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- N. B. :**
1. Solve any Three questions from Q. 1 to To Q. 6
 2. Solve Any One questions from Q.7 and Q. 8.
 3. Bracketed figures to the right indicate marks.
- Q.1**
- A.** Explain Batch processing and time sharing ? (4)
- B.** State the difference between GOTO and ON-GOTO statement. (4)
- C.** Write a program in BASIC to find sum of all multiples of 5 between 1 and 100 and print.
- Q.2**
- A. Give Dos Commands for each of the following.** (4)
1. To change to the PAY subdirectory which is a subdirectory of DBASE subdirectory.
 2. To remove a subdirectory NOTES in the subdirectory PAGE.
 3. To change from subdirectory LEAF back to the root directory.
 4. To make a subdirectory DATA in the subdirectory WORD which is a subdirectory of LOTUS
- B.** Explain the use of PRINT # and WRITE # statement in the sequential file (4)
- C.** Write a program in BASIC to calculate and print value of $1^4 + 4^4 + 7^4 + 10^4 + \dots + 100^4$
- Q.3**
- A.** Explain the command DIR state the difference between DIR/P and DIR/W and state with example. (4)
- B.** Explain the use of INPUT # and LINE INPUT # statement in sequential file. (4)
- C. Write statements in BASIC for each of the following.** (4)
1. To draw circle with centre at (30, 30) with radius 30 and with color 5.
 2. To draw a line joining the point (20, 100) and (120, 20)
 3. Draw a box with its vertices at (20, 100), (40,100), (20,150) (40,150) with color 4 for drawing box.
 4. Write data record numbered 3 from the buffer to a random file on a storage device.
- Q.4**
- A. Explain the use of following command with example.** (4)
- | | |
|---------|---------|
| 1) EDIT | 2) REN |
| 3) TIME | 4) PATH |
- B.** Write output for the following program when x = 13 (3)
- ```
10 WHILE x <= 50
20 X = X + 9
30 WEND
```

**C. Write BASIC commands for each of the following :** (5)

1. To store a program file DELTA on disk drive A
2. To retrieve a program file COMPARE from disk drive A and run it.
3. To erase the program "BCOM" on drive C.
4. To display all program names on drive A beginning with X and having extension. BAS
5. To store the lines 20-120 currently loaded program in memory on drive A under the name STUDENT .BAS

**Q.5 A.** What are the different types of viruses ? Explain each type in brief. (4)

**B. State the output of the following.** (3)

```
10 S1 = 36 : S2 = 40 : S3 = 45
20 ON 2 + SGN (X - 2) 40, 60, 80
30 PRINT S1, S2, S3 : END
40 S1 = S1 + 1
50 RETURN
60 S2 = S2 + 22
70 RETURN
80 S3 = S3 + 333
90 RETURN
To check if x = 1, 2, 3
```

- C.** Write a BASIC program to input a string having odd number of characters, your program should do the following (5)
- a. Print the 3rd character
  - b. Print 3 character from the left and 5 rightmost
  - c. Also print character at the centre.

**Q.6 A.** What are the advantages of windows operating system on DOS operating system. (4)

**B. Write statements in BASIC for the following,** (4)

1. Copy one complete record from file #2 onto file #3
2. Repeat a loop 200 times or till value of a numeric variable X exceeds 1000 for the first time.
3. If Gross income (T) of an individual exceeds 50,000  
print : "Tax rate is 50%" otherwise print "Tax rate is 40%"
4. If X = 100, go to statement 100  
If X = 200, go to statement 200 and  
If X = 300, go to statement 300  
Assume that X cannot take any other value

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

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where, values of A, N, and R will be input at the time of processing.  
Run the program with your own data and state the output. (4)

- Q.7 A.** 1. What precautions should be take to ensure safety of compute from viruses ? (3)  
2. Explain in brief what is 'booting of computer system? (3)

**B.** Explain LSET and RSET statement in random access file. (4)

**C.** Create a sequential datafile named EMPREC with records for five employees choosing your own data. Where a record consists of employee code, Emp. Name and Gross salary. Close the file. (5)

**Q.8 A. Write TRUE or FALSE of the following.** (5)

1. Move command copies the file from original location to another location without erasing the file in it's original location.
2. In most modern computer systems a single CPU is provided with more than one ALU.
3. The function of the supervisor program is to control the activities of program execution.
4. Batch processing provides a variety of functions where by a program can utilise the various capacities of the computer.
5. CPU cannot execute more than one instruction at a time, it executes an instruction from one program and then an instruction from the other and so on.

**B.** Explain PSET and PRESET statement and their uses. (4)

**C.** Write a program in BASIC to input "N" no. of observations in an array A(N) and arrange this array in ascending order of magnitude. Print the array in ascending order. (5)

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