TIME : 2 Hrs.   MARKS : 50

N. B.

1) Solve any 3 question from Q. 1 to Q. 6.
2) Solve any One question from Q. 7 and Q. 8.
3) Bracketed figures to the right indicate marks.

Q.1. A) What is operating System ? What are the functions of the operating System ?   [4]

B) Explain the OPEN Statement with different forms with suitable illustration.   [4]

C) Write BASIC Commands for each of the following :   [4]
1) To kill a program file JET saved on disk drive A.
2) Open a file called DETAILS on disk drive B for random access & assign it to data channel # 2, Record size is 100 ch.
3) Draw a circle with center at (20, 30) & radius 20.
4) Close three files numbered as #1, #2 & #3.

Q. 2. A) Explain difference between Dos operating System and Windows Operating System.   [4]

B) A Shopkeeper offers discount on total purchase. If purchase exceeds Rs. 10,000 then discount is 15% otherwise 8%. Input customer no., amount in rupees of purchase. Calculate discount & print Customer no., discount amount, amount of purchase and net amount to be paid for 10 Customers. Write a Basic program.   [4]

C) State whethere the statements are true or false.   [4]
1) Load command is used to load a program in BASIC from a disk into the computers memory.
2) Virus in Computer is spread through environment.
3) PRESET statement is use to display a point on a screen.
4) MKI$, MKS$ or MKD$ functions are used to convert numeric value to string value.

Q. 3. A) Explain different methods of eliminating viruses.   [4]

B) Find errors, if any, in each of the following cases :   [4]
i) 10 GoSoB 100
    100 GoTo 10
    110 RETURN

ii) 10 PRINT #2, AS ; BS where A$ = "B, A" and B$ = "D, E"
    20 INPUT #2, A$, B$, C$

C) Compute and print present value (PV) rounded off to nearest rupee of a cash inflow (A) at the end of N years; if Cost of capital is R rupees p.a. where PV is given by

$$PV = \frac{A}{(1+R)^N}$$

Where values of A, N & R will be input at the time of processing.   [4]

Q. 4. A) Explain the following commands with format & example.   [4]
1) RMDIR
2) REN

B) Write the steps for creating Random Access data file.   [4]

C) Write a program to print number 1 to 50 in **10 rows** and columns such that 1st row contains 1, 11, 21, 31, 41 and Last row contain 10, 20, 30, 40, 50. [4]

Q. 5. A) Give Dos commands for each of the following :-   [4]
1) To make a subdirectory SALARY in the subdirectory EMPLOYEE.
2) To copy a file RAMAYAN of drive C to drive E.
3) Delete all the files with extension. BAS & starting with alphabet R.
4) Display the contents of file SALESREC which is on D drive.

B) Explain PSET & PRESET statements with its format with one example. [4]

C) A random access data file named EMPL.DAT contains some records with a records consisting of three fields : Employee code EC$ (Five character), Employee Name EN$ (Twenty Characters) & Basic Salary BS$ (numeric with size eight)

Suppose a file contains 100 records for employees with code nos. 00101 & 00200 arranged in the asending order of code nos. Write a program to read the record of employee with code no. 00177 & print his details on the screen.   [4]

Q. 6. A) Write short note on the following.   [4]
1) DIR
2) COPY

B) Write output for the following statements :   [4]
1) OPEN "R", #2, "MARK", 80
2) GoTo subroutines beginning with line numbers : 1000, 2000 & 3000 if 1 < X < 3 ; 3 < X < 4 & 4 < X < 6 respectively.
3) 80 Close #3, #2
4) 500 If NoT EoF(2) THEN 100

P.T.O.

C) Write a program in BASIC to give 10 pairs of values of two variables X, Y at the time of program execution & to calculate karl pearson' coefficient of correlation ® between X & Y.   [6]

$$R = \frac{N . \Sigma XY - \Sigma X . \Sigma y}{\sqrt{N.\Sigma X^2 - (\Sigma X)^2} . \sqrt{N.\Sigma Y^2 - (\Sigma Y)^2}}$$

Q. 7. A) Give short note on :   [4]
1) Batch processing
2) On line (Real time) Processing

B) State whether the statements are true or false.   [4]
1) Changing Name of file is possible with the help of files command.
2) Field statement is used to define length of each data item in the record.
3) Run Command can do two jobs, Viz. LOADING & RUNNING.
4) The format of color statement is color (x, y), 2, 1

C) Write a program to perform addition of two matrices of size M X N where M & N will be input at the time of processing. Also input the the row element during execution.

Q. 8. A) State Whether the Statements are true or false.   [5]
1) Unix can be simultaneously used by more than one users in a network.
2) To remove a directory should be given from the parent directory.
3) Coping a group of files from one drive to another is not possible.
4) Move Command is used to delete a file from its original location.
5) You can scan a disk with the help of SCAN command.

B) Write a program in BASIC to input the names of 10 students of class and to sort them alphabetically & print them in sorted order.   [5]

C) Explain the Basic commands, with format and One example.   [4]
1) KILL command
2) FILES command

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