

January - February (Winter) Examination - 2023

Subject Name: B.Tech. CBCS_74092_Network Engineering_16.01.2023_10.30 AM To 01.30 PM

Subject Code: 74092

Day and Date: Monday, 16-01-2023

Time: 10:30 am to 01:30 pm

Total Marks: 100

Instructions.:

- 1) Figures to the right indicate full marks

Special Instruction.:

Attempt any FIVE Questions.

(chap 1) Q.1. a) Explain the implementation of virtual memory in windows O.S. (10) [20]

(chap 2) b) Explain the following (10)

- 1) Processes
- 2) Threads
- 3) Jobs
- 4) Security

(chap 2) Q.2. a) what is executive? Explain it. (10) [20]

(chap 2) b) List and explain various system processes appearing on windows system. (10)

(chap 3) a) Explain types of device drivers. (10) [20]

(chap 3) b) What is impersonation? Explain in brief. (10)

(chap 4) a) List and explain types of I/O requests. (10) [20]

b) Explain Linux services and protocols. (10)

Q.5. a) Describe the Network file system driver. (10) [20]

b) Explain the windows storage stack in detail. (10)

Q.6. a) Explain Winsock client and server operation with a neat diagram. (10) [20]

b) Describe various web Access API's. (10)

January - February (Winter) Examination - 2023

Subject Name: B.Tech. CBCS_74090_Advanced Database Management System_11.01.2023_10.30 AM To 01.30 PM

Subject Code: 74090

Day and Date: Wednesday, 11-01-2023

Time: 10:30 am to 01:30 pm

Total Marks: 100

Instructions.:

- 1) Figures to the right indicate full marks
- 2) Use Sketches/Diagrams wherever necessary

Special Instruction.:

Solve any five questions

Q.1. Chap 2 a. What are the different types of Distributed DB systems? Differentiate [20] between homogeneous and heterogeneous databases. 10

Chap 1 b. What is object referencing in OODBMS? Explain with a suitable example. Write a schema definition corresponding to following relational schema using references- Emp(Person_nm, street, city); Works(Person_nm, Comp_nm, salary); Company(Comp_nm, city); Manages(Person_nm, manager_nm) 10

Q.2. Chap 3 a. Distinguish between interquery and intraquery parallelism. 10 [20]

Chap 2 b. With a suitable example elaborate distributed lock management to control concurrency. 10

Q.3. Chap 1 a. Illustrate and elaborate the speedup and scale-up terms with a parallel [20] database. 10

Chap 3 b. What is a skew? With some illustrations explain the handling of skew. 10

Q.4. Chap 2 a. With a neat diagram explain TP-monitor architectures. 10 [20]

b. Illustrate the two-phase commit protocol with its advantages and drawbacks. 10

Q.5. Chap 2 a. Differentiate between OLAP and OLTP. Explain the roll-up, slice, and drill-down operations of OLAP with a suitable example. 10 [20]

b. What is a real-time transaction system? Explain. 10

Q.6. Chap 6 a. In detail explain with a suitable example the long duration of transactions. 10 [20]

b. Discuss Page ranking and Popularity ranking in information retrieval. 10

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QP Code: 702QP

Total No. of Pages: 1

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Subject Name: B.Tech. CBCS_74089_Advanced Computer Architecture_09.01.2023_10.30 AM To 01.30 PM
Subject Code: 74089

Day and Date: Monday, 09-01-2023
Time: 10:30 am to 01:30 pm

Total Marks: 120

Instructions.:

- 1) Figures to the right indicate full marks
- 2) Use of Scientific calculator is allowed
- 3) Assume suitable data wherever necessary and mention it boldly

Special Instruction.:

Attempt any five questions.

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- Q.1. ✓ a) Explain static dataflow architecture in brief. [10 Marks] [20]
✓ b) What is Multithreading and explain multithreading models in detail. [10 Marks]
- Q.2. ✓ a) Describe different Shared memory track in detail. [10 Marks] [20]
✓ b) Explain architecture of vector supercomputers with neat diagram. [10 Marks]
- Q.3. ✓ a) Explain Loosely coupled architecture in detail with its applications. [10 Marks] [20]
✓ b) Write down difference between Tightly coupled architecture and Loosely coupled architecture. [10 Marks]
- Q.4. ✓ a) Why scheduling is required for parallelism. Explain Static multiprocessor scheduling with example. [10 Marks] [20]
✓ b) Describe different network properties and routing for parallel processing. [10 Marks]
- Q.5. ✓ a) Explain different compilation phases in parallel code generation. [10 Marks] [20]
✓ b) Explain Functional and Logical model in detail. [10 Marks]
- Q.6. a) List out types of levels of parallelism and explain it in detail with neat diagram. [10 Marks] [20]
b) Describe master slave configuration operating system for parallel processing. [10 Marks]

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Subject Name: B.Tech. CBCS_74093_EL1-Project Management_18.01.2023_10.30 AM To 01.30 PM

Subject Code: 74093

Day and Date: Wednesday, 18-01-2023

Time: 10:30 am to 01:30 pm

Total Marks: 100

Instructions.:

- 1) Figures to the right indicate full marks
- 2) Use of Scientific calculator is allowed
- 3) Assume suitable data wherever necessary and mention it boldly

Special Instruction.:

Attempt any five Questions

Q.1.

- a) Phases of traditional project life cycle. (10 Marks)
- b) What is project management? Explain with the framework (10 Marks)

Q.2.

- a) Give and explain seven main processes involved in project integration management. (10 Marks)
- b) Give the details of how to monitor and control processes with outputs. (10 Marks)

Q.3.

- a) What is project charter? Give sample with factors responsible for it. (10 Marks)
- b) Explain in brief cost estimation, with its types. (10 Marks)

Q.4.

- a) Write a short note on (solve any two, 5 marks each) (20)
1. Draw and explain Risk breakdown structure
 2. SMART criteria for milestone.
 3. Planning process for selecting information technology projects.

- b) Explain all motivational theories. (10 Marks)

Q.5.

- a) Give tools and techniques required for Quality control. (10 Marks)
- b) How to create WBS? Explain WBS organized by product & phase. (10 Marks)

Q.6.

- a) How to manage conflicts using communication skills. (10 Marks) (20)
- b) Explain in brief procurement management. (10 Marks)

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QP Code: 1142QP

Total No. of Pages: 1

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Subject Name: B.Tech. CBCS_74091_Distributed Systems_13.01.2023_10.30 AM To 01.30 PM

Subject Code: 74091

Day and Date: Friday, 13-01-2023

Time: 10:30 am to 01:30 pm

Total Marks: 100

Instructions.:

- 1) Figures to the right indicate full marks

Special Instruction.:

Answer any five questions

Q.1.	A) Demonstrate distributed computing system in detail B) Criticize different types of transparencies in distributed system	10 10	[20]
Q.2.	A) Describe software agent technology in distributed systems B) Explain role of virtualization in distributed system	10 10	[20]
Q.3.	A) Illustrate RPC in distributed system B) Demonstrate the following w.r.t. Distributed Shared Memory a. Strict Consistency Model b. Casual Consistency Model	10 10	[20]
Q.4.	A) Demonstrate distributed approach for mutual exclusion B) Demonstrate Berkeley algorithm for clock synchronization	10 10	[20]
Q.5.	A) Explain the basic NFS architecture for UNIX systems B) What is distributed commit? Demonstrate Two-Phase commit protocol	10 10	[20]
Q.6.	A) Illustrate software architecture of the AMOEBA system B) Illustrate sequential consistencies using non-replicated and migrating blocks	10	[20]

ALC2 from PJP

RMB ANMP
NRMN