

Time : 2 hrs.

CODE - TIDE

Marks : 50

- N. B.**
- 1) Solve any 3 questions from Q. No. 1 to 5.
 - 2) Solve any 1 question from Q. No's 6 & 7.
 - 3) Bracketed figures to the right indicate marks.
- Q.1**
- A)** 1. Distinguish between Analog & Digital computers. 2
2. Distinguish between RAM, ROM. 2
- B)** State the use of following commands in BASIC. 3
1) AUTO 2) NEW 3) LIST
- C)** Write BASIC statements for each of the following : 5
- 1) Multiply Value of A by 3, add 7 to the product and assign this value to x.
 - 2) Increase HRA by 15%.
 - 3) To Print the first two characters of the string A\$
 - 4) Declare a matrix of 40 elements with 8 rows and 5 columns.
 - 5) Interchange values of two numeric variables X and Y print their values.
- Q.2**
- A)** Answer the following :
- 1) What are Scanners ? 2
 - 2) What is the technology used in Laser Printer ? 2
- B)** What is a variable in BASIC ? Specify different types of variables.
Give examples of each kind. 3
- C)** Find the Value of the following BASIC functions :
- i) $Z\$ = \text{SPACE}(7) + \text{"ALPHA"}$
 - ii) $\text{LEN}(\text{STR\$}(\text{VAL}(20/02/80)))$
 - iii) If $A=7, B=5.689, C=-35.22, D=PI/2$ then $A * \text{INT}(B) ** \text{SGN}(C) * \text{FIX}(-D * D)$ 3
- 2)** State for what values of x each of the following BASIC expression will hold.
- i) $X < 7 \text{ AND } X < 14 \text{ OR } X < 11.$
 - ii) $X < 12 \text{ XOR } X < 10 \text{ AND } X < 18.$ 2
- Q.3**
- A)** What are compilers and Interpreters ?
State the difference between the two. 4
- B)** Explain the use of following commands in BASIC with examples.
i) REM ii) INPUT iii) RESTORE 3
- C)** Write a program in BASIC to find the Sum of the first 50 Natural numbers. 5
- Q.4**
- A)** What is a central processing unit ? Describe each of its component. 4

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B) Write a program in BASIC to do the following :
Enter the value of Basic salary and calculate D.A. @ 75% of Basic Salary,
H.R.A. @ 15% of Basic Salary, C.C.A. @ 8% of Basic salary &
Gross Salary = Basic Salary + D.A. + H.R.A + C.C.A.

C) State the output for the following :

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10 A=2 : B = 4 : C = 7 : D= 10 : E = 5
20 FOR N= B to C STEP INT ( D/9)
30 A= A + N
40 E= E + A
50 NEXT N
60 PRINT A,E
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Q.5 A) What are the different capabilities of a computer ?

B) Write a program in BASIC to find the maximum of three numbers.

C) Find the errors if any in each of the following & Write the correct statements :

- i) 100 FOR N= 70 TO 30 STEP 4
- ii) 40 C = A\$ + B
- iii) 50 DIM 80 (X)
- iv) 30 INPUT P,Q,R, B\$, " ENTER THE VALUES."

Q.6 A) State whether the following statements are true or false.

- i) The read/ write head touches the surface of a Winchester disk while reading data.
- ii) Built in BASIC is in ROM.
- iii) Daisy wheel printers are non-impact printers.
- iv) Inner track of a floppy stores same data as outer track.

B) Explain the use of IF- THEN, IF-THEN-ELSE and GOTO statement with suitable examples. State the difference between them.

C) Write a program in Basic to Calculate Value of $\frac{-B + \sqrt{B^2 - 4AC}}{2A}$ for given values of A, B & C.

Q.7 A) Write a short note on "Applications of Computers"

B) Write the statements in BASIC.

- i) A certain distance is D kilometers and M Meters. Convert it into meters and assign this value to S.
- ii) Interchange the Central characters of A\$ = " BREAD" AND B\$ = " GROSS"
- iii) To print value of A rounded to nearest 10.
- iv) To print value of B correct upto two places after the decimal point.