

Instruction : 1) Solve any 3 questions from Q. No. 1 to Q. No. 5.

2) Solve any 1 question form Q. Nos. 6 & 7.

3) Bracketed Figures to the right indicate marks.

Q.1 a) Discuss the various generations of computers bringing out the improvement in technology in each generation. 4

b) What are the different ways of entering data in to the BASIC program ? Give the formats of each statement with illustration. 4

c) Write a program in BASIC to find the sum of first 25 natural numbers. 4

Q.2 a) Distinguish between Digital and Analogue computers. 4

b) State the output for each of the following set of instructions in BASIC. 4

i) 10 REM "ARRANGEMENT OF LETTERS OF A WORD"

20 A\$ = "TELEVISION"

30 B\$ = A\$

40 C\$ = " PROGRAM TELECAST"

50 X\$ = LEFT\$(B\$,4) + MID\$(C\$, 4,4) + RIGHT\$(C\$,4)

50 Y\$ = MID\$(A\$,5,6,) + CHR\$(32) + MID\$(C\$,5,4) + LEFT\$(B\$,3)

+ " " + RIGHT\$(C\$,4)

70 PRINT X\$

80 PRINT Y\$

90 END

ii) 100 A = 49 B = -6.3899 : C = 25.33: D = 3.1416 4

110 P = INT(B) + SQR (INT(C))

120 Q = SQR (A) * D * SGN (B)

130 IF ABS (INT(B)) = INT (ABS (B)) THEN 170

140 R = FIXD (B) * VAL ("14SEN23") - SGN (D-C) * SQR(A)

150 PRINT P, Q, R

160 GOTO 180

170 PRINT R, Q + P

180 END

Q.2 c) Write use of the following commands with its format. 4

i) NEW ii) LIST

iii) DIM iv) SAVE

- Q.3 a) State whether the following statements are true or false. 4**
- Daisy wheel printers are faster than dot matrix printers.
 - Outer track of a floppy stores large amount of data than the inner track.
 - Chain printers are impact printers.
 - ENIAC was the first computer to use transistors.
- b) 1) State for what values of X, each of the following BASIC expression will hold. 2**
- $X < 9 \text{ XOR } X < 5 \text{ AND } X < 12$
 - $\text{NOT } (X > 15 \text{ OR } X < 5) \text{ OR } X > 7$
- 2) Write the BASIC expressions corresponding to each algebraic expressions 2**
- given below.
- $$\frac{5 \times 2^8 - 7^4}{8 - 15(2 - 1.7)}$$
 - $$\frac{\left(1 + A + \frac{B}{C}\right) \left(\frac{E}{F} - G + H\right)}{\sqrt{(3 + 9B)}}$$
- c) Write a program in BASIC to print numbers which are multiple of 7 in the range from 200 to 300 4**
- Q.4 a) Answer the following 4**
- What are scanners ?
 - What is the technology used in Laser printer.
- b) Write a program in BASIC to find the area of a circle & circumference of a circle with radius R (Given area = πR^2 , circumference = $2 \pi R$, $\pi = 22/7$) - (4) 4**
- c) Explain the use of following commands in BASIC with illustration. 4**
- LEN
 - SPACE\$
 - AUTO
 - FOR - TO - NEXT
- Q.5 a) What are the different PRINT FEATURES available with the printer Explain each of them in brief. 4**
- b) Write instructions in BASIC for the following.**

- 2) Print value of B correct up to two places after the decimal point.
- 3) Calculate sales value (S) of an order for K Kilograms and G grams of a product which is sold at a rate of R rupees per kilogram. 3
- c) Write a program in BASIC to calculate $NPR = \frac{N!}{(N-R)!}$ where value of N and R are to be provided during program execution. 5
- Q.6 a) Describe in brief the 5 functional units of a computer. 5
- b) Write instructions in BASIC for the following. 6
- i) Interchange the values of the variables X and Y. Print their values.
 - ii) Increase the value of N by 25%
 - iii) To Print the remainder when A is divided by B
 - iv) Calculate value of $11/7$ accurate up to 6 decimal places and assign it to variable A.
 - v) To print the string C\$ starting from 20th column of the line.
 - vi) Execute a loop 100 times.
- c) Explain the use of IF - THEN and IF - THEN - ELSE Statement with suitable example.
- Q.7 a) What are compilers and interpreters state the difference between the two.
- b) State whether the following statements are true or false in BASIC.
- i) Minimum value for a subscript is 1.
 - ii) 10 PRINT TAB (15) ; X and 20 PRINT , X will do the same job.
 - iii) $RND * 100$ generates numbers between 0 and 1
 - iv) 200 RESTORE TO 100 is a valid statements.
- c) Write a program in BASIC to find largest of three numbers.
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