SEE COMPUTER SCIENCE 2080 (2024)

Time: 3 hrs Full Marks: 50

Group 'A'

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

a) What is unguided media?
b) What is the business done through the mobile?
c) Which data type is used to store date of birth in MS-Access?
d) Write any two elements of database.
e) What is modular programming?
f) Write any two features of C- language.

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

a) A secret group of characters used to protect computer system from unauthorized users.
b) An artificial environment created by a computer system that appears real.

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

a) URL
b) STP

Group B

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

a) Define network topology. Sketch a drawing of star topology.
b) Write any four commandments of computer ethics.
c) What are the computer security threats? Mention any two measures to protect from security threats.
d) What is E-commerce? List any two E-commerce companies in Nepal.
e) Define Artificial Intelligence with examples.
f) List any four features of MS-Access.
g) What is Primary Key? Give any two benefits of it.
h) Give the differences between the Select Query and Action Query.
i) Identify a record and field from the following table structure:

Symbol No.	Name	Marks
00100202S	Aarambha Shrestha	91
00100203T	Suhisha Rayamajhi	99

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

```
DECLARE FUNCTION SQN (N)
CLS
S=0
FOR L=1 TO 3
read NUM
S=S+SQN (NUM)
NEXT L
PRINT "Sum of square"; S
DATA 1, 4, 5
END

FUNCTION SQN (N)
SQN = N^2
END FUNCTION
```

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

```
DECLARE SUB Square (A)
REM to print square of a input number
CLS
GET "Enter a number"; N
Square (N)
END

SUB Square (A)
Sq = A^ 4
Display "Square of a number is "; Sq
End Sub
```

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

```
DECLARE FUNCTION Count (W$)
INPUT "Enter a word"; R$
```

```
C = Count (R$)
PRINT C
END

FUNCTION Count (W$)
FOR L = 1 TO LEN (W$)
Ch$MID$ (W$, L, 1)
IF UCASES (Ch$) = "K" THEN
N=N+1
END IF
NEXT L
Count = N
END FUNCTION
```

Questions:

a) List any two library functions used in the above program.
b) Write the use of variable 'C' in line 3 [i.e. C = Count (R$)] given in the above program.

Group 'C'

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

a) $(ABC)_{16} = (?)_8$
b) $(435)_{10} = (?)_2$
c) $(101)_2 \times (101)_2 = (?)_2$
d) $(101101)_2 \div (101)_2$

9.

a) Write a program in QBASIC that asks length, breadth and height of room and calculate its area and volume. Create a User Defined Function to calculate Area and Sub Program to calculate the Volume. **[4]**
[Hint: Area = L×B and Volume = L×B×H]

b) Employee's name, address, gender and salary are stored in the "EMP.DAT" sequential data file. Write a QBASIC program that displays all information about personnel whose salaries exceed 60000. **[4]**

10. Write a program in 'C' language to find simple interest where user need to input Principle, Rate and Time. [4]

 (Or)

Write a program in 'C' language to display the series with their sum. 1,2,3,4, up to 10th term.