

BOOST UP EXAMINATION - 2080

Grade : X

Subject: Opt. II Computer Science

F.M.: 50

Time: 2 hrs.

Candidates are required to write their answers according to the instructions given.

(Group 'A' 10×1=10)

1. Answer the following questions in one sentence. [6×1=6]

- a) Which type of cable typically uses RJ-45 connector?
- b) Write the name of the protocol used for sending email messages.
- c) What is the primary component of a database that organizes data into rows and columns?
- d) What data type is commonly represented as Boolean in MS - Access?
- e) Which mode is used to read and display data from an existing sequential data file?
- f) How many keywords does the C programming language have?

2. Write appropriate technical term for the following. [2×1=2]

- a) The conversion of encrypted data into its original form.
- b) A process of performing a variety of tech-enabled activities via virtual communities and network.

3. Write the full form of the following. [2×1=2]

- a) EFT
- b) MAN

(Group 'B')

4. Answer the following questions. [9×2=18]

- a) What is communication media? Draw a well labeled diagram of ring topology.
- b) Define digital citizenship. Write any two examples of cyber bullying.
- c) What is information security? Write any four hardware security measures.
- d) Differentiate between E-Commerce and Traditional Commerce.
- e) What is Internet of Things? Write any two applications areas of virtual reality.
- f) What is database? Give any four examples of DBMS.

- g) What is validation rule? Write any two importance of primary key.
- h) Define record. Write any two advantages of sorting.
- i) List any two major differences between query and report.

5. Write the output of the given program: Show with dry run in table. [2]

```
DECLARE SUB DISPLAY ( )
CLS
CALL DISPLAY
END

SUB DISPLAY
I = 10
N = 32
DO
IF N MOD 2 = 0 THEN PRINT N
I = I + 2
N = N + 1
LOOP UNTIL I > 19
END SUB
```

6. Re-Write the given program after correcting the bug. [2]

```
REM TO READ RECORDS FROM DATA FILE
OPEN "STUD.DAT" FOR OUTPUT AS #1
WHILE NOT EOF("STUD.DAT")
LINE INPUT #1, REC$
PRINT #1, REC$
LOOP
CLOSE #1
END
```

7. Study the following program and answer the given questions. [2×1=2]

```
DECLARE SUB CHECK(A,B)
INPUT "Enter three different numbers"; X, Y
CALL CHECK (X,Y)
END

SUB CHECK (A,B)
IF A>B THEN
T=A+B
ELSE
T=A*B
END IF
```

PRINT T
END SUB

Questions:

- a) What is the name of sub procedure used in the above program.
- b) List the real parameters and formal parameters in the above program.

8. Convert/Calculate as per the instruction. [4×1=4]

- i) $(816)_{10} = (?)_8$
- ii) $(FEED)_{16} = (?)_2$
- iii) $(101010)_2 \times (101)_2 - (1010)_2$
- iv) $(10110111)_2 \div (101)_2$

9.

- a) Write a program in QBASIC that asks radius of a circle and calculate its Total Surface Area and Volume of sphere. Create a sub procedure to calculate volume of sphere and user - defined function to calculate Total Surface Area. **[4]**
- b) A sequential data file "SALARY.DAT" contains the information, Employee-Code, Employee-Name, Post, Basic-Salary. Write a program to display those records whose Basic-salary is between 25000 to 40000 and Post is 'Manager'. **[4]**

10. Write a program in C language to ask a number and check whether it is divisible by 10 or not. [4]

OR

Write a program in 'C' language to display the series : 22,11,34,17,52,26,13,40,20,10.