National PABSAN, Bagmati Province

SEE Pre-Board Examination - 2080

Time: 2 hours
Subject: Computer Science

Full Marks: 50

GROUP A [6×1=6]

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

a) What is a web browser?
b) List any two commandments of computer ethics.
c) Which data type is used in MS-Access to store address of a person?
d) What is a RDBMS?
e) What is a global variable?
f) Which mode is used to add data items into the already existed data file in QBASIC?

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

a) The amount of data transmitted per second through the communication channel.
b) The process of making copies of data or data files to use in the event the original data or data files are lost or destroyed.

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

a) CCTV
b) SIM

GROUP B [12×2=24]

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

a) What is computer security? Write any two software security measures.
b) List four ways to stay safe on social networks.
c) What is m-commerce? Give two examples of digital wallets used in Nepal.
d) What is cloud computing? Write any two examples of AI.

e) Define ring topology. Write its two advantages.
f) What is a foreign key? Write two properties of primary key.
g) Write any two differences between data sorting and data filtering.
h) Write a difference between database and DBMS. Give one example of manual database.
i) What is a Form? Write two uses of a form.

5. Write down the output of the given programs. Show with dry run in a table. [2]

```
DECLARE SUB Display(S$)
CLS
S$="TOEPOHSDRA"
CALL Display (S$)
END

SUB Display(S$)
LET I=48
FOR C=1 TO 4
P=I MOD 7
R$=R$+ MID$(S$, P, 1)
I=I-1
NEXT C
PRINT R$
END SUB
```

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

```
REM Program to add records to an existing file "Student.dat"
OPEN "Student.dat" FOR APPEND AS #1
DO
CLS
INPUT "Enter name: "; N$
INPUT "Enter Address: "; Ad$
INPUT "Enter Total Marks: "; TM$
COPY #1, N$, Ad$, TM
INPUT "Do you want to add more records? Press Y or N: "; CH$
LOOP WHILE UCASE$(CH$) < > "Y"
CLOSE "Student.dat"
END
```

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

```
DECLARE FUNCTION Calculate (X,Y)
CLS
```

```
INPUT "Enter a multi-digit number"; N
LET S = Calculate (N,T)
PRINT "The sum ="; S
END

FUNCTION Calculate (X,Y)
WHILE X < > 0
R=X MOD 10
Y = Y + R
X=X\10
WEND
Calculate = Y
END FUNCTION
```

Questions:

a) List formal parameters and real parameters of procedure 'Calculate'.

b) What is the purpose of the above program?

8. Perform the following as indicated. [4×1=4]

a) $(11101011)_2=(?)_8$

b) $(65)_{10}=(?)_2$

c) $(11101)_2+(11011)_2-(11110)_2$

d) $(111011)_2 \div (11)_2$

GROUP C [16 Marks]

9.

a) Write a program in QBASIC to find out sum of three numbers using SUB procedure and average of three numbers using FUNCTION procedure. **[4]**

b) A sequential data file, "record.dat." contains several records with data items name, address, age, and phone number. Write a program to display the records of students whose age is greater than or equal to 18. **[4]**

10. Write a program in C language to input length of three rods and display whether the triangle can be formed by those rods or not. [4]

OR

Write a program in C language to declare whether the given number is 'Positive', 'Negative' or 'Zero'.