ST. ANGEL'S SCHOOL

WINTER HOLIDAYS HOMEWORK(2017-18)

CLASS XI

ENGLISH

Ques.1 The Canterville Ghost is the most important character. The story depicts his tragedy and his attempts to overcome it. Discuss.

Ques.2 Why did Virginia agreed to help the canterville ghost despite risks to her life?

SUBJECT TEACHER :_____ **HOD:_____**

MATHS

Note : Solve in assignment register.

CH 10 STRAIGHT LINES

Q.1 A straight line passes through the point (Θ,Φ) and this point bisects the portion of the line intercepted b/w the axes . Show that the eq. of the straight line is x/2 Θ+y/2Φ =1

Q.2 Reduce the line 3x-4y+4=0 and 2x+4y-5=0 to the normal form and hence find which line is nearer to the origin

Q.3 Find the eq. of the medians of a triangle formed by the line x+y-6=0 , x-3y-2=0 and 5x-3y+2=0

Q.4 Find the eq. of the line parallel to y – axis and drawn through the point of intersection of the line x-7y+5=0 and 3x+y=0.

Q.5 Find the value of Θif the line 3x-4y-13=0 , 8x-11y-33=0 and 2x-3y+ Θmutually exclusive =0 are concurrent

Q.6 Find the eq. of the line which divides the join of A (1,0) and B (3,0) in the ratio 2:1 and perpendicular to it

Q.7 Find the image of the point (2,1) with respect to the line mirror x+y-5=0

Q.8 If the image of the point (2,1) with respect to the line mirror be (5,2) find the eq. of the mirror

Q.9 Find all the points on x+y=4 that lie at a unit distance from the line 4x+3y-10=0

Q.10 Two sides AB and AC of an isosceles triangle are given by the eq. 7x-y+3=0 and x+y-3=0 resp. and its third side passes through (1,-10)

Determine the eq. of the line BC

Q11) Find the equation of the line through he intersection of 5x-3y=1 & 2x+3y-23=0 & perpendicular to the line 5x-3y-1=0.

CH 11 Conic Section

Q.1 Find the eq. of the circle whose centre is at the point (4,5) and which passes through the centre of the circle $x^2 + y^2 - 6x + 4y - 12 = 0$

Q.2 Find the centre and radius of each of the following circle

(1) $x^2 + y^2 - x + 2y - 3 = 0$

Q.3 Find the eq. of the circle which passes through the point (1,-2) and (4,-3) and has its centre on the line 3x+4y=7.

Q.4 Find the eq. of the ellipse whose axis are along the coordinate axis , foci at (0,+-4) and eccentricity 4/5

Q.5 Find the eccentricity , coordinate of foci , length of lactus rectum of the ellipse $25x^2 + 16y^2 = 1600$

Q.6 Find the eq. of parabola whose focus is (-3,2) and directrix is x+y=4

Q.7 Find the eq. of parabola whose focus is (-3,0) and directrix x+5=0

Q.8 show that $9x^2 - 16y^2 - 18x + 32y - 151 = 0$ represent a hyperbola . find foci , vertices , lactus rectum , eccentricity

Ch 12 Introduction to 3D Geometry

Q.1 Find the points which is equidistant from the point A(0,2,3) and B (2,-2,1)

Q.2 Show that the point (0,7,10) , (-1,6,6)and(-4,9,6) are the vertices of isosceles right angled triangle

Q.3 The midpoints of the sides of the triangle are (1,5,-1) , (0,4,-2) and (2,3,4) find its vertices

Q.4 Find the ratio in which the sphere $x^2 + y^2 + z^2 = 504$ divides the line joining the points (12,-4,8) and (27,-9,8)

Q.5 Find the centroid of a triangle , midpoints of whose sides are (1,2,-3) , (3,0,1) and (-1,1,-4)

Ch 13 Limits and Derivatives

Q.1 Let f(x) be a function defined by

f(x) ={4x-5 , if x ≤2

x- Θ ,if x >2

find Θif lim f(x) exist

x→2

Q.2 Find K so that lim f(x) may exist, where

x→2

f(x) ={2x+3 ,if x ≤2

x+k ,if x >2

Q.3 Evalute :lim x^4 -4/x^2 +3x√2-8

x→3

Q.4 Evalute :lim (1/X^2 +X-2 - X/$^{X3-}$1)

x→1

Q.5 Evalute :lim √(a2+ x^2) - √(a^2 –x^2) /x^2

x→0

Q.6 Evalute :lim ($(X+2)^{5/3}$ – $(A+2)^{5/3}$)/X-A

x→A

Q.7 If lim (x^n-2^n)/x-2=80 and n€ N find n

x→2

Q.8 Lim (1-cosmx)/(1-cosnx)

x→0

Q.9 Find the derivative of the following function by first principles

(1)tanx (2) √sinx (3)tan√x (4) x^2 cosx

Q.10 Diffrentiate the following function w.r.t x:

(1) $(x^2+1/x^2)^3$

(2) $e^x/secx + tanx$

(3) (xsinx + cos x)(xcosx-sinx)

(4) $e^x \log\sqrt{x} + tanx$

(5) $sinx.e^x.x^3$

Q11) Evaluate the following limits , if exist

i) $\lim_{x\to 3} (e^x-e^3)/(x-3)$

ii) $\lim_{x\to 0} \log(1+x^3)/\sin 3x$

SUBJECT TEACHER :_____ HOD:_____

PHYSICS

OSCILLATIONS

1. Water in a U-tube executes S.H.M. Will the time period for mercury filled up to the same height in the tube be lesser of greater than that in case of water?

2. The displacement of a particle in S.H.M may be given by

$y = \sin(\omega t + \phi)$, show that if the time t is increased by $2\Pi/\omega$, the value of y remains the same.

3. Draw (a) displacement time graph of a particle executing SHM with phase equal to zero (b) velocity time graph and (c) acceleration timeϕangle graph of the particle.

4. Derive an expression for the time period of the horizontal oscillations of a massless loaded spring.

Thermal properties of matter

1. At what temperature the resistance of thermometer will be 12% more of its resistance at 0°C (given temperature coefficient of resistance is $2.5 \times 10^{-3}\,°C^{-1}$?

2. 100g of ice at 0°C is mixed with 100 g of water at 80°C. The resulting temperature is 6°C. Calculate heat of fusion of ice.

3. Calculate heat required to convert 3kg of water at 0°C to steam at 100°C

Given specific heat capacity of H2O = 4186J kg^{-1} k^{-1} and latent heat of stem = 2.256×10^6 J/kg

4. Define coefficient of thermal conductivity. Two metal slabs of same area of Cross -section, thickness d1 and d2 having thermal conductivities K1 and K2 respectively are kept in contact. Deduce expression for equivalent thermal conductivity.

WAVES

1. A wire stretched between two rigid supports vibrates in its fundamental mode with a frequency 45 Hz . The mass of the wire is 3.5 × 10–2 kg and its linear density is 4.0 × 10–2 kg m– . What is (a) the speed of transverse wave on the string and (b) the tension in the string?

2. A steel sod 100 cm long is clamped at its middle. The fundamental frequency of longitudinal vibrations of the rod as given to be 2.53 kHz . What is the speed of sound in steel?

3. One end of a long string of linear mass density 8.0 × 10–3 kg m–1 is connected to an electrically driven tunning folk of frequency 256 Hz . The other end passes over a pulley and is tied to a pan containing a mass of 90 kg. The pulley end absorbs all the incoming energy so that reflected waves at this end have negligible amplitude. At t = 0, the left end of the string x = 0 has zero transverse displacement (y = 0) and is moving along positive x direction. The amplitude of wave is 5.0 cm. Write down the transverse displacement y as function of x and t that describes the wave on the string.

4. A pipe 20 cm long is closed at one end, which harmonic mode of the pipe is resonantly excited by a 430 Hz source? Will this same source can be in resonance with the pipe, if both ends are open? Speed of sound = 340ms^{-1}.

SUBJECT TEACHER :_____ **HOD:**_____

CHEMISTRY

1. Define oxidation and reduction in terms of oxidation number. Give example in each case to illustrate your answer.
2. Find out the oxidation number of the underlined elements in the given compound: 1. $H_2\underline{S}O_4$ 2. $H\underline{N}O_3$ 3. $K\underline{Mn}O_4$ 4. $K_2\underline{Cr}_2O_7$
3. Discuss the principle and method of softening of hard water by synthetic ion exchange resins.
4. Compare the structure of water and hydrogen peroxide.
5. What characteristics do you expect from an electron deficient hydride with respect to its structure and chemical reaction?
6. Knowing the property of H_2O and D_2O, do you think that D2O can be used for drinking purposes?
7. What is water gas? How is it prepared?
8. Name the alkali metals in order of increasing atomic masses and write their electronic configuration.
9. Why LiF almost insoluble in water whereas LiCl is soluble not only in water but also in acetone.
10. What happens when:
    a. Magnesium is burnt in air

    b. Quick lime is heated with silica

    c. chlorine reacts with slaked lime

    d. Calcium nitrate is heated.

11. Berilium and magnesium do not give color to flame where as other alkaline earth metals do so. Why?
12. When an alkali metal dissolves in liquid ammonia, the solution can acquire different colors. Explain the reason for this type of color change?

- **DO NCERT BACK EXERCISE OF**

(i) Organic Chemistry: Some basic principles and techniques
(ii) Hydrocarbon
(iii) Environmental chemistry

SUBJECT TEACHER :_____ **HOD:**_____

BIOLOGY

CH- 20 Locomotion And movement

Q.1 Differentiate between pectoral and pelvic girdle diagrammatically.

Q.2 Differentiate between osteoporosis and osteoarthritis.

Q.3 Vertebral column is the important part of the human body.Give reason.

Q.4 Explain axial and appendicular skeleton.

Q.5 Describe in detail the structure of a sarcomere.

CH-21 Neural Control And Coordination

Q.1 Explain any two functions of cerebrospinal fluid in humans.

Q.2 What is blind spot ? why is it so named ?

Q.3Enumerate the functions of hypothalamus.

Q.4 Where are temporal lobe and corpus callosum located? Give one function of each.

Q.5 Explain briefly the function of human middle ear.

CH-22 Chemical coordination And Integration

Q.1Define glycogenesis.

Q.2 What causes cretinism?

Q.3 Mention four functions of androgens.

Q.4 Distinguish between Calcitonin And Somatostatin.

Q.5 Differentiate between Giantism and Myxoedema.

SUBJECT TEACHER :_____ **HOD:**_____

COMPUTER SCIENCE

ASSIGNMENT :

1) What is " code generation"? Can ba program be executed before it?
2) What do you understand by " guard code"?
3) What is dangling else problem?
4) What are escape sequences?
5) What is portability of a program?
6) What is robustness?
7) What are the characteristics of a good program?
8) Whatare the 3 steps in using a function?
9) Write a function in c++ having 2 parametres X and n of integer type with result type float to find sum of following series:

$$1 + x/2! + x^2/3! + ...+ x^n/(n+1)!$$

10) What are multidimensional array?
11) Do the array values are stored in memory location? Justify.
12) Give any two processes performed during pre-processing phase.
13) What is an algorithm and what are different symbols of a flow chart?
14) Explain the following:
    (i) selection sort
    (ii) Bubble sort
15) What will be the output of the following :-

```
#include<iostream.h>
#include<conio.h>
int jumpingbit[]={ 8,40,20.60};
void main()
{
 clrscr();
int i=0, j=1;
while(jumpingbit[0]>0)
{
 jumpingbit[j]+=1;
jumpingbit[i]- = 1;
for(int k=i; k<>=3;k++)
 cout<<jumpingbit[k]<<" ";
cout<<"\n";
if(j<3)
 j+=1;
```

```
else
  j=1;
}
getch();
}
```

16) Consider the structure called Point having following format:

```
struct point
{
    int xcoord;
     int y coord;
}
```

Write a function called getline() which accepts two ponts as parameters & then return the length of line being drawn between them using distance formula. (Formula is $(PQ)^2 = (x2-x1)^2 + (y2-y1)^2$)

17) What is random() function? Under which header file it is defined?

18) Which of the following statements about creating an array (size 20) of structure are not true?

```
struct employee
    {
     string emp_id;
    string emp_name;
    string emp_sex;
    };
```

(a) employee emp[20];
(b) employee[20] emp;
(c) employee[] emp= new employee[20];

19) What would be the output of following:

```
#include<iostream.h>
#include<conio.h>
struct point
{
  int x,y;
 };

void maketriangle(point p[]);
void main()
{
```

```
 point p[2];
int i;
maketriangle(p);
cout<<" the triangle consist of following coordinates";
for(i=0;i<2;i++)
  cout<< "("<<p[i].x<<"."<<p[i].y<<")";
  cout<<"\n";
getch();
}
void maketriangle(point p[])
{
 p[0].x=200;
p[0].y=20;
p[1].x=150;
p[1].y=100;
}
```

20) What would be the output of following:-

```
int subtr(int x, int y);
int main()
{
 int x,y, res;
cout<<" enter x and y";
cin>>x>>y;
res=subtr(x,y);
cout<<"result:"<<res;
getch();
return 0;
}
int subtr(int x, int y)
{
 return (x-y);
}
```

PROJECT:

Prepare any game of your choice using C++ features.

Practical file:

1) Write a program to raise a number 'x' to power 'n'.

2) Write a program to take an alphabet from user and to print its next four alphabets using functions.

4) Write a C++ program to find cube of a number using functions.

5) Write a program to find smallest and largest element of a 1D array.

6) Write a program to swap two numbers using functions.

7) Write a program to replace a given number with zero in a 2D array.

8) Write a program to calculate compound interest for 10 clients of an investment company.Details (including costume name, code and date of starting, number of years, interest rate and total amount) are stored in an array of structure.

9) Write a program to store information of 10 employee and to display information of an employee depending upon the employee number given.

10) Write a program to create an array containing details of 15 students (including Roll number, name, marks in three subjects) and print out a list of these students with details.

11) Write a program to add two array A and B of size m x n.

12) Write a function that receives two numbers as an argument and display all prime numbers between these two numbers. Call this function from main( ).

13) Write a program that lets the user perform arithmetic operations on two numbers. Your program must be menu driven, allowing the user to select the operation (+, -, *, or /) and input the numbers. Furthermore, your program must consist of following functions:

1. Function showChoice: This function shows the options to the user and explains how to enter data.
2. Function add: This function accepts two number as arguments and returns sum.
3. Function subtract: This function accepts two number as arguments and returns their difference.
4. Function multiply: This function accepts two number as arguments and returns product.
5. Function divide: This function accepts two number as arguments and returns quotient.

14) Declare a structure to represent a complex number (a number having a real part and imaginary part). Write C++ functions to add, subtract, multiply two complex numbers.

15) Write a menu driven C++ program with following option

a. Accept elements of an array

b. Display elements of an array

c. Sort the array using insertion sort method

d. Sort the array using selection sort method

e. Sort the array using bubble sort method

Write C++ functions for all options. The functions should have two parameters name of the array and number of elements in the array.

SUBJECT TEACHER :_____ **HOD:**_____

BUSINESS STUDIES

Project : Marketing Management

Students are required to select any one product from the following list and make a project.

List of products

1. Toothpaste
2. Noodles
3. Shampoo
4. Bathing soap
5. Washing detergent
6. Washing powder
7. Lipstick
8. Moisturiser
9. Shoe polish
10. Pen
11. Shoes
12. Hair dye
13. Mobile
14. Chocolate
15. Sauces/ketchup
16. Ready soups
17. Body spray
18. Fairness cream
19. Hair oil
20. Roasted Snacks
21. Jeans
22. Pickles
23. Squashes
24. Jams
25. Salt
26. Bread
27. Butter
28. Shaving cream
29. Razor
30. Cheese spreads

31. e –Wash
32. Tiffin wallah
33. Air Conditioners
34. Infant dress
35. Sunglasses
36. Fans
37. Fruit candy
37. Washing powder
39. Bathroom cleaner
40. Wipes
41. Shoe polish . etc.

Identify one product/service from the above which the students may like to manufacture/provide [pre Assumption].

Now the students are required to make a project on the identified product/service keeping in mind the Following.

1. Why have they selected this product/service?
2. Find out 5‟ competitive brands that exist in the market.
3. What permission and licenses would be required to make the product?
4. What are your competitors Unique Selling Proposition? [U.S.P.]?
5. Does your product have any range give details?
6. What is the name of your product?
7. Enlist its features.
8. Draw the „Label‟ of your product.
9. Draw a logo for your product.
10. Draft a tag line.
11. What is the selling price of your competitor's product?

(i) Selling price to consumer

ii) Selling price to retailer

(iii) Selling price to wholesaler

What is the profit margin in percentage to the
- Manufacturer.
- Wholesaler.
- Retailer.

12. How will your product be packaged?
13. Which channel of distribution are you going to use? Give reasons for selection?

14. Decisions related to warehousing, state reasons.
15. What is going to be your selling price?
(i) To consumer
(ii) To retailer
(iii) To wholesaler

16. List 5 ways of promoting your product.
17. Any schemes for
(i) The wholesaler
(ii) The retailer
(iii) The consumer

18. What is going to be your „U.S.P?
19. What means of transport you will use and why?
20. Draft a social message for your label.
21. What cost effective techniques will you follow for your product.
22. What cost effective techniques will you follow for your promotion plan.

At this stage the students will realise the importance of the concept of marketing mix and the necessary
decision regarding the four P‟s of marketing.

- Product
- Place
- Price
- Promotion

On the basis of the work done by the students the project report should include the following:
1. Type of product /service identified and the (consumer/industries) process involve there in.
2. Brand name and the product.
3. Range of the product.
4. Identification mark or logo.
5. Tagline.
6. Labeling and packaging.
7. Price of the product and basis of price fixation. 8. Selected channels of distribution and reasons thereof.
9. Decisions related to transportation and warehousing. State reasons.
10. Promotional techniques used and starting reasons for deciding the particular technique.
11. Grading and standardization.

Presentation and Submission of Project Report
At the end of the stipulated term, each student will prepare and submit his/her project report.
Following essentials are required to be fulfilled for its preparation and submission.
1. The total length of the project will be of 25 to 30 pages.
2. The project should be handwritten.
3. The project should be presented in a neat folder.

The project report should be developed in the following sequence-

- Cover page should include the title of the Project, student information, school and year.
- List of contents.
- Acknowledgements and preface (acknowledging the institution, the places visited and the persons who have helped).
- Introduction.
- Topic with suitable heading.
- Planning and activities done during the project, if any.
- Observations and findings of the visit.
- Conclusions (summarized suggestions or findings, future scope of study).
- Photographs (if any).
- Appendix
- Teacher's observation.
- Signatures of the teachers.
- At the completion of the evaluation of the project, it should be punched in the centre so that the report may not be reused but is available for reference only.
- The projects will be returned after evaluation. The school may keep the best projects.

ASSESSMENT

Allocation of Marks = 10

The marks will be allocated under the following heads:
1. Initiative, cooperativeness and participation 1 Mark
2. Creativity in presentation 1 Mark
3. Content, observation and research work 2 Mark
4. Analysis of situations 2 Mark
5. Viva 4 Mark

SUBJECT TEACHER :_____ **HOD:**_____

ACCOUNTANCY

PREPARE ACCOUNTS FILE FOR FINAL PRACTICAL ON COMPREHENSIVE PROBLEM.

COMPREHENSIVE PROJECT- comprising of

a) Case Study
b) Journal
c) Ledger
d) Trial balance
e) Financial Statements
f) Ratio analysis.

Students will prepare a **Project File** to record their work related to the problems attempted by them in the following format :

1. First page of the file should describe title of work, identity of student, school, and the teacher concerned.

2. Index to indicate columns for title of work, page no., date, teacher's remarks and signature.

3. The **format** for Project Work will be :

- Statement of the problem / Name of the Project
- Objectives
- Period of Study
- Source Material
- Tools of Analysis used
- Processing and Tabulation of data
- Diagrammatic/graphic presentation- pie-diagram , bar diagram and graphs.
- Derivations , Interpretation and Conclusion.
- Assumptions (if any)

Project File should be neatly handwritten and presentable with page numbers. Each step of the solution needs to be highlighted. Conclusions drawn should be placed in boxes at the end.

SUBJECT TEACHER :_____ **HOD:**_____

ECONOMICS

MEASURES OF CENTRAL TENDENCY

ARITHMETIC MEAN

Q1. Find average for following individual data

2,3,5,6,8,10,11,13,17,20

Q2. Daily income of 10 families is given as follows:

Sno	1	2	3	4	5	6	7	8	9	10
Daily IN	100	120	80	85	95	130	200	250	225	275

Calculate average daily income

Q3. The following table gives the marks obtained by 10 students of a class.

Sno	1	2	3	4	5	6	7	8	9	10
Marks	43	60	37	48	65	48	57	78	31	59

Find out mean marks using Direct and shortcut method.

Q4. Find out the mean by i) Direct Method ii)Shortcut method iii)Step Deviation Method

64,59,67,69,65,70,68

Q5.DISCRETE SERIES

Q5 Find average ;

X	3	5	6	7	8
F	2	4	3	8	10

Q6 Find average.

HEIGHT in cms	58	60	62	64	66	68
Number of plants	12	14	20	13	8	5

Q7 use all methods of Mean

MARKS	5	15	25	35	45	55	65
No.of students	4	6	10	20	10	6	4

Q8 Calculate A.M by direct method.

Age in years .	20	21	22	23	24	25
No. of males	1	2	4	5	15	23

Q9 Compute the mean marks .

Marks	0 -10	10-20	20-30	30-40	40-50
No.of std.	4	6	10	20	10

Q 10 Find mean

Marks	0-4	4-8	8-12	12-16	16-20	20-24
No of St	7	9	16	8	6	4

Q11 Compute Mean

Daily wages	2-4	4-6	6-8	8-10	10-12	12-14	14-16	16-18
No. of workers	11	14	20	32	25	7	5	2

Q12 Compute Mean

Marks	5-15	15-25	25-35	45-55	55-65
No of St .	8	12	6	7	3

Q13. FIND MEAN

MARKS		No of students
Less Then	10	5
	20	20
	30	45
	40	70
	50	80
	60	88
	70	98
	80	100

Q14. Calculate arithmetic mean from the following data:

MARKS		No of students
More Than	0	150
	10	140
	20	100
	30	80
	40	80
	50	70
	60	30
	70	14

Q15. Calculate mean of unequal class intervals

X	0-10	10-20	20-30	30-60	60-90
F	5	9	20	12	4

Q16 Calculate mean of inclusive series

Age		20-29	30-39	40-49	50-59	60-69
Workers	10	8	6	4	2	

Q17. The mean height of 25 male workers in a factory is 61 inches and the mean height of 35 female workers in the same factory is 58 inches. Find the combined mean height of 60 workers in the factory.

Q18. The mean age of combined group of men and women is 35 yrs. If the mean age of the group of men is 35 and that of the group of women is 25, find out the percentage of men and women in the group.

Q19. The average weight of group of 20 boys was calculated to be 89.4/ It was later discovered that one weight was misread as 78 kgs instead of correct one of 87 kgs. Calculate the correct average weight.

Q20. Calculate weighted mean.

Marks		62	77	65	62	57
Weights	2	1	2	3	4	

MEDIAN

INDIVIDUAL SERIES

Q1. 15 35 48 46 50 43 55 49

Q2. 25,20,15,45,18,7,10,64,38,12

DISCRETE SERIES

Q3. Income 1200 1800 5000 2500 3000 1600 3500

Persons 12 16 2 10 3 15 7

Q4. X 160 150 152 161 156

F 5 8 6 3 7

CONTINOUS SERIES

Q5. Size 10-20 20-30 30-40 40-50

F 42 25 58 40

Q6. Age 20-25 25-30 30-35 35-40 40-45 45-50 50-55 55-60

F 50 70 100 180 150 120 70 60

CUMALATIVE FREQUENCY(Less than and More than)

Q7. Marks less than 10 20 30 40 50 60 70 80

F 5 20 45 80 100 115 125 130

Q8. Marks More than0 10 20 30 40 50 60 70

F 100 92 78 44 32 18 15 13

WHEN MID POINTS ARE GIVEN

Q9 Mid values 37.5 42.5 47.5 52.5 57.5

F 30 20 15 13 22

INCLUSIVE SERIES

Q10 class Intervals 10-19 20-29 30-49 40-49 50-59 60-69

F 12 19 20 21 15 13

Q11 Open ended series

X Below 10 10-20 20-30 30-40 40 -50 50 AND Above

F 3 7 15 9 6 4

Q15 Missing frequency

X 10-20 20-30 30-40 40-50 50-60 60-70 total

F 12 30 ? ? 25 15

Q16. Graphic location of median

Marks 0-10 10-20 20-30 30-40 40-50 50-60

F 10 15 25 30 10 10

QUARTILES

Q1 Calculate Q1 and Q3

(a) X 12 16 17 21 2 8 19 30 32

(b) 18, 20,25,17,09,11,23,37,38,42

(c) Marks 58 59 60 61 62 63 64 65 66

Frequency 2 3 6 15 10 5 4 3 1

Cont. Series

Q1. Calculate Q1 and Q3.

C.I. 0-10 10-20 20-30 30-40 40-50 50-60 60-70

F 10 20 35 40 25 25 15

MODE

Individual Series

Q1 salary 2000 2100 2400 2900 3100 3300

Q2 Discrete series

Salary 2000 2100 2400 2900 3100 3300

F 3 5 10 19 8 4

Q3 Calculate mode by using observation and grouping method

Height-60 62 63 64 65 66 67 68 69 70

F 5 13 18 20 21 30 23 12 04 02

Q4 Continuous Series

C I 0-5 5-10 10-15 15-20 20-25 25-30 30-35 35-40

F 5 7 15 18 16 9 6 3

Q5 WHEN mid points are given

M 15 25 35 45 55 65 75 85

F 5 8 12 16 28 15 3 2

Q5 Unequal class intervals

Marks more than 0 10 20 30 40 50 60 70 80

F 40 38 33 25 15 7 5 2 0

Q6 Variable 0-10 10-20 20-40 40-50 50-70

F 5 12 40 32 28

Inclusive series

Marks 0-9 10-19 20-29 30-39 40-49 50-59

F 3 7 15 25 10 4

FIND MEAN MEDIAN MODE in the same data

C.I 0-10 10-20 20-30 30-40 40-50 50-60

F 4 15 10 7 3 1

RANGE AND ITS COEFFICIENT

Q1 Individual series

22,35,32,45,42,48,39

Q2. 310,350,420,105,115,290,245,450,300,370

Q3 Discrete series

X 6 7 8 9 10 11 12 13

F 8 12 14 20 15 8 7 10

Q4 X 10 20 30 40 50 60 70

F 8 12 7 30 10 5 2

Q5 X 10-20 20-30 30-40 40-50 50-60

F 12 18 14 63 19

Q6 X 5-9 10-14 15-19 20-24 25-29 30-34

F 4 6 3 2 6 4

QUARTILE DEVATION AND ITS COEFFICIENT

Q1 X 1200 1400 1500 1700 2000 2100 2200

Q2 20 28 40 12 30 15 50

Q3

X 150 151 152 153 154 155 156 157 158

F 15 20 32 35 33 22 20 12 10

Q4

X 10 20 30 40 50 60

F 4 7 15 8 7 2

Q5 X 5-10 10-15 15-20 20-25 25-30 30-35 35-40 40-45 45-50

F 6 10 18 30 15 12 10 6 4

Q6 X [Less than] 25 30 35 40 45

F 2 10 26 16 7

MEAN DEVIATION And Coefficient [From mean and median]

Q1 X 100 150 80 90 160 200 140

Q2 X 210 220 225 225 235 240 250 270 280

Q3 X 5 10 15 20 25 30 35 40

F 16 32 36 44 28 18 12 14

Q4 X 10 11 12 13 14

F 3 12 18 12 3

Q5 C.I 140-150 150-160 160-170 170-180 180-190 190-200

F 4 6 10 18 9

Q6 C.I 0- 10 10-20 20-30 30-40 40-50 50-60

F 3 5 7 2 9

Q7 C.I [MORE THAN] 10 20 30 40 50 60

F 5 12 20 35 54 60

STANDARD DEVIATION

INDIVIDUAL SERIES

Q1 8,9,15,23,5,11,19,8,10,12

Q2 3,5,6,7,10,12,15,18

Q3 160,160,161,162,163,163,163,164,164,170

Discrete series

Q4

X 3, 4, 5 6 ,7 , 8,9.

F 3,7,22,60,85,32,8

Q5 X 10 20 30 40 50 60 70

F 6 8 16 15 32 11

Q6 X 60 61 62 63 64 65 66 67 6

F 2 0 15 29 25 12 10 4 3

CONTINUOUS SERIES

Q1 AGE 20-25 25-30 30-35 35-40 40-45 45-50

F 17 11 8 5 4 3

Q2 0-10 10-20 20- 30 30-40 40-50 50-60 60-70

F 2 4 6 8 6 X 4 2

Q3 X 0-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80

F 5 10 20 40 30 20 10 4

Q4 X 5-10 10-15 15-20 20-25 25-30 30-35

F 2 9 29 54 11 5

Q5 X 15-19 20-24 25-29 30-34 35-39 40-44

F 4 20 38 24 10 4

VARIATION AND COEFFICIENT

Q1 Calculate coefficient of variation

Marks 0 10 20 30 40 50 60 70

F 100 90 75 50 20 10 5 0

(a) WHICH two towns A,B , Pays out more amount of daily market?

(b) Find average of daily pocket

© Which town is more consistent?

Q2 The price of share of a company X and Y are given below . State which company is more stable?

X 25 50 45 30 70 42 36 48 34 60

Y 10 70 50 20 95 55 42 60 48 80

Q3 From the following data of two workers , identify who is a more consistent workers?

	WORKERS	
	A	B
Av.Time	40	42
Std.	8	6

Q 4 Find which modal has greater uniformity?

Life in years	0-2	2-4	4-6	6-8	8-10	10-12
Modal A	5	16	13	7	5	4
	2	7	12	19	9	1

CORRELATION OF COEFFICIENT

Q1 Draw scatter dig

X	4	5	6	7	8	9	10	11	12
Y	78	72	66	60	54	48	42	36	30

.Q2

X	8	16	24	31	42	50
Y	70	58	50	32	26	12

Q3

X	8	10	12	11	9	7	13	14	15
Y	5	7	9	8	6	4	10	11	12

Q 4

X	10	12	8	15	20	25	40
Y	15	10	6	25	16	12	8

Q karl pearsons coefficient

X	10	12	8	15	20	25	40
Y	15	10	6	25	16	12	8

SUBJECT TEACHER :_____ **HOD:_____**

INFORMATICS PRACTICES

- **Complete Practical File with 7 Java programs (of for loop, do while loop, while loop, if-else, switch case, radio button, check box)**

Chapter 6-Control Structure

Q1. What is the difference between while and do while? Explain with the help of an example.

Q2. What is the purpose of default clause in a switch statement?

Q3. If we don't use break in case of switch statement what will happen? What is that condition known as?

Q4. Explain the use of for statement along with its syntax.

Q5. What are relational operators? Explain with the help of suitable example.

Q6. Following are the grading system of a school.

Marks	Grade
91-100	A+
81-90	A
71-80	B
61-70	C
Less than 61	D

Develop and application based on the above grading system, to display the grade in a dialog box depending upon the marks entered. For example if the marks entered is 91. The message should be "The student has scored A+".

Q7. Design a GUI application to print the Fibonacci series. The user should enter the last number, and once he clicks on the enter button the Fibonacci series up to that number should be displayed .

Chapter 7-Programming Guidelines

Q1. Explain the different types of errors?

Q2. What are the various stages of developing an application? Explain each statement in 2-3 lines.

Q3. Why do we use comments in a program? Excessive comments add time to the execution of your program (true/false). Justify.

Q4. Explain the following terms:

a) Exception handling
b) Syntax
c) Portability
d) Prettyprinting

Chapter 2-Software Concepts and Productivity Tools

Q1. What do you mean by software? What are the two types of software?

Q2. What is operating system? Why do we need operating system?

Q3. Write the functions of operating system

Q4. What are the different types of software? Explain each in 1 line.

Q5. What is BIOS?

Q6. Define the following a) Interpreter b)Compiler c)Assembler d) Language Processor

Q7. Explain the term IDE.

Q8. Explain the relationship between hardware and software with the help of an suitable example?

Q8. Write a short note on : a) Utility Software b)Device Driver

Q9. What do you mean by bit and byte?

Chapter 3-Information Security and Social Networking

Q1. What do you mean by security of a computer?

Q2. What is a computer virus?

Q3. Define the term anti virus software?

Q4. What is cyber crime? Explain with the help of an example

Q5. Define the following terms: a)Worms b)Trojan c)Spyware d)Cookie

Q6. What do you mean by term firewall in computer? How does it work?

Q7. Compare digital Signature and digital certificate?

Q8. Differentiate between the following

a) Virus and Worm
b) Authorization and Authentication

Q9. What are the common threats pertaining to social networking sites. Also write the precautions for each.

Q10. What is desktop security? What are the various measures?

SUBJECT TEACHER :_____ **HOD:**_____

PSYCHOLOGY

Chapter covered- Ch-5 Sensory, Attentional and perceptual process Ch-6 Learning

1. How does classical conditioning demonstrate learning by association?
2. A good role model is very important for a growing up child. Discuss the kind of learning that support it.
3. How can we identity students with learning disabilities?
4. How does transfer of learning takes place?
5. Why do illusions occur?
6. What is meant by light and dark adaptation? How do they take place?
7. How does perception of space take place?
8. How does auditory sensation take place?

Define the terms:

1. Functional Fixedness
2. Image
3. Mnemonics
4. Elaborative rehearsals
5. Echoic memory

SUBJECT TEACHER :_____ **HOD:**_____

PHYSICAL EDUCATION

Q1 What is SPD?

Q2 Define stress ?

Q3 Explain the procedure and benefits of chakrasana ?

Q4 Mention 3 sociological aspect of women participation of women player ?

Q5 Describe types of personality according to Sheldon ?

Q6 What are the causes of bad posture ? Describe in brief?

SUBJECT TEACHER :_____ **HOD:**_____

GENERAL STUDIES

DO L-12 : OZONE LAYER DEPLETION & ITS EFFFECTS, GREENHOUSE EFFECTS & ITS CONCEQUENCES

L-14 : POLLUTION RELATTED DISEASES

L-16 : ENERGY NEEDS – CHANGING GLOBAL PATTERNS

L-19 : CONSERVATION & EFFICIENCY OF ENERGY SOURCES

SUBJECT TEACHER :_____ **HOD:**_____