

**S. S. JAIN SUBODH P.G.(AUTONOMOUS) COLLEGE, JAIPUR**

Affiliated to University of Rajasthan, Jaipur

**II CIA BCA IV Semester Test, April 2018**

**Data Structure & Algorithms**

**Max. Marks: 30**

**Duration: 1 Hour**

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**Instructions to the Candidates**

Note:- **Section A** : Consists of three short answer type questions, each carrying 7.5 marks. The candidates are required to attempt any two ( $7.5 \times 2 = 15$  marks)

**Section B** : Consists of one descriptive question of 15 marks with an internal choice.

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**Section A**

- (1) Write an algorithm to insert a node at the end of a Linked List.
- (2) Write an algorithm to delete a node from the beginning of a Linked List.
- (3) Write short note on :
  - (a) Header Node
  - (b) Circular Linked List
  - (c) Doubly Linked List

**Section B**

- (4) What is Linked List? How Linked Lists are represented in memory? Write an algorithm to count number of nodes in a Linked List.

**OR**

What do you mean by Stack? Write algorithms to perform PUSH and POP operations.

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**PHP PROGRAMMING**

**Max. Marks: 30**

**Duration: 1 Hour**

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**Section B** : Consists of one descriptive question of 15 marks with an internal choice.

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**Section A**

- (1) Describe `$_REQUEST` variable in PHP.
- (2) Explain any three sorting functions of an array.
- (3) Write short note on-
  - (a) `strtolower()`
  - (b) `strtoupper`
  - (c) `strlen()`

**Section B**

- (4) What is Array? Explain different types of arrays in PHP with appropriate example.

**OR**

Describe GET and POST methods in PHP with suitable example.

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**II CIA BCA IV Semester Test, April, 2018**

**Advanced Database Concepts**

**Max. Marks: 30**

**Duration: 1 Hour**

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**Section B** : Consists of one descriptive question of 15 marks with an internal choice.

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**Section A**

- (1) What is Complex Data Type? How object can be created in database?
- (2) What is Distributed Database System? Explain the benefits and drawbacks of it.
- (3) How inheritance can be achieved in Object Oriented Database? Explain.

**Section B**

- (4) What is Persistent Programming Language? What are the benefits of it? How a data can be made persistent, explain?

**OR**

What do you understand by Parallel Database? Explain different Parallel Database architectures in detail.

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**II CIA BCA IV Semester Test, April- 2018**

**Data Communication & Networking**

**Max. Marks: 30**

**Duration: 1 Hour**

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**Instructions to the Candidates**

Note:- Section A : Consists of three short answer type questions, each carrying 7.5 marks. The candidates are required to attempt any two ( $7.5 \times 2 = 15$  marks)

Section B : Consists of one descriptive question of 15 marks with an internal choice.

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**Section A**

- (1) Explain Guided Transmission Media with its advantages and disadvantages.
- (2) What do you mean by Multiplexing? Explain FDM, TDM and WDM.
- (3) Explain the following terminology with suitable examples-
  - (a) Bandwidth
  - (b) Distortion
  - (d) Attenuation

**Section B**

- (4) What do you mean by Error? Explain all types of error detection techniques.

**OR**

Explain OSI Model with suitable diagram.