Group C

Programming (18 marks)

1. What is a variable?

**Answer:** Variable are the data item whose value may change during the execution of a program.

b) Name any two data types used in C language. 1

**Answer:** Any two data types used in C language are:

i) int ii) float

c) Give the functions of: 0.5×2=1

**Answer:**

i) NAME AS : The NAME statement renames a file on a disk.

ii) CLOSE : The CLOSE statement is used to close one or all open files.

**Rewrite the following program after correcting the bugs: 2**

DECLARE SUB Series (.)

CLS

EXECUTE Series

END

SUB Series

REM to generate 2 2 4 6 10….. upto 10th term

P=2

Q=2

FOR Ctr=1 TO 5

DISPLAY P,Q,

P=P+Q

Q=P+Q

WEND

END Series()

**Debugged Program**

DECLARE SUB Series ( )

CLS

CALL Series

END

SUB Series

REM to generate 2 2 4 6 10….. upto 10th term

P=2

Q=2

FOR Ctr =1 TO 5

PRINT P,Q,

P=P+Q

Q=P+Q

NEXT Ctr

END SUB

**Write the output of the following program.**

DECLARE FUNCTION AREA (L,B)

LET L=10

LET B=5

PRINT “The area = ”; AREA(L,B)

END

FUNCTION AREA(L,B)

A=L\*B

AREA=A

END FUNCTION

**OUTPU**T:

The area = 50

**Study the following program and answer the questions: 1×2=2**

DECLARE FUNCTION Sum( A,B)

INPUT “Enter first number:”; A

INPUT “Enter second number:”; B

PRINT “The sum of the two number=”;Sum(A,B)

END

FUNCTION SUM(A,B)

S=A+B

Sum=S

END FUNCTION

**a) List the numerical variables used in the above program.**

**Answer:** The numerical variables used in the above program are A, B and S.

**b) Will the program run if the first line (i.e. DECLARE….) is deleted?**

**Answer:** Yes, the program will run even if the first line (i.e. DECLARE…) is deleted.

**14a) Write a program using Function…..End Function to get temperature in Celsius from the**

**user and then print the temperature in Fahrenheit.(hint: F=9C/5+32)**

DECLARE FUNCTION TEMP (C)

CLS

INPUT “ENTER TEMPERATURE IN CELCIUS”; C

PRINT “TEMPERATURE IN FAHRENHEIT=”; TEMP (C)

END

FUNCTION TEMP (C)

F = 9 \* C / 5 + 32

TEMP = F

END FUNCTION

1. **Write a program using Sub….End Sub to get a word from the user and then print it inreverse order.**

DECLARE SUB REVERSE (N$)

CLS

INPUT “ENTER ANY STRING”; N$

CALL REVERSE (N$)

END

SUB REVERSE (N$)

FOR I = 1 TO LEN(N$)

B$ = MID$(S$, I, 1) + B$

NEXT I

PRINT “REVERSED STRING IS “; B$

END SUB

1. **A sequential data file called “Marks.dat” contains Name, English, Nepali, Maths and Science Fields. Write a program to display all the contents of that data file.**

OPEN “Marks.dat” FOR INPUT AS #1

CLS

PRINT “NAME”, “ENGLISH”, “NEPALI”, “MATHS”, SCIENCE”

DO WHILE NOT EOF(1)

INPUT #1, N$, E, N, M, S

PRINT N$, E, N, M, S

LOOP

CLOSE #1

END