

Code : 303204

BCA 2nd Semester Exam., 2018

PROBLEM SOLVING TECHNIQUE AND
PROGRAMMING IN C

Time : 3 hours

Full Marks : 60

Instructions :

- (i) All questions carry equal marks.
 - (ii) There are **SEVEN** questions in this paper.
 - (iii) Attempt **FIVE** questions in all.
 - (iv) Question Nos. 1 & 2 are compulsory.
1. Choose the correct answer of the following (any six) :

- (a) In which header file is the NULL macro defined?
- (i) stdio.h
 - (ii) stddef.h
 - (iii) stdio.h and stddef.h
 - (iv) math.h

- (b) If a variable is a pointer to a structure, then which of the following operators is used to access data members of the structure through the pointer variable?

- (i) .
- (ii) &
- (iii) *
- (iv) ->

- (c) Which is the stage of the following code?

```
#include<stdio.h>
gets replaced by the contents of the
file stdio.h
```

- (i) During editing
- (ii) During linking
- (iii) During execution
- (iv) During preprocessing

- (d) How will you free the allocated memory?

- (i) remove(var-name);
- (ii) free(var-name);
- (iii) delete(var-name);
- (iv) dalloc(var-name);

- (e) What is the similarity between a structure, union and enumeration?
- All of them let you define new values
 - All of them let you define new data types
 - All of them let you define new pointers
 - All of them let you define new structures
- (f) What does the following declaration mean?
`int (*ptr)[10];`
- ptr is array of pointers to 10 integers
 - ptr is a pointer to an array of 10 integers
 - ptr is an array of 10 integers
 - ptr is a pointer to array
- (g) When is the 'void' keyword used in a function?
- (h) How do you generate random numbers in C?
- What are actual arguments?
 - What are formal parameters?

2. Answer any *three* of the following :

- What is an endless loop?
- What are comments and how do you insert it in a C program?
- What is variable initialization and why is it important?
- What is pointer to a function?
- What is type casting?

- What are command line arguments of main function? Explain with a suitable example.
- What are header files? Are functions declared or defined in header files?
- What is a pointer in C? What are the advantages of using pointers? Explain with examples.
- What is a structure? Explain structure within structure with an example.
- What are the differences between formal arguments and actual arguments of a function? Explain with an example.
