SAMPLE QUESTION PAPER - 3
Computer Science (083)
Class XII (2024-25)

Time Allowed: 3 hours   **Maximum Marks: 70**

General Instructions:

- This question paper contains 37 questions.
- All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions.
- The paper is divided into 5 Sections- A, B, C, D and E.
- Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
- Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.
- Section C consists of 3 questions (29 to 31). Each question carries 3 Marks.
- Section D consists of 4 questions (32 to 35). Each question carries 4 Marks.
- Section E consists of 2 questions (36 to 37). Each question carries 5 Marks.
- All programming questions are to be answered using Python Language only.
- In case of MCQ, text of the correct answer should also be written.

Section A

1. State true or false: **[1]**

   The value of the expressions 4/(3*(4-2)) and 4/3*(4-2) is the same.

2. What is the full form of DDL?   **[1]**

   a) Data Definition Language   b) Dynamic Data Language

   c) Detailed Data Language   d) Data Derivation Language

3. What is the output of following code?   **[1]**
   ```
   l1 = [[4,1],[2,3],[3,5],[6,0.5]]
   l1.sort()
   print(l1)
   ```

   a) [[2,3],[3,5],[4,1],[6,0.5]]   b) [[2,3],[3,4],[5,6]]

   c) [[0.5,1],[2,3],[3,4],[5,6]]   d) [[6,0.5],[4,1],[2,3],[3,5]]

4. What are the possible outcome(s) executed from the following code? Also specify   **[1]**
   the maximum and minimum values that can be assigned to variable PICK.

```
import random
PICK= random.randint(0, 3)
CITY = ["DELHI", "MUMBAI", "CHENNAI", "KOLKATA"];
for I in CITY :
for J in range(l, PICK) :
print(I, end = " ")
print()
```

a) DELHI
   MUMBAIMUMBAI
   KOLKATAKOLKATAKOLKATA

b) DELHIDELHI
   MUMBAIMUMBAI
   CHENNAICHENNAI
   KOLKATAKOLKATA

c) DELHI
   MUMBAI
   CHENNAI
   KOLKATA

d) DELHI
   DELHIMUMBAI
   DELHIMUMBAICHENNAI

5.   a. Given is a Python string declaration: **[1]**

     NAME = "Learning Python is Fun"

     Write the output of : print(NAME[-5:-10:-1])

     b. Write the output of the code given below:

     dict1={1:["Rohit",20], 2:["Siya",90]}
     dict2={1:["Rahul",95], 5:["Rajan",80]}
     dict1.update(dict2)
     print(dict1.values())

6.   Computer communication signal which is in the form of the continuous wave is   **[1]**
     called

     a) modulation signal   b) Binary signal

     c) digital signal   d) analog signal

7.   _____ method takes a string and writes it in the file.   **[1]**

     a) write()   b) writelines()

     c) writer()   d) writerow()

8. Which of the following is correct to retrieve any character at index 'i' in string 's'? **[1]**

   a) s.__getitem__(i)   b) s.getitem(i-1)

   c) s.__getitem__(i-1)   d) s.getitem(i)

9. What is the meaning of "HAVING" clause in SELECT query? **[1]**

   a) To filter out the row groups   b) To filter out the column groups

   c) To filter out the row values   d) To filter out the row and
                                               column values

10. What will happen with the following code? **[1]**
    file1 = open ("c:\\users\\temp\\myfile.text",r)
    file1.seek (2,-10)
    print "The pointer is at", file1.tell()
    file1.close()

11. State true or false: **[1]**

    The first line of function definition that begins with keyword def and ends with a
    colon (:), is also known as function header.

12. Process of inserting an element in a stack is called _____. **[1]**

    a) Evaluation   b) Create

    c) Push   d) Pop

13. Write a query to display the Sum, Average, Highest and Lowest salary of the
    employees grouped by department number. **[1]**

14. Internet is an example of _____ topology. **[1]**

    a) Mesh   b) Star

    c) Tree   d) Bus

15. What data type is the object below? **[1]**
    L = 1, 23, 'hello', 1

    a) list   b) dictionary

    c) tuple   d) array

16. Which of the following join gives the intersection of two tables? **[1]**

    a) Inner join   b) Outer join

    c) Equi join   d) Fuller join

17. Protective covering that protects the optical fiber from outside environment is known as **[1]**

    a) Core   b) Jacket

    c) Buffer   d) Cladding

18. Which of the following come under cyber crime? **[1]**

  i. Operating someone's Internet banking account, without his knowledge.

  ii. Stealing a keyword from someone's computer.

  iii. Working on someone's computer with his/her permission.

  iv. None of these

    a) Option (i)   b) Option (iii)

    c) Option (iv)   d) Option (ii)

19. **Assertion (A):** In Python, a stack can be implemented using a list. **[1]**
    Reasoning (R): A stack is an ordered linear list of elements that works on the principle of First In First Out (FIFO).

    a) Both A and R are true and R is the correct explanation of A.   b) Both A and R are true but R is not the correct explanation of A.

    c) A is true but R is false.   d) A is false but R is true.

20. **Assertion (A):** To store the data permanently into the file we use file handling. **[1]**
    Reason (R): A file is a named location on a disk to store related information.

    a) Both A and R are true and R is the correct explanation of A.   b) Both A and R are true but R is not the correct explanation of A.

    c) A is true but R is false.   d) A is false but R is true.

21. **Assertion (A):** The python float() function returns a floating-point number. **[1]**
    Reason (R): It takes one argument.

    a) Both A and R are true and R is the correct explanation of A.

    b) Both A and R are true but R is not the correct explanation of A.

    c) A is true but R is false.

    d) A is false but R is true.

Section B

22. Give one advantage and one disadvantage of optical fiber cable and coaxial cable used in communication. **[2]**

23. Consider the following table structure **[2]**
    Table: Faculty with fields as

F_ID (P)
Fname
Lname
Hire_date
Salary

Write the Python code to create the above table.

24.   i. What is the output of the following code? **[2]**

```
dnry={0: 'a', 1: 'b', 2: 'c'}
for x, y in dnry:
print(x, y)
```

ii. Write the corrected code for part (a) so that it prints keys and values both.

<div align="center">OR</div>

If a is (1, 2, 3)

  i. what is the difference (if any) between a * 3 and (a, a, a)?

ii. is a * 3 equivalent to a + a + a?

iii. what is the meaning of a[1:1]?

iv. what's the difference between a[1:2] and a[1:1]?

25. Consider the table Faculty whose columns name are **[2]**
    F_ID, Fname, Lname, Hire_date, Salary, Course_name

Write the code to insert the following record into the above table.

| 101 | Riya | Sharma | 12-10-2004 | 35000 | Java Advance |
| 102 | Kiyaan | Mishra | 3-12-2010 | 28000 | Data Structure |

26. Write a program which will find all such numbers which are divisible by 7 but are not a multiple of 5, between 200 and 300 (both included). **[2]**

OR

Underline the syntax errors in the following program

```
x = int(input("Enter first number:))
y = int(input("Enter second number:"))
z = int(input("Enter third number:")
a = x + b + z
print ("Result = ", b)
```

27. Write a Python program that read the data from file 'original.dat' and delete the line(s) having word (passed as an argument). Then write these data after removing lines into file 'duplicate.dat'. **[2]**

OR

What is the output of following code?
```
fh = file ("poem.txt", "r")
size = len(fh.read( ))
print(fh.read(5))
```

28. How can you pass dictionary to function? **[2]**

Section C

29. Write definition of a method EvenSum(NUMBERS) to add those values in the list of NUMBERS, which are not odd. **[3]**

OR

Find the errors in code given below:

```
i. def minus(total, decrement)
   output = total - decrement
   print(output)
   return (output)
```

ii. define check()

    N = input ('Enter N:')

    i = 3

    answer = 1 + i * * 4/N

    Return answer

iii. def alpha(n, string = 'xyz', k = 10) :

    return beta(string)

    return n

    def beta (string)

    return string == str(n)

    print(alpha("Valentine's Day"):)

    print(beta (string = 'true'))

    print(alpha(n=5, "Good-bye") :)

30.   i. A SQL table **ITEMS** contains the following columns: **[3]**

    INO, INAME, QUANTITY, PRICE, DISCOUNT

    Write the SQL command to remove the column **DISCOUNT** from the table.

ii. Categorize the following SQL commands into **DDL** and **DML**:

    CREATE, UPDATE, INSERT, DROP

<div align="center">OR</div>

Consider the following Query :

SELECT brand, MAX(price)

FROM product

GROUP BY brand

HAVING price > 100 ;

The above query is giving error.

 i. Identify and list the error.

ii. Correct the error so that only those brands get listed that have a max price more than 100.

iii. How will the corrected query's result be different from the following query?

    SELECT brand, price

    FROM product

    WHERE price >100

    GROUP BY brand;

31. Write the definition of a function **ChangeGender()** in Python, which reads the **[3]** contents of a text file **"BIOPIC.TXT"** and displays the content of the file with every occurrence of the word **'he'** replaced by **'she'**. For example, if the content of the file **"BIOPIC.TXT"** is as follows:

Last time he went to Agra,

there was too much crowd, which he did not like.

So this time he decided to visit some hill station.

The function should read the file content and display the output as follows:

Last time she went to Agra,

there was too much crowd, which she did not like.

So this time she decided to visit some hill station.

OR

Define a function overlapping () that takes two lists and returns true if they have at least one member in common, False otherwise.

Section D

32. Write a program to implement a stack for these book details (bookno, bookname). **[4]** That is, now each item node of the stack contains two types of information -a bookno and its name. Just implement push and display operations.

OR

Write a program to print a string in reverse order.

33. God made the Earth; **[4]**

Man made confining countries

And their fancy-frozen boundaries.

But with unfound boundless Love

I behold the borderland of my India

Expanding into the World.

Hoil, mother of religions, Lotus, scenic beauty, and sages!

Consider the file "poemBTH.txt" and predict the outputs of following code fragments if the file has been opened in filepointer file1 with code:

file1 = open("E :\\mydata\\poemBTH.txt", "r+")

 i. print ("A. Output 1")

   print(file1.read())

   print()

ii. print("B. Output 2")

print(file1.readline())

print()

iii. print ("C. Output 3")

print(file1.read(9))

print()

iv. print ("D. Output 4")

print(file1.read(9))

print()

v. print("E. Output of Readlines function is")

print(file1.readlines())

print()

34. Give output for following SQL queries as per given table(s): **[4]**

Table: HOSPITAL

No.	Name	Age	Department	Dateofadm	Charges	Sex
1.	Arpit	62	Surgery	21/01/98	300	M
2.	Zarina	22	ENT	12/12/97	250	F
3.	Kareem	32	Orthopedic	19/02/98	200	M
4.	Arun	12	Surgery	11/01/98	300	M
5.	Zubin	30	ENT	12/01/98	250	M
6.	Ketaki	16	ENT	24/02/98	250	F
7.	Ankita	29	Cardiology	20/2/98	800	F
8.	Zareen	45	Gynecology	22/02/98	300	F
9.	Kush	19	Cardiology	13/01/98	800	M
10.	Shilpa	23	Nuclear Medicine	21/02/98	400	F

i. SELECT COUNT (DISTINCT Charges) FROM HOSPITAL;

ii. SELECT MIN (Age) FROM HOSPITAL WHERE Sex = "F";

iii. SELECT SUM (Charges) FROM HOSPITAL WHERE Department = "ENT";

iv. SELECT AVG (Charges) FROM HOSPITAL WHERE Dateofadm< {12/08/98};

OR

Give output for following SQL queries as per given table(s) :

relation Teacher

No.	Name	Age	Department	Date of join	Salary	Sex
1.	Jugal	34	Computer	10/01/97	12000	M
2.	Sharmila	31	History	24/03/98	20000	F
3.	Sandeep	32	Maths	12/12/96	30000	M
4.	Sangeeta	35	History	01/07/99	40000	F
5.	Rakesh	42	Maths	05/09/97	25000	M
6.	Shyam	50	History	27/06/98	30000	M
7.	Shiv Om	44	Computer	25/02/97	21000	M
8.	Shalakha	33	Maths	31/07/97	20000	F

i. SELECT COUNT (distinct department) FROM TEACHER;

ii. SELECT MAX (Age) FROM TEACHER WHERE Sex = "F";

iii. SELECT AVG(Salary) FROM TEACHER WHERE Dateofjoin< {12/07/96};

iv. SELECT SUM (Salary) FROM TEACHER WHERE Dateofjoin < {12/07/96}

35. Create following table using Python code where   **[4]**
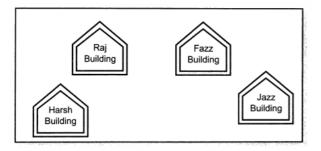
Database - Test

Table - Watches

User name - Root

Password - System

WatchId	WatchName	Price	Type	Qtystore
W001	High Time	10000	Unisex	100
W002	Life Time	15000	Ladies	150
W003	Wave	20000	Gents	200
W004	High Fashion	7000	Unisex	250
W005	Golden Time	25000	Gents	100

Section E

36. Ravya Industries has set up its new center at Kaka Nagar for its office and web   **[5]**
based activities. The company compound has 4 buildings as shown in the diagram
below:

Center to center distances between various building is as follows:

Harsh Building to Raj Building	50 m
Raj Building to Fazz Building	60 m
Fazz Building to Jazz Building	25 m
Jazz Building to Harsh Building	170 m
Harsh Building to Fazz Building	125 m
Raj Building to Jazz Building	90 m

Number of Computers in each of the buildings is as follows:

Harsh Building	15
Raj Building	150
Fazz Building	15
Jazz Building	25

i. Suggest the most suitable place (i.e., building) to house the server of this organisation with a suitable reason.

ii. Suggest the placement of the following devices with justification:

    a. Internet Connecting Device/Modem

    b. Switch

iii. The organisation is planning to link its sale counter situated in various parts of the same city, which type of network out of LAN, MAN or WAN will be formed? Justify your answer.

37.   Write SQL queries for (i) to (vii) on the basis of table ITEMS and TRADERS: **[5]**

Table: ITEMS

ICODE	INAME	QTY	PRICE	COMPANY	TCODE
1001	DIGITAL PAD 12i	120	11000	XENITA	T01
1006	LED SCREEN 40	70	38000	SANTORA	T02
1004	CAR GPS SYSTEM	50	21500	GEOKNOW	T01

| 1003 | DIGITAL CAMERA 12X | 160 | 8000 | DIGICLICK | T02 |
| 1005 | PEN DRIVE 32 GB | 600 | 1200 | STOREHOME | T03 |

Table: TRADERS

TCode	TName	City
101	ELECTRONIC SALES	MUMBAI
103	BUSY STORE CORP	DELHI
102	DISP HOUSE INC	CHENNAI

i. To display the details of all the items in ascending order of item names (i.e., INAME).

ii. To display item name and price of all those items, whose price is in the range of 10000 and 22000 (both values inclusive).

iii. To display the number of items, which are traded by each trader. The expected output of this query should be:
T01 2 T02 2 T03 1

iv. To display the price, item name and quantity (i.e., qty) of those items which have quantity more than 150.

v. To display the names of those traders, who are either from DELHI or from MUMBAI.

vi. To display the names of the companies and the names of the items in descending order of company names.

vii. Obtain the outputs of the following SQL queries based on the data given in tables ITEMS and TRADERS above.

   a. SELECT MAX (PRICE), MIN (PRICE) FROM ITEMS;

   b. SELECT PRICE*QTY FROM ITEMS WHERE CODE=1004;

   c. SELECT DISTINCT TCODE FROM ITEMS;

   d. SELECT INAME, TNAME FROM ITEMS I, TRADERS T WHERE I.TCODE=T.TCODE AND QTY<100;

<div align="center">OR</div>

Consider the following tables CABHUB and CUSTOMER and answer (b) and (c) parts of this question:

Table: CABHUB

Vcode	VehicleName	Make	Colour	Capacity	Charges

100	Innova	Toyota	WHITE	7	15
102	SX4	Suzuki	BLUE	4	14
104	C Class	Mercedes	RED	4	35
105	A-Star	Suzuki	WHITE	3	14
108	Indigo	Tata	SILVER	3	12

Table: CUSTOMER

Ccode	Cname	Vcode
1	Hemant Sahu	101
2	Raj Lai	108
3	Feroza Shah	105
4	Ketan Dhal	104

a. Give a suitable example of a table with sample data and illustrate Primary and alternate Keys in it.

b. Write SQL commands for the following statements:

   i. To display the names of all the white-colored vehicles.

   ii. To display the name of vehicle name and the capacity of vehicles in ascending order of their sitting capacity.

   iii. To display the highest charges at which a vehicle can be hired from CABHUB.

   iv. To display the customer name and the corresponding name of the vehicle hired by them.

c. Give the output of the following SQL queries:

   i. SELECT COUNT (DISTINCT Make) FROM CABHUB;

   ii. SELECT MAX(Charges), MIN(Charges) FROM CABHUB;

   iii. SELECT COUNT (*) Make FROM CABHUB;

   iv. SELECT Vehicle FROM CABHUB WHERE Capacity=4;

Solution
SAMPLE QUESTION PAPER - 3
Computer Science (083)
Class XII (2024-25)
Section A

1. **(a)** True

   Explanation:

   The result of both of these expressions is same because the presence of parenthesis does affect the order of precedence.

2. **(a)** Data Definition Language

   Explanation:

   Data Definition Language is a language used to define data structures and modify data.

3. **(a)** [[2,3],[3,5],[4,1],[6,0.5]]

   Explanation:

   Sorting is done by giving preference to first value of each list.

4.

   (c) DELHI

   MUMBAI

   CHENNAI

   KOLKATA

   Explanation:

   PICK can have maximum value 3 and minimum value 0.

5. a. si no

   b. dict_values([['Rahul', 95], ['Siya', 90], ['Rajan', 80]])

6.

   (d) analog signal

   Explanation:

   Analog Signal, a continuous time varying signal, which represents a time varying quantity.

7. **(a)** write()

   Explanation:

   write()

8. **(a)** s.__getitem__(i)

   Explanation:

   It is the correct syntax to call character at index i of string s

9. **(a)** To filter out the row groups

   Explanation:

   A HAVING clause is used to filter values from a group.

10. The code will open the file myfile.txt first by open function and then by seek() method place the pointer 10 bytes before the end of file. Lastly, it will tell the position of the file pointer from the starting of the file.

11. **(a)** True

    Explanation:

    True

12.

    (c) Push

    Explanation:

    The process of inserting an element in a stack is called push operation.

13. mysql > SELECT SUM (sal), AVG (sal), MAX (sal), MIN (sal) FROM empl GROUP BY deptno;

14. **(a)** Mesh

    Explanation:

    Mesh

15.

    (c) tuple

    Explanation:

    The items of the tuple are separated with a comma (,) and enclosed in parentheses ()

16. **(a)** Inner join

    Explanation:

    Inner join

17.

    (c) Buffer

    Explanation:

    Core is the part through which light travels.

    Cladding covers the core and reflects light back to it.

    Buffer is the fiber protection.

    Jacket is not in the context.

18. **(a)** Option (i)

    Explanation:

    Operating someone's Internet banking account, without his knowledge.

19.

    (c) A is true but R is false.

    Explanation:

    A is true but R is false.

20.

(b) Both A and R are true but R is not the correct explanation of A.

Explanation:

The file handling plays an important role when the data needs to be stored permanently in the file. A file is a named location on a disk to store related information.

21.

(b) Both A and R are true but R is not the correct explanation of A.

Explanation:

The python float() function converts the passed value into floating point number and returns the floating point number.

Section B

22. **Optical Fiber Cable:**

Advantage: It is free of electrical noise and interference.

Disadvantage: It is an expensive communication medium.

Coaxial cable:

Advantage: It provides a cheap means of transporting multi-channel television signals around metropolitan areas.

Disadvantage: When using coaxial cables over long distances, signal loss is a disadvantage.

23. import mysql.connector

mycon = mysql.connector.connect(host = "localhost",user = "root",passwd = "system",data

cursor = mycon.cursor()

db = cursor.execute("CREATE TABLE Faculty(F_ID varchar(3) Primary key, Fname varch

mycon.close()

24. i. The above code will produce Error as we can iterate only on keys in a dictionary. Thus the line:

for x, y in dnry:

is wrong and it will give error.

ii. dnry={0: 'a', 1: 'b', 2: 'c'}

for x in dnry:

print(x, dnry[x])

output for this will be:

0 a

1 b

2 c

    i. Expression a * 3 will give a tuple while (a, a, a) will give a nested tuple :

        >>> a = (1, 2, 3)

        >>> a * 3

        (1, 2, 3, 1, 2, 3, 1, 2, 3)

        >>> (a, a, a)

        ((1, 2, 3), (1, 2, 3), (1, 2, 3))

   ii. Yes

  iii. Empty tuple ( )

   iv. a [1:2] will give a tuple with one item while a[1:1] will give an empty tuple.

25. import mysql.connector

    mycon=mysql.connector.connect(host="localhost",user="root",passwd="system",database=

    cursor=con.cursor()

    sql="INSERT INTO Faculty (F_ID, Fname, Lname, Hire_date, Salary, Course_Name) VAI

    val=[(101, 'Riya', 'Sharma', '12-10-2004', 35000, 'Java Advance'), (102, 'Kiyaan', 'Mishra', '

    try:

       cursor.executemany(sql, val)

       mycon.commit()

    except:

       mycon.rollback()

    mycon.close()

26. l = []

    for i in range(200, 300):

       if(i%7==0) and (i%5!=0)

          l.append (str(i))

    print(','.join(l))

    x = int(input("Enter first number : "))

    y = int(input("Enter second number:"))

    z = int(input("Enter third number:"))

    a = x + y + z

    print("Result = ", a)

27. import os

    def Delete (word):

       file1=open('original.dat', 'rb')

```
      nfile=open('duplicate.dat', 'wb')
      while True:
          line=file1.readline()
          if not line:
              break
          else:
              if word in line:
                  pass
              else:
                  print(line)
                  nfile.write(line)
    file1.close()
    nfile.close()
```

<p style="text-align:center">OR</p>

No output

Explanation: The **fh.read()** of line 2 will read the entire file content and place the file pointer at the end of file. For the **fh.read(5)**, it will return nothing as there are no bytes to be read from EOF thus **print()** statement prints nothing.

28. Dictionary can also be pass to the function by following example. e.g.

```
def dic(a):
    for i in a:
        print(i , ":", a [i])
dic({1:"One", 2:"Two", 3:"Three"})
```

Output

1 : One

2 : Two

3 : Three

<p style="text-align:center">Section C</p>

29.
```
def EvenSum (NUMBERS):
even_sum = 0
for num in range (len(NUMBERS)):
if NUMBERS[num] %2 == 0 :
even_sum = even_sum + NUMBERS[num]
print (even_sum)
```

<p style="text-align:center">OR</p>

  i. Syntax error. Colon (:) missing in the end of function header. Colon should be added to end of function header.

  ii. Syntax error. Keyword to define a function is def (not define).

   Also, colon (:) missing in the end of function header.

   Return is not a valid statement. It should be return.

  iii. No error in function alpha's definition.

   Multiple return statements are syntactically legal. But in the above code, the second return statement is unreachable. You can return multiple values by using return value1, value2.

   In function beta()'s definition, Colon (:) missing in the end of function header.

   In __main__part, the colons at the end of first and third print( ) statements is invalid (not enclosed in quotes)

   In third print( ) statement, in the function call of alpha( ), positional argument follows keyword argument, which is a syntax error.

30. i. **Removing the Column "DISCOUNT":** To remove the column named "DISCOUNT" from the existing "ITEMS" table, we can use the following SQL command:

  ALTER TABLE ITEMS DROP COLUMN DISCOUNT;

 ii. • **Categorizing SQL Commands:**

   DDL (Data Definition Language):

    ▪ CREATE: Used to create a new database or its objects.

    ▪ DROP: Used to delete objects (e.g., tables) from the database.

  • **DML (Data Manipulation Language):**

    ▪ INSERT: Used to add new records to a table.

    ▪ UPDATE: Used to modify existing records in a table.

<center>OR</center>

 i. The condition price > 100 with HAVING clause is error because with group by groups of records get created that contain the summary result and price > 100 is applicable on individual records and not on group of records.

 ii. SELECT brand, MAX(price) FROM product GROUP BY brand HAVING MAX(price) > 100 ;

 iii. The corrected query will return only those groups where MAX(price) > 100.

  But the given query will first extract records with price > 100 and then group them on the basis of column brand.

31. def ChangeGender():

  try:

   # Read the content from the file

   with open("BIOPIC.TXT", "r") as file:

```python
        content = file.read()
    # Replace 'he' with 'she'
    modified_content = content.replace("he", "she")
    #Display File before modification:
    print("Original content:\n", content)
    # Display the modified content
    print("Content After Modification:\n", modified_content)
  except FileNotFoundError:
    print("File 'BIOPIC.TXT' not found.")
# Call the function
ChangeGender()
```

                              OR

```python
def overlapping (list1, list2):
len_1 = len(list1)
len_2 = len(list2)
for i in range (0, len_1):
for j in range (0, len_2):
if list1[i]==list2[j]:
return True
else:
return False
```

Section D

32. Implementation of stack for push and display operation:-

```python
def isEmpty(stk):
if stk==[ ]:
return True
else:
return False
def pushbook(stk, item):
stk. append (item)
top=len(stk)-1
def displaybook(stk):
if isEmpty(stk):
print "Stack Empty"
else:
top = len(stk)-1
```

```
print "Book No----- Book Name"
for a in range (top, -1,-1)
print stk[a].split( )
#main
stack = [ ]
top = None
while True:
print "Books"
print "1. Add a book"
print "2. Display list"
print "3. Exit"
ch=int (row_input("Enter your choice 1-3:"))
if ch == 1:
bno = row_input("Enter Book No.")
bname = row_input("Enter Book Name")
item = [bno, bname]
pushbook(item, stk)
row_input()
elif ch == 2:
displaybook(stk)
row_input()
elif ch==3:
break
else:
print "Invalid choice!"
row_input( )
```

<div align="center">OR</div>

To print a string in Reverse order:-
```
def pushstack(stack, ch):
stack, append(ch)
top=len(stack)-1
return
def popstack (stack):
if isempty(stack):
return
else
top=len(stack)-1
```

```
    for a in range(top, -1, -1)
    print stack[a],
    return
    def isempty (stack):
    if stack==[]:
    else:
    return True
    else:
    return False
    #.....main.....
    str=[]
    top=None
    str=raw_input("Enter a string")
    while a in str:
    pushstack(stk, str)
    print "------ Reverse-------"
    popstack(stk)
```

33. i. A.Output 1

God made the Earth; Man made confining countries

And their fancy-frozen boundaries.

But with unfound boundless love

I behold the borderland of my India

Expanding into the World.

Hail, mother of religions, lotus, scenic beauty and sages!

ii. B.Output 2

God made the Earth;

iii. C.Output 3

God made

iv. D.Output 4

God made

v. E. Output of Readlines function is

['God made the Earth;\n', 'Man-made confining countries\n', 'And their fancy frozen boundaries. \n', ' But with unfound boundless love\n', ' I behold the borderland of my India\n', ' Expanding into the World. \n', 'Hail, mother of religions, lotus, scenic beauty, and sages!']

34. i. COUNT (DISTINCT Charges)

5

ii. MIN (Age)

   16

iii. SUM (Charges)

   750

iv. AVG (Charges)

   385

<div align="center">OR</div>

OUTPUT

 i. 3

 ii. 35

iii. 0

iv. 0

35. import mysql.connector

   my=mysql.connector.connect(host = "localhost",user="Root",passwd="System",database=

   cursor=my.cursor()

   db=cursor.execute("CREATE TABLE Watches (Watch_Id varchar(5) Primary Key, WatchN

   sql = "INSERT INTO Watches(WatchId, WatchName, Price, Type, Qty_store) VALUES (%

   val=[("W001", "High Time", 10000, "Unisex", 100),("W002", "Life Time", 15000, "Ladies

   try:

      cursor.executemany(sql, val)

      my.commit();

   except:

      my.rollback()

   my.close()

Section E

36. i. The most suitable place/block to house the server of this organisation would be Raj
   Building, as this block contains the maximum number of computers, thus decreasing
   the cabling cost for most of the computers as well as increasing the efficiency of the
   maximum computers in the network.

   ii. a. Raj Building

   b. In the layouts, a hub/switch each would be needed in all the buildings, to
      interconnect the group of cables from the different computers in each block.

   iii. The type of network that shall be formed to link the sale counters situated in various
   parts of the same city would be a MAN because MAN (Metropolitan Area Networks)
   are the networks that link computer facilities within a city.

37. i. SELECT * FROM ITEMS ORDER BY INAME ASC;

ii. SELECT INAME, PRICE FROM ITEMS WHERE PRICE = > 10000 AND PRICE = < 22000;

iii. SELECT TCODE, COUNT (CODE) FROM ITEMS GROUP BY TCODE;

iv. SELECT PRICE, INAME, QTY FROM ITEMS WHERE QTY > 150;

v. SELECT TNAME FROM TRADERS WHERE (CITY = "DELHI") OR (CITY = "MUMBAI")

vi. SELECT COMPANY, INAME FROM ITEMS ORDER BY COMPANY DESC;

vii. a. 38000

    1200

  b. 1075000

  c. T03

  d. LED SCREEN 40 DISP HOUSE INC CAR GPS SYSTEM ELECTRONICS sales

<div align="center">OR</div>

a. Primary key of CABHUB table given in question = Vcode alternate key of CABHUB table = Vehicle Name. The Primary key of Customer table = Ccode Alternate Key of CUSTOMER = Cname.

b. i. SELECT VehicleName FROM CABHUB WHERE Colour = "WHITE";

ii. SELECT VehicleName, capacity From CABHUB ORDER BY Capacity ASC;

iii. SELECT MAX(Charges) FROM CABHUB;

iv. SELECT Cname, VehicleName FROM CABHUB, CUSTOMER WHERE CUSTOMER. Vcode= CABHUB. Vcode;

c. i. 4

ii.

Max(Charges)	Min(Charges)
35	12

iii. 5

iv. SX4

    C Class