

COMPUTER SCIENCE
Pre-Board
XII(Arts/Commerce/Science)

Full marks: 70

Time: 3 hours

The figures in the margin indicate full marks for the questions

General Instructions:

- (i) Write all the answers in the Answer Script.
- (ii) Attempt multiple choice questions and very short answer-type questions serially.
- (iii) Attempt all parts of a question together at one place.

1. Choose the correct option for the following: 1x6=6

a. A _____ is a collection of interrelated data, stored to serve multiple applications.

- (i) File (ii) Information
- (iii) Data file (iv) Database

b. A record stored at multiple locations will be referred to as data _____.

- (i) wastage (ii) redundancy
- (iii) inconsistency (iv) none of these

c. A keyword which marks the beginning of the function block

- (i) define (ii) def
- (iii) main (iv) none of the above

d. Which of the following is not a valid mode to open a file

- (i) r (ii) h
- (iii) a (iv) w

e. To read the next line of the file from a file object fp, we use

- (i) fp.read() (ii) fp.readline()
- (iii) fp.readlines() (iv) none of the above

f. Which type of transmission media is the least expensive to manufacture?

- (i) Coaxial (ii) Twisted pair cable
- (iii) CAT cable (iv) Fibre optic

2. Answer the following questions in not more than 2(two) or 3(three) sentences: 1x6=6

- (a) What is a token?
- (b) What is traversing?
- (c) What are fruitful functions?
- (d) What is a database
- (e) What is a stack?
- (f) Full form of DBMS

3. Answer **any six** of the following questions: 2x6=12

- (a) What are operators? What is their function?
- (b) Is return statement optional?
- (c) What is a Data-Structure?
- (d) What is a server? What is its role?
- (e) What is a result set?
- (f) What is Telnet?
- (g) What do you understand by the term Iteration?
- (h) What is a function?

4. Answer **any three** of the following in brief: 2x3=6

- (a) What are aggregate functions?
- (b) What are the rules for naming an Identifier?
- (c) What is SQL? What are different categories of commands available in SQL?
- (d) Explain if else Statement?
- (e) What is Dynamic Typing?

5. Answer **any two** the following questions: 2x2=4

- (a) What is the difference between a WHERE clause and a HAVING clause of SQL SELECT statement?
- (b) What is the use of ORDER BY clause? What is the default sort order of ORDER BY clause?
- (c) What is the significance of GROUP BY clause in a SQL query?

6. Answer the following questions 4x3=12

- (a) What is meant by network topology?
- (b) What is entry controlled loop? Which loop is entry controlled loop in Python?

OR

Differentiate between candidate key and alternate key?

- (c) What is the difference between read() and readlines() function?

7. Answer **any one** of the following questions 3

- (a) What are the different types of SQL functions?
- (b) Evaluate the expression 50, 60, +, 20, 10, -, * in tabular form showing stack status after every step
- (c) What is a Constraint?

8. Answer **any three** of the following questions: 3x3=9

- (a) What is a Server? What is its role?
- (b) Write a short note on circuit switching?
- (c) What is domain name?

9. Answer the following questions: 4x2=8

- (i) What are the major types of networks? Explain.
- (ii) Write a program to reverse the digits of a number using functions.

OR

Write a program to check if a number is odd or even using functions.

10. Write a Python code to connect to a MYSQL database namely 'Bank' and then fetch all those records from the table 'Employee' where salary > 40,000 4

OR

Given the following table:

Table : student

Rollno	Name	Marks	Grade	Section
1	Ray	78	A	A
2	John	90	A	B
3	Jessie	60	B	B
4	Kelly	50	C	A
5	Jay	67	B	A

Give the output of following SQL statements:

- (a) select distinct name from student;
- (b) select avg(marks) As "Average Marks" from student ;
- (c) select name, marks from student where marks>60;
- (d) select * from student order by marks;