

**PABSON, Lalitpur**

## **SEE PRE-QUALIFYING EXAMINATION-2081**

**Subject-Opt II. Computer Science**

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

### **Group A [20 Marks]**

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

- a) What is hacking?
- b) Why is browser needed?
- c) Write two examples of cyber-crime.
- d) What are the different data types available in C?
- e) Which data type is used to store paragraph in MS-Access?
- f) What is the use of CALL statement in modular programming?

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

- a) The process of transferring data or files from a local device to a remote system, server, or online platforms.
- b) The responsible and ethical use of technology and digital platform to engage, communicate, and participate in online communities effectively and safely.

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

- a) IRC
- b) CCTV

### **Group B [24 Marks]**

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

- a) What do you mean by digital footprint? List any two ways to maintain our digital reputation.
- b) Write any two advantages and two disadvantages of cloud computing.
- c) What is DBMS? List its two functions.
- d) What do you mean by field property in MS Access? List any two field properties with example.
- e) What is form? List its uses.
- f) What is hardware security? List any four methods to protect the data from your computer.
- g) What is bus topology? Mention any two differences between bus and ring topology.
- h) What is B2C? Give any two examples of B2C in Nepal.
- i) What is query? List its types.

**5. Write the output of the given program showing the dry run table. [2]**

```
DECLARE SUB test()  
CALL test  
END  
SUB test  
X=0  
FOR K=10 TO 4 STEP-2  
A=K^2  
X=X+A  
NEXT K  
PRINT X  
END SUB
```

**6. Re-write the following program correcting the bug. [2]**

```
REM To copy all data from sequential data file INFO.DAT to NEWINFO.DAT.  
OPEN "INFO.DAT" FOR INPUT AS #1  
OPEN "NEWINFO.DAT" FOR INPUT AS #2  
DO WHILE NOT EOF(1)  
LINE INPUT #1, ALL$  
COPY #2, ALL$  
WEND  
FINISH #1,#2  
END
```

**7. Read the program given below and answer the questions that follows.**

**[2]**

```
DECLARE FUNCTION RETURNS(A$)  
LINE INPUT "Enter a Sentence"; S$  
PRINT RETURNS(S$)  
END  
FUNCTION RETURNS(A$)  
FOR T=1 TO LEN(A$)  
E$= MID$(A$,T,1)  
IF E$ SPACE$(1) THEN  
R$=E$+R$  
END IF  
NEXT T  
RETURN$=R$  
END FUNCTION
```

**Questions:**

- List all the string library function(s) from the program.
- How many times loop T execute, if A\$= 'MY PRIDE MY NATION'?

## Group C [16 Marks]

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

- i)  $(111101100)_2$  into octal
- ii)  $(401)_{16}$  into Decimal
- iii)  $(10101)_2 - (11011)_2 + (10001)_2$
- iv)  $(101101)_2 \div (100)_2$

**9. Write a program in QBASIC that asks length, breadth and height of room and calculates its area and volume. Create a user-defined function to calculate area and sub-program to calculate volume. [4]**

[Hint: Area=L×B, Volume=L×B×H]

**10. A sequential data file called "STUDENT.DAT" has stored data under the field heading Registration No., Class, Section, Name, Date of Birth and Gender. Write a program to display all the information of class NINE students whose gender is 'FEMALE'. [4]**

**11. Using C language, write a program to input three integers then display the highest integer. [4]**

OR

Using C language, write a program to display all even numbers from 20 to 40 along with their sum.