

PABSON 2080 (Gandaki)

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) What is e-banking?
- b) What is mobile computing?
- c) Give any two examples of DBMS.
- d) Which view of MS Access helps us to modify table?
- e) Write down the types of modular programming.
- f) Write any two names of data types used in C programming language.

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

- a) A device that connects two dissimilar networks.
- b) The technology to encode file or message.

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

- a) ISDN
- b) STP

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

- a) What is browser? Give any two examples of browser.
- b) Define digital footprint. How can you manage your digital footprint?
- c) What is software security? Write any two principles of information security.
- d) What is E-commerce? Write any two advantages of E-commerce.
- e) What is contemporary technology? Write any two advantages of cloud computing.
- f) Differentiate between data and information with examples.
- g) What is RDBMS? Write any two examples of it.
- h) What is key in DBMS? Write any two names of keys available in DBMS.
- i) What is query? Write any two ways of creating query.

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

```
DECLARE SUB DTB (N)
CLS
N = 5126
CALL DTB (N)
END
```

```
SUB DTB (N)
WHILE N <> 0
R = N MOD 10
S = S + R
N = N \ 10
WEND
PRINT S;
END SUB
```

6) Rewrite the given program after correcting the bugs. [3]

```
REM WAP to create file "detail.dat" and insert some records.
CLS
OPEN "detail.dat" FOR APPEND AS #5
TOP:
INPUT "Enter name, class and address"; n$, cl, a$
INPUT #5, n$, cl, a$
```

```
INPUT "Do you want to add more? (Y/N)"; C$
IF UCASE$(C$) = "Y" OR C$ = "y" THEN GOTO down
CLOSE #5
END
```

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

```
DECLARE FUNCTION count (N$)
INPUT "Enter a word"; W$
C = count (W$)
PRINT C
END
```

```
FUNCTION count (N$)
FOR K = 1 TO LEN (N$)
X$ = MID$ (N$, K, 1)
IF UCASE$(X$) = "A" THEN
X = X + 1
END IF
NEXT K
Count = X
END FUNCTION
```

Questions:

- a) What are the library functions used in the above program?
 - b) Write the use of variable 'C' in line 3 in program [i.e. $C = \text{count}(W\$)$]
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Group 'C'

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

- a) $(A4D)_{16} = (?)_2$
- b) $(37)_{10} = (?)_8$
- c) $(10101)_2 \div (101)_2$
- d) $(1111)_2 \times (101)_2$

9) Answer the following. [2×4=8]

- a) Write a program in QBasic that asks height and radius of cylinder and calculate its volume by user defined function and total surface area by sub procedure.
- b) A sequential data file called "student.txt" has stored data under the field heading Name, Class, Address and Age. Write a program to display all the information of those whose class is 10 and gender is "male".

10) Write a program in C language to check the students whether they are pass or fail, when the pass mark is 45. [4]

OR

Write a program in C language to display the series with their sum 40, 41, 42, 43..... 10th terms.