

# **SEE (Grade Increment) 2080 (2024)**

## **Opt. II Computer Science**

**Time: 3 hrs Full Marks: 50**

### **Group 'A'**

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

- a) Give the name of any two unguided transmission media.
- b) Write any two benefits of e-governance service.
- c) Which type of query do you use to calculate the total marks of students from table in MS Access?
- d) What is the maximum length of the field name in MS-Access?
- e) List the different types of procedures in Qbasic.
- f) Which format specifier do you use in C language for 'int' data type?

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

- a) Digital trails created while using internet.
- b) Data transmission in only one direction.

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

- a) NIC
- b) OTP

### **Group B**

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

- a) Define Bus topology? Write any two advantages of Bus topology.
- b) What is cyber ethics? Write any two commandments for using computer.
- c) What is Backup? How it helps to secure data?
- d) Define e-commerce? Write any two names of Nepali e-commerce sites.
- e) What is social media? Write any one reason why it is popular now days.
- f) Define DBMS with any two examples of it.
- g) What is primary key? List any two advantages of it.

- h) What is query? List two types of it.  
i) Define report and mention any two uses of it.

**5. Write down the output of the given program and show them in dry run table. [2]**

```
DECLARE FUNCTION Series (N)
CLS
A=2
PRINT "Sum of the series"; Series (A)
END
```

```
FUNCTION Series (N)
Sum=0
FOR J = 1 TO 4
Sum=Sum + N
N=N+3
NEXT J
Series= Sum
END FUNCTION
```

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

```
REM to display name, post and salary of 10 employees
OPEN "EMP.TXT" FOR IN AS #1
FOR I=10 TO 1
INPUT #1, Name$, Post$, Salary
DISPLAY Name$, Post$, Salary
NEXT I
CLOSE "EMP.TXT"
END
```

**7. Study the following program and answer the given questions. [2]**

```
DECLARE SUB SEE (A$)
A$="COMPUTER SCIENCE"
END
```

```
SUB SEE (A$)
L=LEN(A$)
FOR I=L TO 1 STEP-2
PRINT MID$ (A$, I, 1)
NEXT I
END SUB
```

**Questions:**

- a) Which statement should be added in the main module to execute the program?
- b) List out the variables used in the above program.

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

- i)  $(10011011)_2 = (?)_8$
- ii)  $(99)_{10} = (?)_{16}$
- iii)  $(10110)_2 \times (101)_2 = (?)_2$
- iv)  $(101101)_2 \div (11)_2$

**9.**

- a) Write a program in QBASIC that asks radius and height of a cylinder. Create a User Defined Function to calculate total surface area and a Sub Program to calculate the volume of a cylinder.

**[4]****[Hint:  $TSA=2\pi r(r+h)$  and  $Volume = \pi r^2 h$ ]**

- b) Write a program to create a sequential data file "student.dat" to store 10 students name and obtain marks in four different subjects. **[4]**

**10. Write a program in C language that asks for an integer value and checks whether it is divisible by 7 or not. [4]****OR**

**Write a program in C language to display the series with their sum 1, 4, 9, 16.... up to 10th term.**