

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

Affiliated to University of Rajasthan, Jaipur

I CIA B.C.A. III Semester Test, September- 2017

Database Management System

Max. Marks: 30

Duration: 1 Hour

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.

Section A

- Q.1 Write the advantages of Database System over File Processing Systems.
- Q.2 Discuss the role of a Database Administrator.
- Q.3 Write short notes on :
- (a) Instances
 - (b) Schemas .
 - (c) Data Independence

Section B

- Q.4 Explain the architecture of DBMS with the help of a diagram.

OR

What is Data Model? Explain its various types.

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Advance Java Programming

Max. Marks: 30

Duration: 1 Hour

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.

Section A

- Q.1 Define the terms JDK, JRE and JVM.
- Q.2 What are the different data types available in Java ?
- Q.3 How array are declared and initialized in Java ?

Section B

- Q:4 Describe the various features of Java language.

OR

Explain the following control structures with example :

(a) For each

(b) Labeled.Break

(c) Switch

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Operating System

Max. Marks: 30

Duration: 1 Hour

Instructions to the Candidates

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

Section A

- Q.1 Explain various functions of Operating System.
Q.2 What is Scheduling ? Explain different types of schedulers.
Q.3 What is a Process ? Explain various Process states using a diagram.

Section B

- Q.4 What is Operating System ? Discuss various types of operating Systems.

OR

Explain the following :

(a) Round Robin Scheduling

(b) Process	AT	BT
P ₁	0	5
P ₂	1	3
P ₃	2	3
P ₄	4	1

Find Average Waiting Time using SRTF .

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System Analysis and Design

Max. Marks: 30

Duration: 1 Hour

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.

Section A

- Q.1 Define System ? Explain its characteristics.
- Q.2 Explain Information System.
- Q.3 What do you mean by System Analysis and Design?

Section B

- Q.4 What do you mean by SDLC ? Explain all the steps in detail with a diagram.

OR

Explain different types of Systems .

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II CIA B.C.A. III Semester Test, Nov. - 2017

Database Management System

Max. Marks: 30

Duration: 1 Hour

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.

Section A

- Q.1 Explain Super Key, Primary Key and Foreign Key along with an example.
- Q.2 What is Generalization and Aggregation?
- Q.3 Define the following:-
- a) Multivalued Attributes
 - b) Composite Attributes
 - c) Derived Attributes

Section B

- Q.4 Explain E-R model in detail with suitable example.

OR

What is Relational Algebra? Explain the following fundamental operations with example.

- a) Select Operation
- b) Project Operation
- c) Union Operation

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II CIA B.C.A. III Semester Test, Nov. - 2017

Operating System Fundamentals

Max. Marks: 30

Duration: 1 Hour

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.

Section A

- Q.1 Differentiate between Logical and Physical address space.
- Q.2 What is Swapping?
- Q.3 What is Demand Paging and Pure Demand Paging?

Section B

- Q.4 Find total number of page faults using FIFO algorithm using the following reference string:

7, 0, 1, 2, 3, 5, 4, 0, 1, 2

OR

What short notes on:

- a) Fragmentation
- b) Compaction
- c) Virtual Memory

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System Analysis and Design

Max. Marks: 30

Duration: 1 Hour

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.

Section A

- Q.1 Explain role of the System Analyst in detail.
- Q.2 What is Requirement Analysis?
- Q.3 Explain strategies of determining Information Requirement.

Section B

- Q.4 What is Feasibility Analysis? Explain different types of feasibility study.

OR

Explain different fact finding techniques in detail.

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Advance Java Programming

Max. Marks: 30

Duration: 1 Hour

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.

Section A

- Q.1 Differentiate Method Overriding and method Overloading with example.
- Q.2 Explain static members of a class.
- Q.3 What are Interfaces? How they are implemented in a class?

Section B

- Q.4 What is Inheritance? What are the different types of inheritance supported by java? Explain with the help of an example.

OR

Write short note on :

- a) Super Keyword
- b) Abstract Keyword
- c) Final Keyword