Total No. of Questions : 9]   [Total No. of Printed Pages : 8

(2021)

BCA (CBCS) RUSA Ist Semester Examination ·

4040

C-PROGRAMMING

BCA–0104

Time : 3 Hours]   [Maximum Marks : 70

Note :– Attempt *five* questions in all, selecting *one* each from Unit–I to Unit–IV. Part-A (Q. No. 1) is compulsory.

Part–A

(Compulsory Question)

1. (A) Multiple Choice Questions :

   (i)   The type name/reserved word 'short' is :

         (a) short long

         (b) short char

         (c) short fleat

         (d) short int

(ii) To store a word/sentence declare a variable of the type 'string'.

   (a) True

   (b) False.

(iii) In the given below code, the P_2 is :

   Type def int *ptr;

   ptr p^1, p^2

   (a) Integer

   (b) Integer pointer

   (c) Both integer and integer pointer

   (d) None of these

(iv) What will be the output of the following C code ?

1. # include <stdio.h>

2. int main()

3. {

4. int a=1, b=1, c;

5. c = a++ + ++b

6. printf ("%d, %d", a,b);

7. }

   (a) a = 1, b = 1

   (b) a = 2, b = 1

   (c) a = 1, b = 2 .

   (d) a = 2, b = 2

(v) What will be the output of the following C code ?

1. # include <stdio.h>

2. int main()

3. {

4. while()

5. printf ("In while loop");

6. printf ("After loop \n");

7. }

   (a) In while loop after loop

   (b) After loop

   (c) Compile time error

   (d) Infinite loop

(vi) C was primarily developed as :

(a) system programming language

(b)✗ General purpose language

(c) Data processing language

(d) None of these

(vii) C programs are converted into machine language with the help of :

(a) An Editor

(b) A compiler

(c) An operating system

(d) None of these

(viii) In C if you pass an array as an argument to a function, what actually gets passed ?

(a) Value of element in array

(b) First element of the array

(c) Base address of the array

(d) Address of the last element of array

(ix) Which header file should be included to use functions like malloc() and calloc() ?

(a) memory.h (b) stdlcb.h

(c) string.h (d) dos.h

(x) Which of the following is not logical operator ?

(a) & (b) && And

(c) || OR (d) ! NOT   1×10=10

(B) Answer the following in 25 to 50 words :

(i) Why C is called middle level language ?

(ii) Explain the term compilation.

(iii) Differentiate between keywords and identifiers.

(iv) What is an operator ? List different types of operators.

(v) Define an array. In what way does an array differ from an ordinary variable ?   4×5=20

Part–B

(Unit–I)

2. Write an algorithm and draw a flow chart to find :

   (a) The sum of first 50 natural numbers

   (b) The sum of first 50 add numbers   5,5

Or

3. What are constants, variables and keywords ? Explain by taking suitable examples.

10

(Unit–II)

10 each

4. Write a program to find the reverse of a five digit number.

Or

5. Write a program to calculate net salary of an employee if his basic salary is input from keyboard, his DA is 35% of basic, HRA is 15% of the basic, MA is Rs. 250 and his PF is deducted at the rate of 10% of the Basic Salary (BS) :

   Net Salary = BS + DA + HRA + MA – PF

C–587   (6)

(Unit–III)

10 each

6. Write a program to calculate electricity bill for the following conditions :

   Minimum charges = 250 if units consumed are < = 100

   upto 250 units bill is calculated @ 3 per unit for > 100 and < = 250 units

   upto 500 units bill is calculated @ 3.75 per unit for > 250 and < = 500 units

   for > = 500 units is calculated # 4.50 per unit.

Or

7. Write a program to print the following patterns :

   (i)   A B C D   ⊏   B A

          A B C   ⊏   B A

          A B   B A

          A   A

C–587   (7)   Turn Over

(ii) 6 5 4 3 2 1

5 4 3 2 1

4 3 2 1

3 2 1

2 1

1

(Unit–IV)   10 each

8. What is a Function ? Differentiate between call by value and call by reference function. Use appropriate examples.

Or

9. What are Pointers ? Explain the concept of array of pointers with the help of appropriate example.