is Stronger O.A @ write reaction of Halogens with water. QUE Give example to show abnormal behaviour of F. Qu'I Arrange HX in increasing Order of acidic strength and stability. Q12 The stability of HX decreases down the QB why is O2F2 and OF2 are called orygen Gill writ formulas of onides of CL, Br, I also Q-15 F. show only -1 O.S why?. Q16 How 88 Cl2, prepared by Deacon's process. Cl2 water 18 a good O.A and bleaching 218 write composition of bleaching powder agent why @19 Name two poisonous gases which Can be prepared G-20 mane two pr G-20 men Cl2 gas wrote preparan of HCC. Of when Hel reacts with finely powdered iron

it forms ferrous chloride and not Ferric Q-22 write properties of Inter halogen Compols. Q23 Why is Interhalogen compde are very reactive? Q24 Deduce the Molecular Shapes of OBRES @BRES Q25 Write reactions of each type of Interhalogen Comfol with water. Q26 Complete the following reactions (1) Fesoy +H2soutcl2 -> 1) MnO2 + Nacl +H2SOU -> (2) Na2 SO3 + Cl2 + H20 -> $(3) SO_2 + H_2 0 + Cl_2 \rightarrow$ KMnOy +HCe → (3) $S_8 + Cl_2 \rightarrow$ (14) I2 + H20+Cl2 -> (Hastle > (15) NH3+HCe -> (5) CIOHIG+ Cl2-> 16) AUTHT+NO3+LE > 6 8 NH3+3Cl2 -> 17) Pt +H++N03+ci+ Excess 18 Nazsoz+Hel -> 7 NH3 + CH2 (8) NaOH+ Cl2-> (19) Jatel 2 -> Cold-dil NaOH+Cl2-> 207 Br2+F2-> hot + conc (10) Ca (H)2+U2> Q.27 Arrange following add acc to increasing Order of acidic stringth O HOF, HOBR, HOI, HOCL (1) HOLL, HOLLOZ, HOLLOZ, HOLLO write uses of cl2, HCL and Inter-halogen 239 sea is the greatest source of some halogens @ 30 By using three parameters (DegH, ABD H, L.E.) compare milliona bohavious. of Us and, Brz.

BIOLOGY

1 Marks Questions:

- 1. State a difference between a gene and an allele?
- 2. Mention the type of allele that expresses itself only in homozygous state in organism?
- 3. A diploid organism is heterozygous for 4 loci, how many types of gametes can be produced?
- **4.** Who had proposed the chromosomal theory of the inheritance?
- 5. A male honeybee has 16 chromosomes whereas its female has 32 chromosomes. Give one reason?
- **6.** Why is it that the father never passes on the gene for haemophilia to his sons? Explain.
- **7.** Write the genotype of i) an individual who is carrier of sickle cell anaemia gene but apparently unaffected, and ii) an individual affected with the diseases?
- 8. Give an example of a human disorder that is caused due to a single gene mutation?
- 9. Write the chromosomal defect in individuals affected with Klinefelter's Syndrome?
- **10.** State the chromosomal defect in individuals with Turner's syndrome?

2 Marks Questions:

- **1.** In Snapdragon, a cross between true breeding red flowered (RR) plants and true breeding white flowered (rr) plants showed a progeny of plants with all pink flowers.
 - (a) The appearance of pink flowers is not known as blending. Why?
 - (b) What is the phenomenon known as?
- 2. Can a Child have blood group 'O' if his/her parents lave blood group? 'A' and 'B' Explain.
- 3. How do genes and chromosomes share similarity from the point of view of 'Genetical Studies'?
- 4. How has mutation breeding helped in improving the production of many bean crop?
- **5.** A colour-blind child is born to a normal couple, workout a cross to show it is possible. Mention the sex of this child.
- **6.** If a father and son are both defective in red-green colour vision, is it likely the son inherited the trait from his father. Comment.
- 7. Which chromosomes carry the mutant genes causing thalassemia in humans? What are the problems caused by these mutant genes?
- 8. A cross between a normal couple resulted in a son who was haemophilic and a normal daughter. In course of time, when the daughter was married to a normal man, to their surprise the grandson was also haemophilic.
 - (a) Represent the cross in form of a pedigree chart. Give the genotype of daughter and her husband.
 - (b) Write the conclusion you draw of the inheritance pattern of this diseases.
- 9. (a) Sickle celled anaemia in humans is a result of point mutation. Explain.

(b) Write the genotypes of both the parents who have produced a sickle celled anaemia offspring.

3 Marks Questions:

- 1. When a cross is made between tall plant with yellow seeds (TtYy) and tall plant with green (TtYy), what proportions of phenotype in the offspring could be expected to be (a) tall and green (b) dwarf and green
- 2. A cross was carried out between two pea plants showing the contrasting traits of height of the plant. The result of the cross showed 50% of parental characters.
- (i) Work out the cross with the help of a punnet square.
- (ii) Name the type of cross carried out.
- **3.** A teacher wants his/her students to find the genotype of pea plants bearing purple coloured flowers in their school garden. Name and explain the cross that will make it possible.
- **4.** Two heterozygous parents are crossed. If the two loci are linked what, would be the distribution of phenotypic features in F1 generations for a dihybrid cross?
- 5. A geneticist interested in studying variations and parents of inheritance in living beings prefers to choose organism for experiments with shorter life cycle.
- 6. Briefly mention the contribution of T.H. Morgan in genetics.
- 7. Differentiate between male and female heterogamete.
- **8.** Explain mechanism of sex determination in birds.

- 9. A couple with normal vision bears a colour-blind child. Work out a cross to show how it is possible and mention the sex the affected child.
- **10.** If there is a history of haemophilia in the family, the chances of male members becoming haemophilic are more than that of the female.

(a) Why is it so? (b) Write the Symptoms of the diseases.

5 Marks Questions:

- 1. Pea plant producing yellow coloured and round seed is given with unknown genotypes. Explain how you would find the correct genotype of plants with respect to the two traits mentioned. Work out the cross and name it?
- **2.** Explain the following terms:

a) Co – dominance b) Incomplete dominance

- 3. (a) Write the blood group of people with genotype I^AI^B. Give reason in support of your answer.
 (b) In one family, the four children each have different blood group their mother has blood group A and their father has blood group B. Work out a cross to explain how it is possible.
- **4.** (a) Haemophilia is sex-linked recessive diseases. Study the pedigree analysis given below showing the inheritance of the diseases in a family and answer the following questions that follow



i) Give the evidence from the above analysis which suggests that the diseases is

1) Sex – linked and 2) caused by a recessive allele.

- ii) Write the possible genotypes of the individuals '2' and '5'?
- (b) Why is thalassemia categorised as a mendelian disorder? State the condition when an individual will suffer from the diseases.
- **5.** (a) Why are colour blindness and thalassemia categorised as mendelian disorder? Write the symptoms of these diseases seen in people suffering from them.

(b) About 8% of human male population suffers from colour blindness whereas only about 0.4% of human female population suffers from this disease write an explanation to show how it is possible.

COMPUTER SCIENCE: CH-7 Data File Handling

- Write the difference between for the following(with example):
 i) Text file and binary file ii) tellg() and seekg() iii)seekg() and seekp()
- 2. Write a function in c++ to print the count of all the words beginning with do(in any case) in a text file "DIALOG.TXT".
- 3. Write a function Text() to read a text file "Input.txt" and print only words starting with 'I' in reverse order.
- 4. Assume that a text file named "ALPHA.TXT" already contains some text written into it . But while writing into the file , the word "are" has been misspelled "aer" everywhere in the file . Write a function named Rectify() in C++ that reads the file "ALPHA.TXT" and corrects the word "aer" .
- 5. Write a function to count number of uppercase vowels, digits and special symbols in a given text file.

- 6. Assuming that a text file text1.txt already contains some text in it. Write a function named **VOWEL()** in c++ which receives this file as input and copies all words starting with lowercase alphabets into a new file text2.txt
- 7. Write a user defined function in c++ to display all those lines starting with alphabet 'A' or 'M' present in a text file "LINES.TXT".
- 8. Write a function definition of WORD4CHAR() in c++ to read content of a text file FUN.TXT and display all those word which has four characters in it.
- 9. Write a function in c++ to count the words "this" and "these" present in a text file "ARTICLE.TXT".
- 10. Following is the structure of each record in a data file named "COLONY.DAT".

```
struct COLONY
{ charC_Code[10], C_Name[10];
intNo_of_people;
};
```

Write a function in c++ to update the file with a new value of No_of_people. The Value of C_Code&No_of_peopleare read during the execution of the program.

- 11. Given a binary file "GAME.DAT", containing records based on the following class.
 - class Game

{ chargamename[15], participant[30];

```
public : void getdata()
```

```
{ gets(gamename);
gets(participant);
}
voidputdata()
{ puts(gamename);
puts(participant);}
char * retname()
```

{ returngamename; }};

Write a function in c++ that would read the contents from the file and creates a new file named "BASKET.DAT" copying only those records from GAME.DAT where the game name is "Basketball".

12. class STUD

```
{ int Rno;char Name[20];public:void Enter(){cin>>Rno;gets(Name);}
```

void Display(){cout<<Rno<<Name<<endl;}</pre>

To add new records of students (as per the definition of student class) in a binary file "STUDENT.DAT" where number of records to be added is passed as argument to the function.

13. Given a binary file PHONE.DAT, containing records of the following structure type:

```
class Phonlist{ char Name[20],address[30],Areacode[5],Phoneno[15];
```

public :void Register();void Show();

intCheckCode(char c[]){return strcmp(Areacode,AC);}

};

Write a function COPY in c++ , that would copy all those records having Areacode as "123" from TELEPHONE.DAT to TELEBACK.DAT.

14. Consider the following class declaration and write a c++ function for the following file operations:-

Append records, search , modify record and delete a record.

class STUD

{ intRno;

char Name[20];

public:

void Enter(){cin>>Rno;gets(Name);}
void Display(){cout<<Rno<<Name<<endl;}
intgetrno(){return Rno;}
char *getname(){return Name;}
};</pre>

PROJECT WORK: Prepare a Project in c++ using Class and File Handling as discussed in class.

INFORMATICS PRACTICES:

Revise chapter-1,2,13 to 16 (Do written practice of My Sql queries and mark doubts)

A. Write the difference for the following (with Example)

Primary Key, Alternate key & Candidate Keys ,DDL and DML commands , Cardinality and Degree, Alter table and Update , Drop table and delete, Cross join and equi join, Natural join and equi join, using clause and on clause(in join) , Table constraints and column constraints , Column Alias and Table Alias.

B. Consider the following tables SCHOOL and ADMIN. Write SQL commands for the statements (i) to (xiv) and give outputs for SQL queries (xvii) to (xx)

SCHOOL

CODE	TEACHERNAME	SUBJECT	DOJ	PERIODS	EXPERIENCE
1001	RAVI	ENGLISH	12/03/2015	24	
1009	PRIYA RAI	PHYSICS	03/09/1998	26	12
1203	AMIT ANAND	ENGLISH	09/04/2000	27	5
1045	YASHRAJ	MATHS	24/08/2000	24	15
1123	GAURAV	PHYSICS	16/07/1999	28	3
1167	HARISH B	CHEMISTRY	19/10/1999	27	5
1215	UMESH	PHYSICS	11/05/1998	22	16

ADMIN

CODE	GENDER	DESIGNATION
1001	MALE	VICE PRINCIPAL
1009	FEMALE	COORDINATOR
1203	MALE	COORDINATOR
1045	MALE	HOD
1123	MALE	SENIOR TEACHER
1167	MALE	SENIOR TEACHER
1215	MALE	HOD

- i) To display Teacher's name and periods of all teachers whose periods less than 25.
- ii) To display Teachername, code and designation from tables SCHOOL and ADMIN whose gender is male.
- iii) To display number of teachers subject wise
- iv) To display TEACHGER'S CODE, TEACHER'S NAME and SUBJECT of all teachers who have joined the school after 01/01/1999.
- v) To display Teacher's name with their Designation.
- vi) To display Teacher's name whose name starts with P.
- vii) To display details of teachers whose subject is English or Physics.
- viii) To display the detail of those teachers whose experience is between 11 and 15
- ix) To display the detail of all teachers in descending order of their periods.
- x) Write the degree and cardinality of school and admin tables
- xi) Write the query of Cartesian product and equi join.
- xii) Delete records of all female coordinator from admin .
- xiii) Add a column in school table to store age of all teachers.
- xiv) Insert a record of teacher in school table.
- xv) Write the query of natural join .

- Write the query of equi join and natural join (whithout using where and natural keywords). xvi)
- SELECT MAX (EXPERIENCE), SUBJECT FROM SCHOOL GROUP BY SUBJECT; xvii)
- SELECT COUNT (EXPERIENCE), COUNT(*) FROM SCHOOL; xviii)
- xix) SELECT TEACHERNAME, GENDER FROM SCHOOL, ADMIN WHERE DESIGNATION = 'COORDINATOR' AND SCHOOL.CODE=ADMIN.CODE;

(xx) SELECT SUBSTR(SUBJECT,1,3) FROM SCHOOL WHERE COMM. IS NULL;

C. Consider the following tables GAMES and PLAYER. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii) GAMES PLAYER

•••••••							
GCode	GameName	Number	PrizeMoney	ScheduleDate			
101	Carom Board	2	5000	23-Jan-2004	PCode	Name	Gcode
102	Badminton	2	12000	12-Dec-2003	1	Nabi Ahmad	101
103	Table Tennis	4	8000	14-Feb-2004	2	Ravi Sahai	108
105	Chess	2	9000	01-Jan-2004	3	Jatin	101
108	Lawn Tennis	4	25000	19-Mar-2004	4	Nazneen	103

(i) To display the name of all Games with their Gcodes.

(ii) To display details of those games which are having PrizeMoney more than 7000.

(iii) To display the content of the GAMES table in ascending order of ScheduleDate.

- (iv) To display sum of PrizeMoney for each of the Number of participation groupings. (as shown in column Number 2 or 4)
- (v) SELECT COUNT(DISTINCT Number) FROM GAMES;
- (vi) SELECT MAX(ScheduleDate), MIN(ScheduleDate) FROM GAMES;
- (vii) SELECT SUM(PrizeMoney) FROM GAMES;
- (viii) SELECT DISTINCT Gcode FROM PLAYER;

D. Write the SQL commands for (i) to (iv) and outputs for (v) to (viii) on the basis of tables : BOOKS and ISSUES.

Table: BOOKS						
Book_ID	BookName	AuthorName	Publisher	Price	Qty	
L01	Maths	Raman	ABC	70	20	
L02	Science	Agarkar	DEF	90	15	
L03	Social	Suresh	XYZ	85	30	
L04	Computer	Sumita	ABC	75	7	
L05	Telugu	Nannayya	DEF	60	25	
L06	English	Wordsworth	DEF	55	12	

Tables DOOKS

Table: ISSUES

Book_ID	Qty_Issued
L02	13
L04	5
L05	21

(i) To show Book name, Author name and Price of books of ABC publisher.

- (ii) To display the details of the books in descending order of their price.
- (iii) To decrease the Qty_Issued from ISSUES table by 3 (all rows must decrease).
- (iv) To display the Book Id, Book name, Publisher, Qty_Issued from both the tables with their matching Book ID.
- (v) SELECT sum(price) FROM Books WHERE Publisher = "DEF";

(vi)SELECT Publisher, min(price) FROM Books GROUP BY Publisher;

(vii)SELECT Price from Books, Issues where Books.Book_ID=Issues.Book_ID AND Qty_Issued=5;

(viii)SELECT Count(Distinct Publisher) FROM Books;

E. Consider the tables product and Client given below:

Table : product

P_id	ProductName	Manufacturer	Price
TP01	Talcom powder	LAK	40
FW05	Face wash	ABC	45

BS01	Bath soap	ABC	55
SH06	Shampoo	XYZ	120
FW12	Face wash	XYZ	95
Table Clie	ent		
C_id	ClientName	City	P_ID
01	Cosmetic Shop	Delhi	FW05
06	Total Health	Mumbai	BS01
12	Live Life	Delhi	SH06
15	Pretty woman	Delhi	FW12
16	Dreams	Banglore	TP01

Write the commands in SQL for the following:

- (i) To display the details of products whose price is in the range of 50 to 100.
- (ii) To display the clientname , city from table client and product name and price from table product, with their

corresponding matching p_id.

- (iii) To increase the price of all products by 5.
- (iii) Identify the Primary key and foreign key column from the above tables.

ENGINEERING GRAPHICS

- 1. Draw all 15 Machine Block with all views.
- 2. Draw all view of Hexagon Nut and Bolts (M=30mm).
- 3. Draw all view of square Nut and bolt (M=30mm).
- 4. Draw all Frustum (like Pentagonal, Hexagon, Triangle, Square & Cone).
- 5. Draw all combination of Solids.

BUSINESS-STUDIES

Question/Answer

- 1. Is marketing merely a post-production activity? Give reason.
- 2. "Profits could be maximised by attracting and persuading customers to buy the product". Identify the concept of Marketing Management?
- 3. Why is it important to decide the philosophy of Marketing Management?
- 4. With the passage of time, why did firms begin to focus on selling concept?
- 5. Give 2 examples of Trade Mark.
- 6. What are the advantages of registering a "Trade mark"?
- 7. For what kind of products, 'three-level channel' of distribution is mostly adopted.
- 8. Explain 'Price' as an element of Marketing mix. Also explain any 4 Factors that affect the fixation of price of a Product.
- 9. 'Bending the customer according to the Product' and 'Developing the product according to customers-needs' are the two important concepts of marketing management. Identify the concept and differentiate between the two on any three bases.
- 10. Amar is engaged in manufacturing of Refrigerator. He surveyed the market and found the customers need a refrigerator with a separate provision of water cooler in it. He decided and launched the same refrigerator in the market. Identify and explain the Marketing Philosophy involved.
- 11. Identify the channel of distribution used in the following given statements:
 - a) KFC selling Fast Food items to the customers.
 - b) Samsung sells its TV to Customers through retail outlets.
 - c) Maruti Udyog sells its cars and vans through company approved retailers.
 - d) ABC Ltd. Sell its cosmetics to wholesalers, who then sells to retailers and finally it reaches to consumers.

- 12. "An important task in the marketing of Goods relates to designing the label as it provides useful and detailed information about the product". In the light of the above statement draw a label for "Juice" and highlight the important information to be provided on it.
- 13. Jasdeep, a dealer in school uniform, decided to maximise his profit by using different aggressive promotional efforts.
 - a) Identify the Marketing Management Philosophy adopted by Jasdeep.
 - b) Explain this philosophy on the bases of:
 - i. Main Focus
 - ii. Means and Ends
- 14. It is necessary that goods and services must be made available to the customers at the right place, in the right Quantity at the right time.
- 15. 'Hayaram' is a famous chain selling a large variety of products in the Indian Market. Their products include Chips, Biscuits, Sweets and Squashes. It charges a comparatively higher price than its competitors as it sells quality products. Besides, it offers regular discounts to its customers and easy credit terms to its retailers. It has five of its own retail shops. It also sells its products through various grocery stores so that the products are made available to the customers at the right place, in the right quantity and at the right time. It regularly uses different communication tools to increase its sales. The above para describes the combination of variables used by Hayaram to prepare its market offering. Identify and explain the variables.
- 16. Himanshu is very thirsty. He is in the middle of a desert. Soon he finds a cold drinks shop. He goes & purchase three bottles & drink them to satisfy his thirst. After drinking the cold drinks, he realises it has been developed after analysing the needs & preferences of the potential customer. On observing of the outer side of the bottle he finds details like ingredients: Size, Shape, Quality, Price, Etc.
 - a) What is cold drink & thirst here is relation to each other.
 - b) Identify one feature of marketing which has been highlighted above.
 - c) How is cold drink a good market offers in above case?
- 17. Ashu is a book seller. One day he was selling book. He approached a person who was sitting on a pavement. He offered him the book & found that he was not having enough money to pay. So, he willingly gave him the book without taking money. It is a true exchange mechanism? Justify your answer.
- 18. 'Burger King' has many branches throughout the India. The company believes in hiring places & giving rent to the owner of the places at highly busy places of the city. However, the company deals with its customers on its own thus providing them freshly prepared burger by its own staff. The company has kept the nature of its channel zero because of one main factor of the product it serves. It has always tried to plan its customers & for this reason the services are fast. The company also decided to launch one scheme where a burger will be provided with an additional cold drink on all days of the first week of the month.
 - a) Identify the channel of distributions highlighted above.
 - b) Which product related factor is responsible for the selection of the above channel by quoting the line?
 - c) Which one component of physical distribution is affected due to the fast services given by the company? Quoting the line also.
 - d) Which advantages of advertising has been highlighted in the above case? Quoting the line also.
 - e) Which sales promotion technique has the company decided to use to increase its sales? Quoting the line also.
- 19. Mr. Raj, working as sales executive in Mahalaxmi Ltd. Possesses good marketing technique. His technique involves oral presentation of messages in the form of conversation with prospective customers for the purpose of making sales.

a) Identify & state the promotional TOOLS USED BY Mr. Raj.

20. As a project work in Business Studies subject the commerce students of 'Creative Public School' thought of setting up a recycling plants to recycle all the waste papers from the school and prepare registers and exercise books to be used by the school students. They approached their Principal

who not only appreciated the idea of the students but also gave them consent for the same. The school also decided to donate 50% of the revenue generated from the sale of registers and excercise books to a nearby blind school.

- a) Explain any 2 product related decisions which the children have to take.
- b) Suggest any two factors the children should keep in mind while choosing the right name for their exercise books and registers.

ECONOMICS

- 1. How can government budget be a useful instrument in reducing inequalities in the distribution of income and wealth?
- 2. Distinguish between Revenue Expenditure and Capital Expenditure.
- 3. Define Tax Revenue. what are the two kinds of Tax Revenue? Give two examples of each.
- 4. Give meanings of Capital receipts and Revenue receipts with an example of each.
- 5. In a government budget, fiscal deficit is Rs. 50,000 crore and interest payments are Rs 5,000 crore. How much is the primary deficit?
- 6. Give meanings of capital receipts and revenue receipts with an example of each.
- 7. What is meant by revenue deficit? What are its implications?
- 8. What is Fiscal Deficit? What are its implications?
- 9. Can there be a fiscal deficit without a revenue deficit? Explain.
- 10. Categorise the following into revenue receipts, capital receipts revenue expenditure and capital expenditure. <u>Give reason</u>
 - a) Expenditure on collection of taxes
 - b) Expenditure on scholarship
 - c) Corporate tax
 - d) Sale of public sector undertaking
 - e) Profits of public sector understanding
 - f) Income tax received by the govt.
 - g) Expenditure on building a bridge
 - h) Borrowings from public.
- 11. Define government budget. Explain the various objectives of a government budget.
- 12. From the following data about a government budget find
 - a) Revenue deficit
 - b) Fiscal deficit
 - c) Primary deficit.
 - Tax revenue: 47
 - Capital receipts: 34
 - Non tax revenue: 10
 - Borrowings: 32
 - Revenue expenditure: 80
 - Interest payments: 20
- 13. Give the difference between
 - a) Devaluation and Depreciation
 - b) Revaluation and Appreciation
- 14. Explain the effect of depreciation of domestic currency on exports.
- 15. Explain the effects of appreciation domestic currency on imports.
- 16. What are fixed and flexible exchange rates?
- 17. Distinguish between BOT and BOP
- 18. Distinguish between Autonomous and Accommodating Transactions.
- 19. List the transactions of current account of BOP account.
- 20. Briefly discuss the components of Capital Account.

ACCOUNTANCY

- 1. The total capital of the firm of Saurabh, Mohit and Nikhil was Rs. 100000. The net profits for the last 3 years were 2013-14 Rs. 40000; 2014-15 Rs. 46000 and 2015-16 Rs. 52000. There was an abnormal loss of Rs. 3000 in 2014-15. Goodwill of the firm was to be valued at 2 years purchase of the average profits of the last three years. Calculate the goodwill of the firm.
- 2. A firm's average profit are Rs.70,000. It includes an abnormal profit of Rs.5,000. Capital invested in the business is Rs.5,50,000 and the normal rate of return is 10%. Calculate goodwill at four time the super profit.
- 3. The average net profit expected in the future by ABC Firm are Rs 36,000 per year. The average capital employed in the business by the firm is Rs 2,00,000. The rate of return expected from capital invested in this class of business is 10%. The remuneration of the partners is estimated to be Rs 6,000 per annum. Find out the value of goodwill on the basis of two years purchase of Super Profits.
- 4. On 1st April 2018, an existing firm had assets of Rs 2,00,000 excluding cash of Rs 4,000. Its creditors amounted to Rs 10,000 on that date the partners amounted to Rs 10,000 on that date. The partners capital account showed a balance of Rs 1,60,000 while the general resolve amounted to Rs 30,000. If normal late of return is 15% and goodwill of firm valued at Rs 36,000 at 3 years purchase of super profit, find the average profits of firm.
- 5. From the following informal, calculate goodwill by
 - i) Capitalisation method and,
 - ii) At 3 years purchase of Super profits
 - i. Total assets Rs 10,00,000
 - ii. External liabilities Rs 1,80,000
 - iii. Normal rate of Return 10%
 - iv. Average rate profit of last five years Rs 1,00,000.
- 6. A, B & C are partners sharing profits and losses in the ratio of 5:4:1. It was decided that with effect from 1st April, 2016 the profit-sharing ratio will be 9:6:5. Goodwill is to be valued at 2 years purchase of average of 3 years profits. The profits for 2013-14, 2015-15, and 2015-16 were Rs 48,000, Rs 42,000 and Rs 60,000 respectively. pass the necessary journal entry for treatment of goodwill.
- 7. A and B were partners in a firm sharing profits in the ratio of 3:2 with effects from 1st April 2016 they agreed to share profits equally. For the purpose the goodwill of the firm was valued at Rs 30,000 the good will of the firm was valued at Rs 30,000. Pass the necessary journal entry.
- 8. P, Q and R are partner sharing profits equally they decided that in future R will get 1/5th share in profits. On the day of change firm's goodwill is valued at Rs 3,00,000. Make the necessary journal entry.
- 9. X, Y and Z are partners sharing profits in the ratio of 4:3:2 from April 1, 2017, they decided to share the profits equally on that date their books showed the following items

Profit & loss Account(G)	Rs 1,20,000
General Reserve	Rs 46,000
Workmen Compensation Reserve	Rs 60,000
Advertisement Suspense Account (Dr)	Rs 90,000
Record the necessary Journal entries.	

- 10. A and B are partners charging profits and losses in the ratio 2:1. From April 1, 2017 they decided to share the profits in the ratio of 3:2. On that date, profit and loss account showed a debit balance of Rs 60,000. Record the necessary journal entry.
- 11. X, Y and Z are partners sharing profits and losses in the ratio of 1:2:2, decide to share future profits equally with effect from 1st April, 2016. On that date, profit and loss Account showed a

credit balance of Rs 1,20,000. Partners do not want to distribute the profit but prefer to record the change in profit sharing ratio by passing an adjustment entry.

12. A, B and C are partners charging profits and losses in the ratio 2:3:4. They decided to share future profits and losses in the ratio of 4:3:2. They also decided to record the effect of following without affecting their book values:

General reserve	Rs 40, 000
Profit and loss account	Rs 20, 000
Advertisements suspense account	Rs 15, 000
You are required to give the necessary single journa	al entry.

- 13. A, B, C and D are partners charging profits and losses in the ratio 2:2:1:1. They decided to share future profits and losses in the ratio of 4:3:2:1. For this purpose goodwill of the firm was valued at Rs 1,80,000. There was also a reserve of Rs 60,000 in the books of the firm.
- 14. A, B, C and D are partners charging profits and losses in the ratio 4:3:1. They decided to share future profits and losses in the ratio of 5:4:3. Calculate each partner gain or sacrifice due to change in ratio.

15. A, B, C and D are partners charging profits and losses in the ratio 2:5:5. From 1st January, 2019, they decided to share future profits and losses in the ratio of 3:5:7. You are required to fill the journal entry

A's Capital A/c	Dr.				
C's Capital A/c	Dr.			90,0	000
To B's Capital A/c					
(1' () () 1 '11	1 / 1	•	C 1	•	

(adjustment for goodwill due to change in profit sharing ratio.)

- 16. A, B, C and D are partners charging profits and losses in the ratio 3:2:2. They admitted D as a new partner for 1/5 Share which he acquired from A, B and C in 2:2:1 ratio respectively. calculate new profit-sharing ratio.
- 17. A and B are partners charging profits and losses in the ratio 7:3. C admitted as a new partner. A sacrifice 2/7th of his share in profits in favour of C. Calculate new profit-sharing ratio between A, B and C.
- 18. Arun, Bhushan and Chetan are partners in a firm sharing profits in 3:2:3 ratio. They decided to admit Sehzad as a partner. Arun surrendered 1/3rd of his share in favour of Sehzad, Bhushan surrendered 1/4th of his share in favour of Sehzad. Calculate new profit-sharing ratio.
- 19. K, L and M are partners in a firm sharing profits in 3:2:1 ratio. They admit N for 1/6th share. It is agreed that M would retain his original share. Calculate new ratio and sacrificing ratio.
- 20. X and Y are partners sharing profits in 5:3 ratio. Z is admitted and it is decided that the profitsharing ratio between Y and Z shall be the same as existing between X and Y. calculate the new profit sharing ratio and the sacrificing ratio.

POLITICAL SCIENCE

- 1. Complete and Learn the given worksheet N0. 1,2 & 3 (Part-1) Part-2 (Chapter-1,2).
- 2. Prepare a map file which should cover all the maps given till the Chapter-4(Part- 1) and Chapter-3 in (Part- 2).
- 3. Study Passages and Cartoon mentioned in NCERT.
- 4. Write a report on 17th Lok Sabha Election and Results.

HEALTH AND PHYSICAL EDUCATION

Compulsory for all the students of Class XII

Topics:

- 1. Swachh Vidyalaya Swachh Bharat
- 2. Dignity of Labour
- 3. Reduce, Recycle, Reuse (most important 3R's)
- 4. Being Safe and Responsible

*Paste your own pictures related to the concerned topic.

*make project on A4 size sheet and each topic should contain 4 pages and all these topics should be combined in a single file.

PHYSICAL EDUCATION (MAIN & ADDITIONAL)

PROJECT

Specific Game (Any one): Athletics, Basketball, Football, Handball, Hockey, Kho-Kho, Volleyball, Basketball.

Topics of Project:

- *History of Game
- 1. Court measurements with specification
- 2. Equipment
- 3. Fundamental skills
- 4. Terminology
- 5. Rules and Regulations
- 6. Warming up (General & Specific) related to game
- 7. Sports Injury
- 8. Arjun Awards related to your specific game (Player Name)
- 9. Dhronacharya Awards related to your specific game (Player Name)
- 10. Rajiv Gandhi Khel Ratna Award related to your specific game (Player Name)

11. Asanas- Vajrasana, Padhastasana, Trikonasana, Bhujanasana, Pawanmuktasana (Procedure, Benefits and Contradictions)

HISTORY

General Instructions:

Students should prepare individual projects of about 25 to 30 pages for CBSE Curriculum. This project should be prepared according to the guidelines already issued in class.

The project should include the following sections: -

- 1. Cover Page- Displaying the topic.
- 2. Acknowledgement- Thanking the people or institutions that has helped in completion of your project.
- 3. Certificate- Mentioning your name and the name of teacher under whose supervision you have completed your work.
- 4. Index- Giving the list of contents with page numbers.
- 5. Introduction- Giving the purpose and important of a study.
- 6. Chapters- Give a title to each chapter along with details and pictures.
- 7. Conclusion- What do you learn from your study?
- 8. Bibliography- Showing the sources from where you have gathered information present the following in your project report: -
 - Data statistical analysis/map work
 - Analysis/Explanation and interpretation
 - Bibliography

Students can use primary as well as secondary sources for the research work. Choose any one of the following topics:

- > Town planning and artefacts of the Harappan Civilisation
- > Mahabharat through the eyes of a reader
- > Understanding the Bhakti-Sufi Movement in India
- > India- Through the eyes of Travellers
- > Depiction of life during Mughal period through paintings
- > The partition in 1947- Not just Division of territory but also heart

Buddhism & Jainism

Revolt of 1857

Students have to be prepared to give Viva on the project in the class. Note: -

A Summery/ Synopsis (One Page) of the project covering:

- a) The objective statement
- b) Their observation and findings

The project must be neat and well presented and must be completely hand-written: -

- No whiteners to be used or written matter to be crossed out. In case of any mistake, re-do the sheet.
- Do not number sheets or write dates unless so instructed by your teacher.
- Colour illustrations, maps, charts may be hand drawn or printed (if it is relevant for any aspect of your project) are welcome to make them look attractive.

Question/answer

- 1. Explain the agriculture practices followed by the cultivators to increase production from C.600CE.
- 2. Explain the main policy of Mauryan Administration 9.
- 3. Describe the distinctive features of Domestic Architecture of Mohenjo-Daro.
- 4. What was Gotra? Mention important rules about Gotra?
- 5. What were the rules of marriage during the period 600BCE?
- 6. The social differences among the men & women were emerged due to parental property. How?
- 7. How did the Economic and Political Development in the Sixth century BCE affect the religions beliefs of the people?
- 8. Who was Walter Eliot? What are known as Eliot Marbles?
- 9. Compare & Contrast Himalaya and Mahayana Buddhism?
- 10. How did John Marshall Contribute to Indian archaeology as the Director General of the "Archaeological Survey of India"?
- 11. How can you say that the people of Harappan Civilisation lived a highly civilised life? Explain it in about 350 words.
- 12. Discuss the ways in which King claimed the high status in ancient times.
- 13. How did James Prinsep's Discovery give a new direction for studying early Indian history?
- 14. Explain the system of law grants and trade from 600BCE to 600CE?
- 15. Explain the agricultural practices followed by the cultivators to increase productivity from C.600BCE to 600CE?
- 16. Who were Satavahanas? What did they do? Discuss.
- 17. Who were regarded as beyond the four Varnas?
- 18. The Dharma Shastra and the Dharma Sutras also contained rules about the ideal occupations of the four categories of Varnas. Examine the statement.
- 19. What was the meaning of Puta? How many Gotami-Putas were there? Write their names.
- 20. Explain the Brahmanical norms of Marriages?

FINE ARTS

Do five painting at Ivory Sheets.

Topics

- 1. Festival Scene
- 2. Village Scene
- 3. Picnic Scene
- 4. Holi Scene
- 5. Fruits Composition