



**BRAINWARE UNIVERSITY**

**Term End Examination 2018 - 19**

**Programme – Bachelor of Technology in Computer Science and Engineering**

**Course Name – Basic Computation and Principles of Programming**

**Course Code – BCSE101 (BL)**

**(Semester - 1)**

**Time allotted: 3 Hours**

**Full Marks: 70**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

**Group –A**

(Multiple Choice Type Questions)

10×1 = 10

1. *Choose the correct alternative from the following*

(i) C language is invented in \_\_\_\_\_.

a. 1968

b. 1970

c. 1971

d. 1972

(ii) How many keywords are present in C?

a. 30

b. 32

c. 64

d. None of these

(iii) Which one is a keyword?

a. pointer

b. malloc

c. string

d. do

(iv) In UNIX system the size of a character is –

a. 2 bit

b. 8 bit

c. 4 bit

d. 6 bit

- (v) Syntax error is obtained in –
- a. Run time
  - b. Compilation time
  - c. Editing time
  - d. Linking time
- (vi) %d is called as
- a. Format Painter
  - b. Format Syntax
  - c. Format Specifier
  - d. Format Symbol
- (vii) Which one is the assignment operator?
- a. &&
  - b. <
  - c. <<
  - d. +=
- (viii) typedef is a –
- a. Operator
  - b. Function
  - c. Keyword
  - d. None of these
- (ix) Purpose of r+ mode is –
- a. Open only for reading
  - b. Open for both reading & writing
  - c. Open only for writing
  - d. None of these
- (x) malloc() function is defined in –
- a. stdio.h
  - b. string.h
  - c. dynamic.h
  - d. stdlib.h

### Group – B

(Short Answer Type Questions)

3×5 = 15

Answer any *three* from the following

2. What is an Algorithm? Write down the characteristics of an algorithm. [2 + 3]
3. Write short note on –
  - a) Bitwise operator.
  - b) string. [3 + 2]
4. Draw a flowchart to find out the biggest among three numbers. [5]
5. Write short note on –
  - a) Unary operator.
  - b) Nested Loop. [2 + 3]

6. Write an algorithm to find out whether a number is odd or even. [5]

**Group – C**

(Long Answer Type Questions) 3×15 = 45

Answer any *three* from the following

7. (a) Give a numerical example of using modulus operation. [5]  
 (b) What will happen if % is used between two float variable? [5]  
 (c) How can you evaluate  $((-b \pm \sqrt{b^2 - 4ac}) / 2a)$  in C language? [5]
8. (a) What are the different data types in C? [5]  
 (b) Briefly discuss about Storage classes in C. [10]
9. (a) Write down the formula for calculating row-major order and column-major order methods for storing two-dimensional arrays in linear storage. [5]  
 (b) In a 4X5 array, calculate the effective address in row-major order and column-major order for the element [2][3]. Assume base(starting) address is 2000.[Integer consume 4 byte] [10]
10. (a) Differentiate between ‘break’ and ‘continue’ with an example. [5]  
 (b) Write a C code to print the following pattern –

```

*                               *
* *                             * *
* * *                           * * *
* * * * * * * * * * * * * *
    
```

- [10]
11. (a) What is Dynamic Memory Allocation? Give Example. [5]  
 (b) Write a C program to print the Fibonacci series using function call. [10]

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