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1183

Final Year B.Tech. (CST) (Semester - VII) (CS) (New)
Examination, December - 2023
HIGH PERFORMANCE COMPUTING

Sub. Code : 91932

Day and Date : Wednesday, 06 - 12 - 2023

Total Marks : 100

Time: 02.30 p.m. to 05.30 p.m.

Instructions : 1) Solve any five questions.
2) Figures to right indicate full marks.

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Q1 a) Explain in detail architecture of Vector Supercomputers. [10]

b) List and describe classification of pipelined processors. [10]

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Q2 a) Describe the concept of Latency rate and explain latency hiding techniques with neat example. [10]

b) Describe the use of systolic arrays in multithreading with its benefits and applications. [10]

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Q3 a) Explain Flynn's classification in detail with neat diagram and example. [10]

b) List and explain different shared memory track in brief. [10]

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Q4 a) Explain dynamic dataflow architecture with neat diagram. [10]

b) List out types of levels of parallelism and explain it in detail with neat diagram. [10]

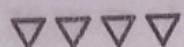
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Q5(a) Explain different dynamic connection networks in detail. [10]

b) Explain Tightly coupled architecture in detail with its applications. [10]

Q6) a) Explain different languages features used for parallelism. [10]
b) Explain Shared variable model in detail. [10]



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Final Year B.Tech. (C.S.T.) (Semester - VII) (CBCS) (New)
Examination, December - 2023
ADVANCED NETWORK ENGINEERING
Sub. Code : 91935

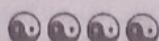
Day and Date : Wednesday, 13 - 12 - 2023

Total Marks : 100

Time : 02.30 p.m. to 5.30 p.m.

- Instructions :
- 1) Attempt any five questions.
 - 2) Figures to the right indicate full marks.
 - 3) Assume suitable data if necessary.

- Q1)** a) Explain objects and handles and Registry in windows O.S. [10]
 b) With neat diagram explain windows system architecture. [10]
- Q2)** a) List the attributes of security descriptor and explain. [10]
 b) Describe I/O system component with suitable diagram. [10]
- Q3)** a) Explain in detail file system formats for windows. [10]
 b) Explain Winsock client and server operation with neat diagram. [10]
- Q4)** a) List and explain types of I/O request. [10]
 b) Describe various device driver routines. [10]
- Q5)** a) Explain in brief named pipe and mail slot implementation. [10]
 b) Discuss various networking API in detail. [10]
- Q6)** a) Explain in brief cloud service models and Elasticity in cloud. [10]
 b) List and explain various fields of the process token of Windows O.S. [10]



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F.Y. B.Tech. (Part - IV) (CST) (Semester - VII) (CS) (New)
(Revised) Examination, December - 2023
DISTRIBUTED AND CLOUD COMPUTING
Sub. Code : 91934

Day and Date : Monday, 11 - 12 - 2023

Total Marks : 100

Time : 02.30 p.m. to 05.30 p.m.

Instructions : 1) Answer any five questions.
2) Figures to right indicate full marks.

- Q1)** a) Demonstrate distributed computing system with its types. [10]
b) Demonstrate alternative client-server organization. [10]

- Q2)** a) Compare synchronous and asynchronous RPC. [10]
b) Explain role of virtualization in distributed system. [10]

- Q3)** a) Differentiate public cloud, private cloud and hybrid cloud. [10]
b) Demonstrate Lamport's algorithm for clock synchronization. [10]

- Q4)** a) Demonstrate Berkeley algorithm for clock synchronization. [10]
b) Explain general architecture of distributed shared memory (DSM). [10]

- Q5)** a) Demonstrate cluster based distributed file systems. [10]
b) Demonstrate Infrastructure-as-a-Service (IaaS) with example. [10]

- Q6)** a) Demonstrate Microsoft Windows Azure. [10]
b) Illustrate sequential consistencies using replicated and non-migrating blocks. [10]



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Final Year B.Tech. (CST) (Semester - VII) (CS) (New)
Examination, December - 2023

ADVANCED DATABASE MANAGEMENT SYSTEM

Sub. Code : 91933

Day and Date : Friday, 08 - 12 - 2023

Total Marks : 100

Time: 02.30 p.m. to 05.30 p.m.

- Instructions :
- 1) Question No. 6 is compulsory.
 - 2) Solve any four questions from Q.1 to Q.5.
 - 3) Draw neat diagram wherever necessary.

Q1) a) With a suitable example explain structured types in OODBMS. Differentiate between object-oriented and object-relational databases. [10]

b) Illustrate and elaborate the speedup and scale up terms with parallel database. [10]

Q2) a) Compare among the different architectures of parallel databases. [10]

b) Explain crawling and indexing the web. [10]

Q3) a) Discuss and compare different partitioning techniques used for I/O Parallelism. [10]

b) What is Histogram? What is Skew? Let you have a histogram where values are between 1 and 100 and are partitioned into 10 ranges, 1-10, 11-20,, 91-100, with frequencies 15,5,20,10,10,5,5,20,5 and 5 respectively. Give a load-balanced range partitioning function to divide the values into 5 partitions. [10]

Q4) a) Differentiate in between OLAP and OLTP. Explain rollup, slice and drilldown operations of OLAP with suitable example. [10]

b) Elaborate different types of parallel sort. [10]

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Q5) a) With a neat diagram in detail explain transaction workflows. [10]

b) Elaborate Page ranking and Popularity ranking in information retrieval. [10]

Q6) Write a short note on following (Any 2) : [20]

a) Distributed lock management to control concurrency.

b) Long duration transactions.

c) TP Monitor architectures.



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Final Year B.Tech. (CST) (Semester - VII) (CS) (New)
Examination, December - 2023

EL1 : Project Management
Sub. Code : 92429

Day and Date : Friday, 15 - 12 - 2023

Total Marks : 100

Time: 02.30 p.m. to 05.30 p.m.

Instructions : 1) Solve any 5 questions.
2) Draw neat diagram wherever necessary.

- Q1)** a) What is change control system? [10]
b) Phases of traditional project life cycle. [10]

- Q2)** a) Give sample project charter, with factors responsible for it. [10]
b) Give the details of how to monitor and control processes with outputs. [10]

- Q3)** a) Give and explain seven main processes involved in project integration management. [10]
b) How scope control is responsible in project scope management. [10]

- Q4)** a) Write a short note on (Any 2) : [10]
i) Request for Proposal (RFP).
ii) Portfolio management.
iii) SMART criteria for milestone.
b) Maslow's Hierarchy of needs. [10]

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- Q5)** a) What is cost? Explain cost management with its processes. [10]
b) Give tools and techniques required for Quality control. [10]

- Q6)** a) How to manage conflicts using communication skills. [10]
b) Explain in brief procurement management. [10]
