(i) the marks obtained by each student in different subjects.

(ii) total marks and average obtained by each student.

11. (a) Explain different types of files in file handling and what are different modes to open a file? 10+5=15

(b) Difference between structure and union. Explain how members of a union are accessed using a program code.

12. (a) What is file? Write C program to copy the contents of one file into another file. 7½+7½=15

(b) Explain different bitwise shift operators use in C Programming.

13. (a) What is pointer? Explain pointer to pointer with example? Can we subtract two pointer variables. 7½+7½=15

(b) Write a program to explain the use of structure with function.



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(20517) Roll No. .....

BCA-II Sem.

# 18006

## B.C.A. Examination, May 2017

### C Programming

### (BCA-202)

### (New)

*Time : Three Hours ]* *[Maximum Marks : 75*

**Note :** Attempt questions from **all** sections as per instructions.

### Section-A

**Note :** Attempt **all** the **five** questions. Each question carries **3** marks. Very short answer is required not exceeding 75 words. 3×5=15

1. Explain the difference between array and structure. 3

2. Differentiate between *(arr+i) and (arr+i). 3



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3. Write a short note on nested structures. 3

4. Explain command line arguments in C using example. 3

5. How pointers are implemented with function with example. 3

## Section-B

**Note :** Attempt any two questions:

6. Write the output: 7½

```
#include <stdio. h>
main ()
{
    int arr [ ] = {1, 2, 3, 4, 5};
    int i=1, j=2;
    Printf ("% d"  *(arr+1+i));
    printf ("% d"  *(arr+*(arr+1)));
    printf ("% d",  *(arr+j));
    printf ("% d",  *(arr+i)+*(arr+j)));
}
```



7. Write a program to interchange second element with last element of an array. 7½

8. Write short note on: 7½
   (a) fopen ( )
   (b) fclose ( )
   (c) fgetc ( )
   (d) fprintf ( )

## Section-C

**Note :** Attempt any **three** questions.

9. (a) What is string? Write a program to find concatenate of two string using pointers without Library function. 7½+7½=15
   (b) Write a program using pointers to search a value from an array.

10. (a) Write a short note on conditional directives. 5+10=15
    (b) In a class there are 5 students. Each student is supposed to appear in 3 tests. Write a program using 2-D array to print.



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11. (a) Create a Structure BANK to maintain the records of a bank customers. It has the following fields CUST-ID, NAME, ACC-TYPE, BALANCE.
    (i) A new record is added when a customer open an account
    (ii) A existing record is updated when user deposits or withdraw an amount.
    Create Menu-Driven Program. 7½
    (b) What do you understand by pointers ? Write a program to count the number of characters, words and lines in the text using pointer. 7½

12. (a) What is macro ? Explain the difference between object macro and function macro with example. 5
    (b) Write a program to swap two numbers using pointer with structure. 10

13. (a) Explain the use of bitwise operators in programming with suitable example. 7½
    (b) Write a program that reads a binary file that stores employees records and prints on the screen the number of records that are stored in the file. 7½



(20518) Roll No. .....

BCA-II Sem.

# 18006

## B. C. A. Examination, May 2018

### C Programming

(BCA-202)

(New)

*Time : Three Hours]* *[Maximum Marks : 75*

***Note :*** Attempt questions from all Sections as per instructions.

### Section-A

**(Very Short Answer Questions)**

Attempt all the *five* questions. Each question carries 3 marks. Very short answer is required not exceeding 75 words. 3×5=15

1. Differentiate between string and character array. 3

2. What is generic pointer ? How can it be converted to a specific type of pointer ? 3

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3. What is the output ? 3

```
#include < stdio.n>
  int func (int);
  main( )
{
  int a = 2;
  printf ("%", func(a));
  return 0;
}
int func(int a)
{
  if (a > 1)
  return func (-- a) + 10;
  else
  return 0;
}
```

4. Explain the difference between malloc ( ) and calloc( ) function. 3

5. Explain the importance of the # define preprocessor directive. 3

## Section-B

### (Short Answer Questions)

Attempt any *two* questions out of the following three questions. Each question carries 7½ marks. Short answer is required not exceeding 200 words. 7½×2=15





6. Write a program to sort an array. 7½

7. Write a C program to find the reverse of each word of a string (how are you : output : woh era uoy). 7½

8. Differentiate between rewind( ) and fseek( ). Can fseek( ) work as an alternative to rewind( ). If yes, why ? 7½

## Section-C

### (Detailed Answer Questions)

Attempt any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 15×3=45

9. (a) Why are arrays needed ? Write a program to calculate the number of duplicate entries in an array. 7½

   (b) With the help of an example, explain how pointers can be used to dynamically allocate space for two-dimensional array. 7½

10. (a) What do you understand by EOF ? Write a program to read a text file, convert all the lower case characters into upper case. 7½

    (b) What is string ? Explain any five library functions of string. 7½



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11. (i) Describe *two* different approaches to undating a data file. Which approach is better and why ? For what kinds of applications are unformatted data files well suited ?

(ii) Write a function using pointers to add two matrices and to return the resultant matrix to the calling function.

12. (i) What is a masking operation ? What is the purpose of each operand ? Which operand is the mask, and how is it chosen ?

(ii) Write macro definitions with arguments for calculation of simple Interest and Amount. Store these macro definitions in a file called 'Interest.n'. Include this file in your program, and use the macro definitions for calculating simple interest and amount.

13. (i) What are the difference between Union and Structure ?

(ii) Write short notes on the following :

(a) fewind( )

(b) fseek( )

(c) fgetc( )

(d) fscanf( )



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Total Questions : **13** ] [ Printed Pages : **4**

# 18006

## B.C.A. IInd Semester Examination, May-2019

## C-PROGRAMMING

**(BCA–202)**

***Time : 3 Hrs. ]*** ***[ M.M. : 75***

*Note* :– Attempt all the Sections as per instructions.

**Section–A**

**(Very Short Answer Type Questions)**

*Note* :– Attempt all *five* questions. Each question carries 3 marks. Very short answer is required not exceeding **75** words.

1. What are *three* dimensional arrays ? How can you initialize them ?
2. How a union is different from a structure ?
3. What do you mean by a dangling pointer ?

4. What are bit fields ?

5. What are the use of standard functions fopen( ) and feof( ) ?

## Section–B

### (Short Answer Type Questions)

*Note* :– Attempt any *two* questions out of the following three questions. Each question carries 7.5 marks. Short answer is required not exceeding **200** words.

6. Write a program that will count the number occurrences of a specified character in a given line of text.

7. Write a program to pre-multiply a matrix by its transpose.

8. Design a structure named student to store data about a student which contains following data element :

| Date Item | Type | Length |
|---|---|---|
| Roll No. | int | – |
| Name | char | 20 |
| College | char | 40 |
| Score | float | – |

Assume that there are not more than 100 students. Write a program to input the data about students, and output the stored data according to the merit of the students.



## Section–C

### (Long Answer Type Questions)

*Note* :– Attempt any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail.

9. (i) How is a multidimensional array defined in terms of an array pointer ? What does each pointer represent ? How does this definition differ from a pointer to a collection of contiguous arrays of lower dimensionality ?

   (ii) What is meant by dynamic memory allocation ? What library function is used to allocate memory dynamically ? How is the size of the memory block specified ? What kind of information is returned by the library function ?

10. (i) Write short notes on the following :

   (a) strlen( )

   (b) strcpy( )

   (c) strcat( )

   (d) strcmp( )

   (ii) What are the important points to be considered when implementing bit-fields in structures ?

11. (a) Write a program to illustrate the use of structure pointers.

(b) What are jumping statements ? Explain the difference between break and continue statements.

12. (a) Describe the limitation of using getchar and scanf functions for reading strings. Write a program which will read a text and count all occurrences of a particular word.

(b) What is prototyping ? Why is it necessary ? Distinguish between the following :

(i) Scope and visibility of variables

(ii) Actual and formal arguments.

13. (a) What is a 'slack byte' ? How does it affect the implementation of structures ? Describe three different approaches that can be used to pass structures as function arguments.

(b) Write a function using pointers to add two matrices and to return the resultant matrix to the calling function.



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(20516) Roll No. .....

BCA-II Sem.

# 18006

## B. C. A. Examination, May 2016

### C Programming

(BCA-202)

(New)

*Time : Three Hours]* *[Maximum Marks : 75*

***Note:*** Attempt questions from all Sections as per instructions.

### Section-A

**(Very Short Answer Questions)**

Attempt all the *five* questions. Each question carries 3 marks. Very short answer is required not exceeding 75 words. 3×5=15

1. What are two-dimensional arrays ? How can you initialize them ?

2. How does a structure differ from an array ?

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3. Distinguish between (*m) [5] and *m[5].

4. How can you declare and initialize a string ?

5. Explain the meaning of the following :
   (i) Tag
   (ii) Size of.

## Section-B

### (Short Answer Questions)

Attempt any *two* questions out of the following three question. Each question carries 7½ marks. Short answer is required not exceeding 200 words. 7½×2=15

6. What is a dynamic array ? How is it created ? Give a typical example of use of a dynamic array.

7. Write a program to illustrate the comparison of structure variables.

8. What is a pointer ? How can it be initialized ? Write a program using pointer to read in an array of integers and print its elements in reverse order.





## Section-C

### (Detailed Answer Questions)

Attempt any *three* questions out of the following five questions. Each question carries 15 marks. Answer is required in detail. 15×3=45

9. (a) Give the main advantage of storing data as a file. Describe various ways in which data files can be categorized in 'C'. Illustrate by using examples.
   (b) Enumerate the difference between functions and parameterized macros.
   Why do we recommend the use of parentheses for formal arguments used in a macro definition?

10. (a) Describe the two bitwise shift operators. What requirement must be operands satisfy ? What is the purpose of each operand ?
    (b) Describe two different approaches to updating a data file. Which approach is better and why ? For what kinds of applications are unformatted data files well suited ?



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