PABSON 2080 (Bagmati)

Opt. II Computer Science

Time: 2 hours
Full Marks: 50

Candidates are required to give their answer according to the given instructions.
Attempt all questions.

Group 'A'

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

a) Which connector is used with coaxial cable?

b) Why data decryption is necessary?

c) Which data types are used to store graphics and numeric characters in MS-Access?

d) List any two objects of MS-Access.

e) What is the function of MOD in QBasic?

f) Write the name of unary operators used in C language.

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

a) The protection of computer systems and sensitive information from unauthorized access, theft or damage.

b) The Internet tool which is used to upload/download.

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

a) VOIP

b) ISDN

Group 'B'

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

a) What is topology? Draw the figure of star topology.

b) What is cyber-ethics? List out any two cybercrimes.

c) What is hardware security? Write any two measures of software security.

d) What is E-government? Give any two examples.

e) Define cloud computing with example.

f) Differentiate between Database and DBMS.

g) What is primary key? Write its importance.

h) What is data type? List any two data types of MS-Access.

i) Why update query is necessary in Database system? Give reason.

5) Write down the output of the given program. Show with dry run in table. [3]

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

SUB show
FOR I = 1 TO 7 STEP 3
S = S + I ^ 3
NEXT I
PRINT S
END SUB
```

6) Re-write the given program after correcting the bugs. [3]

```
REM display records of students from sequential data file.
OPEN "STUDENT.DAT" FOR INP AS #1
PRINT "SNO", "NAME", "ADDRESS", "CLASS", "SECTION"
WHILE NOT EOF
INPUT #1, SN, N$, AD$, C, SE$
PRINT SN, N$, AD$, C, SE$
```

NEXT
CLOSE #1
STOP

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

DECLARE FUNCTION num (N)
FOR I = 1 TO 5
READ N
Z = num(N)
S = S + Z
NEXT I
PRINT S
DATA 11, 14, 16, 5, 7
END

FUNCTION sum (N)
IF N MOD 2 = 0 THEN num = N
END FUNCTION

Questions:

a) List the library function used in the above program.

b) Write the name of the function used in the above program.

Group 'C'

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

a) $(101110111)_2 = (?)_8$

b) $(248)_{10} = (?)_2$

c) $(1101)_2 \times (110)_2 - (1011)_2 = (?)_2$

d) $(1011101)_2 \div (101)_2$

9) Answer the following. [2×4=8]

a) Write a program in QBasic to print circumference of a circle using SUB and volume of a cylinder using FUNCTION.

b) A sequential data file "Employee.dat" has some records with fields serial number, name, address, post and salary for the number of employees. Write a program to display all the records of those employees whose salary is more than Rs. 50000.

10) Write a program to read any three integer numbers from the keyboard and find the smallest number using C language. [4]

OR

Write a program to print first 10 natural numbers using C language.