B.TECH. SEM -VI INFO. TECH. 2014 COURSE (CBCS) :
WINTER - 2017
SUBJECT: OPERATING SYSTEM

Day : **Monday** | **W-2017-2216** | Time : **10.00 AM TO 01.00 PM**
Date : **20/11/2017** | Max.Marks:60

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if necessary.

Q.1 What is Virtual machine? Explain the evaluation of operating system. **(10)**

OR

Explain Booting process of Linux operating system. **(10)**

Q.2 **a)** Explain concept of program and process. **(05)**
b) What is Threads? Discuss types of threads. **(05)**

OR

a) Explain concept of multithreading. **(05)**
b) What is scheduling? Explain in detail. **(05)**

Q.3 **a)** Explain the different methods used to recover from deadlock. **(05)**
b) Write a brief note on requirements for mutual exclusion. **(05)**

OR

Explain the Android Inter process communication mechanism and concurrency mechanism. **(10)**

Q.4 **a)** Discuss about the Dynamic partitioning. **(05)**
b) What is Virtual memory? Explain in detail. **(05)**

OR

Distinguish between Linux memory management and windows memory management. **(10)**

Q.5 **a)** What is Android operating system? Explain Android file management. **(05)**
b) Explain Linux Virtual file system. **(05)**

OR

a) Briefly explain Disk scheduling and Disk cache. **(05)**
b) Write short note on: **(05)**
i) File sharing.
ii) Record Blocking.

Q.6 **a)** Discuss about the Linux Kernel module. **(05)**
b) Briefly discuss about the service oriented operating system. **(05)**

OR

What is embedded operating system? Discuss about characteristics of embedded system. **(10)**

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B.TECH. SEM -VI INFO. TECH. 2014 COURSE (CBCS) :
SUMMER - 2018
SUBJECT: OPERATING SYSTEM

Day : **Friday** **S-2018-2428** Time : **02.30 PM TO 05.30 PM**
Date : **01/06/2018** Max.Marks:60

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if necessary.

Q.1 **a)** What is operating system Objectives and functions? **(05)**
b) Discuss about the modern UNIX system. **(05)**

OR

What is virtual machine? Explain the evolution of operating system. **(10)**

Q.2 Briefly explain Process and Thread Management in Linux. **(10)**

OR

a) Describe various state of process with diagram. **(05)**
b) Explain Process and Thread scheduling in detail. **(05)**

Q.3 **a)** What is a deadlock? What are necessary conditions on operating system must satisfy for a deadlock to occur? **(05)**
b) Explain the different methods used to recover from deadlock. **(05)**

OR

a) Write a brief note on requirements for mutual exclusion. **(05)**
b) Describe: **(05)**
i) With deadlock.
ii) With a cycle but no deadlock.

Q.4 **a)** Explain Android memory management. **(05)**
b) What is virtual memory? Explain in detail. **(05)**

OR

Explain memory management requirements and memory partitioning in detail. **(10)**

Q.5 Briefly explain organization of the I/O function and operating system design issues. **(10)**

OR

a) Discuss about Disk cache. **(05)**
b) Write a brief note on Linux I/O. **(05)**

Q.6 What is embedded operating system? Discuss about characteristics of embedded system. **(10)**

OR

a) Discuss about the service oriented operating system. **(05)**
b) Write short note on Ubuntu EDGE operating system. **(05)**

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : WINTER - 2018

SUBJECT: OPERATING SYSTEM

Day: Tuesday
Date: 13/11/2018

W-2018-2483

Time: 10.00 AM TO 01.00 PM
Max Marks: 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if necessary.

Q.1 Explain Basic Functions Of Operating System And Different Evolutions Of Operating System. **(10)**

OR

Q.1 What Is Virtual Machine? Explain Concept Of Virtualization In Detail. **(10)**

Q.2 State And Explain Multiprocessor Thread Scheduling Approaches? **(10)**

OR

Q.2 Consider Following Processes Where Arrival And Burst Time Are Shown Below- **(10)**

Process	Burst Time	Arrival Time
P1	05	0
P2	04	2
P3	07	3
P4	06	5

Calculate Average Waiting Time And Average Turn-Around Time, If The Processes Are Scheduled Using FCFS.

Q.3 Explain Concept Of Critical Region And Mutual Exclusion With Example. **(10)**

OR

Q.3 What Are Different Ways To Handle Deadlock? Explain Each With Example? **(10)**

Q.4 What Is Demand Paging? Explain Design Issues In Paging. Explain With Example. **(10)**

OR

Q.4 Explain First Fit, Best Fit, And Worst Fit Algorithms With Example. **(10)**

Q.5 Explain Different I/O Buffering Techniques? **(10)**

OR

Q.5 Explain Linux Virtual File System. **(10)**

Q.6 List And Explain Different Characteristics Of Embedded Operating Systems. **(10)**

OR

Q.6 Explain Service Oriented Operating System. **(10)**

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : SUMMER - 2019
SUBJECT: OPERATING SYSTEM

Day: Wednesday
Date: 22/05/2019

Time: 02.30 PM TO 05.30 PM
Max Marks: 60

S-2019-2748

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if necessary.

Q.1	Enlist And Explain Basic Functions Of Operating System?	**(10)**
	OR	
Q.1	What Is Virtual Machine? Explain Concept Of Virtualization In Detail?	**(10)**
Q.2	State And Explain Multiprocessor Thread Scheduling Approaches?	**(10)**
	OR	
Q.2	What Is Thread? How They Are Different From Processes? List Different Types Of Threads Models? Explain Any One?	**(10)**
Q.3	Write A Semaphore Solution For Dining Philosopher Problem?	**(10)**
	OR	
Q.3	What Is Inter-Process Synchronization? Write Solution For Producer Consumer problem Using Semaphore.	**(10)**
Q.4	For a Following Reference String 1,2,3,4,2,1,5,6,2,1,2,3,3,6. Count The Number Of Page Faults That Occurs With 3 Frames Using FIFO And LRU Page Replacement Method. Discuss The Result.	**(10)**
	OR	
Q.4	What Are Common Techniques For Structuring The Different Buffering Techniques?	**(10)**
Q.5	Explain In Brief Different I/O Buffering Techniques.	**(10)**
	OR	
Q.5	Explain Different Disk Scheduling Algorithms.	**(10)**
Q.6	Describe Linux Kernel Module Programming.	**(10)**
	OR	
Q.6	List And Explain Different Characteristics Of Embedded Operating System.	**(10)**

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B.TECH. SEM -VI INFO. TECH. 2014 COURSE (CBCS) :
WINTER - 2017
SUBJECT : ADVANCED DATABASE MANAGEMENT SYSTEMS

Day : **Tuesday** Time : **10.00 AM TO 01.00 PM**
Date : **21/11/2017** **W-2017-2217** Max. Marks : 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labelled diagram **WHEREVER** necessary.
4) Assume suitable data if necessary.

Q.1 What are advantages of object oriented approach? Also explain following terms related to object oriented database method, signature, message, collection and extent. **[10]**

OR

How object definition language (ODL) support semantic constructs of the object data management group (ODMG) object model? Give graphical notation for representing ODL schemas.

Q.2 Compare partitioning techniques used to achieve I/O parallelism. **[10]**

OR

Explain replication and fragmentation approaches for storing relation in distributed database.

Q.3 What are different algorithms for implementing join of relations? Explain block – nested loop join in detail. **[10]**

OR

What is query evaluation plan? Also explain general equivalence rules on relational algebra expression.

Q.4 Explain the following terms: **[10]**

a) Distinctive characteristics of data warehouse
b) Online analytical processing (OLAP)

OR

Explain steps involved in acquisition of data for data warehouse. Give data warehouse design considerations.

Q.5 Explain classification and explain algorithm for decision tree induction. **[10]**

OR

Explain how popularity ranking used in web search engine to find popular pages.

Q.6 What is temporal database? What are time specification data types available in SQL standard? Explain with example. **[10]**

OR

Explain transaction processing monitor architecture.

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : WINTER - 2018

SUBJECT : ADVANCED DATABASE MANAGEMENT SYSTEMS

W-2018-2484

Day : Wednesday
Date : 14/11/2018

Time : 10.00 AM TO 01.00 PM
Max. marks : 60

N. B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagram **WHEREVER** necessary.
4) Assume suitable data, if necessary.

Q. 1 What is object behavior? How to specify the behavior of an object? **(10)**

OR

Which are the different mechanisms to mark an object as persistent? Explain them in detail. **(10)**

Q. 2 Explain Intra-query parallelism in detail. How they are achieved? **(10)**

OR

What are distributed database systems? Elaborate the reasons for building distributed database systems. **(10)**

Q. 3 What are the statistics and approaches used to estimate results of expressions when optimizing a query? Explain in detail. **(10)**

OR

Write short notes on: **(10)**

a) Materialized views
b) Semantic query
c) Dynamic query evaluation

Q. 4 What is a data mart? State the importance and types of data mart. **(10)**

OR

List and explain the design considerations for building a data warehouse. **(10)**

Q. 5 State the classification problem in data mining. How classifiers are built? **(10)**

OR

Q. 5 What are web search engines? Explain their working in detail. **(10)**

Q. 6 What is performance tuning of a system? Which aspects are considered for performance tuning of a system? How are they used? **(10)**

OR

Why are spatial and geographical data needed to be stored differently than other data? How is geographic database represented? **(10)**

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : SUMMER - 2019

SUBJECT : ADVANCED DATABASE MANAGEMENT SYSTEMS

Day : Friday | Time : 02.30 PM TO 05.30 PM

Date : 24/05/2019 | **S-2019-2749** | Max. marks : 60

N. B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagram **WHEREVER** necessary.
4) Assume suitable data, if necessary.

Q. 1 What is ODMG? Explain the object model of ODMG in detail. **(10)**

OR

Elaborate the process of mapping and conversion of EER schema to an object database schema. **(10)**

Q. 2 What is I/O parallelism? How does partitioning help parallelism? Explain skew with reference to I/O parallelism. **(10)**

OR

List and explain prominent architectural models for parallel databases. What are the performance evaluation parameters used for the same. **(10)**

Q. 3 State the need for transforming relational expressions. State any 8 of the equivalence rules used in these transformations. **(10)**

OR

How are parameters of query evaluation measured? Explain in detail. **(10)**

Q. 4 Explain data modeling with reference to data warehouse environment. Explain the types of data modeling used in OLAP. **(10)**

OR

State and explain the various operations and issues associated with data marts. **(10)**

Q. 5 What are association rules? How are they formulated and used? **(10)**

OR

What is a data warehouse? List and explain components of data warehouse. **(10)**

Q. 6 What is a TP-monitor? Draw and explain architecture of a TP-monitor. **(10)**

OR

What are mobile databases? How are they formulated and used? **(10)**

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : SUMMER - 2019

SUBJECT: DESIGN & ANALYSIS OF ALGORITHMS

Day: Monday
Date: 27/05/2019

S-2019-2750

Time: 02.30 PM TO 05.30 PM
Max Marks.: 60

N.B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data, if necessary.
4) Draw neat and labeled diagrams wherever necessary.

Q.1 What are linear data structures? How are they further classified? Explain with suitable example. **(10)**

OR

Q.1 State and explain in detail the asymptotic notations used for mathematical analysis of algorithms. **(10)**

Q.2 What are the procedures to be implemented when applying brute force search? State and analyze any algorithm which uses brute force technique. **(10)**

OR

Q.2 Which are the searching methods for graphs? Explain any one which uses exhaustive search technique. **(10)**

Q.3 What is a convex-hull problem? How to solve it using a divide and conquer algorithm? Compare the performance of this algorithm with that when solved using brute-force technique. **(10)**

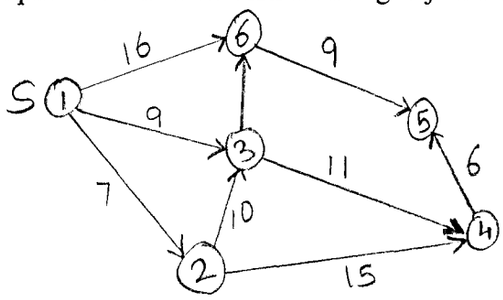
OR

Q.3 State, explain and analyze the algorithm for Strassen's matrix multiplication. **(10)**

Q.4 Explain how 0/1 knapsack problem can be solved using dynamic programming technique. **(10)**

OR

Q.4 Find the shortest path from S to all vertices using Dijkstra's Algorithm. **(10)**



Q.5 Explain Backtracking method of problem solving. How N queens problem can be solved using Backtracking. **(10)**

OR

Q.5 What is branch and bound algorithm design method? Solve 0/1 knapsack problem using branch and bound. **(10)**

Q.6 Write and explain an algorithm for deadlock detection and deadlock avoidance. **(10)**

OR

Q.6 What is resource allocation graph algorithm? Explain with suitable example. **(10)**

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : WINTER - 2018

SUBJECT: DESIGN & ANALYSIS OF ALGORITHMS

Day: Thursday
Date: 15/11/2018

W-2018-2485

Time: 10.00 AM TO 01.00 PM
Max Marks.: 60

N.B. :

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data, if necessary.
4) Draw neat and labeled diagrams wherever necessary.

Q.1 Design an algorithm to compute the area of circle of a any circumference. Determine the frequency count of the algorithm and express its complexity with the help of asymptotic notations. **(10)**

OR

Q.1 What are the tools to measure the performance of an algorithm? Explain them in detail with suitable example. **(10)**

Q.2 What is the characteristic feature of exhaustive search technique? Write an algorithm for Travelling Salesman problem using exhaustive search technique. Show its mathematical analysis. **(10)**

OR

Q.2 What is a convex-hull? How is brute force mechanism suitable for solving this problem? State and explain the algorithm for solving convex hull using brute-force approach. **(10)**

Q.3 How does a divide and conquer algorithm work? State an algorithm and explain with analysis any algorithm which uses divide and conquer technique. **(10)**

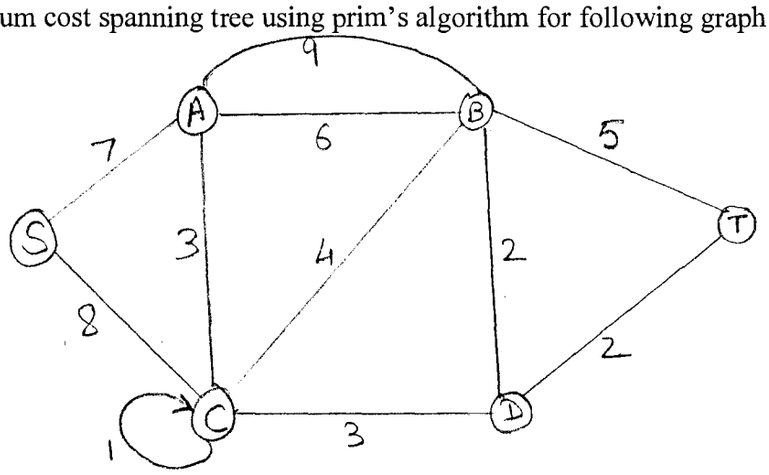
OR

Q.3 What is a heap? Explain in detail heap sorting with an algorithm and example. **(10)**

Q.4 Explain optimal binary search trees algorithm and derive its time and space complexity. **(10)**

OR

Q.4 Find the minimum cost spanning tree using prim's algorithm for following graph **(10)**



Q.5 What is 0/1 knapsack problem? How it is solved using backtracking approach? **(10)**

OR

Q.5 State and solve Hamiltonian circuit problem. Justify that it is a NP-complete. **(10)**

Q.6 Write and explain an algorithm for solving resource allocation problems. State whether it is P – NP or NP hard problem **(10)**

OR

Q.6 What are Heuristic search algorithms? State its characteristics. Explain A* algorithm. **(10)**

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B.TECH. SEM -VI INFO. TECH. 2014 COURSE (CBCS) :
SUMMER - 2018
SUBJECT: DESIGN AND ANALYSIS OF ALGORITHMS

Day : **Wednesday** Time **02.30 PM TO 05.30 PM**
Date : **06/06/2018** **S-2018-2430** Max.Marks:60

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Use of non-programmable **CALCULATOR** is allowed.
4) Neat diagram must be drawn **WHEREVEER** necessary.
5) Assume suitable dada wherever necessary.

Q.1 Define data structure. What are elementary data structures? List elementary data structures and explain any two in detail. **(10)**

OR

What is "Performance Analysis" of algorithms? Elaborate the process of performance analysis of algorithms. **(10)**

Q.2 What is exhaustive search? State, explain and analyze either the travelling salesman problem or the Knapsack problem using exhaustive search. **(10)**

OR

How is brute force technique applicable to sorting? Explain and analyze with example any one brute force sorting algorithm. **(10)**

Q.3 What is divide and conquer strategy? State, explain and analyze any one sorting algorithm which uses divide and conquer strategy. **(10)**

OR

Explain the Strassen's matrix multiplication method in detail **(10)**

Q.4 Define dynamic programming strategy and solve the 0/1 knapsack problem stated below: **(10)**

The ship capacity is 10 and there are 4 items which can be added with the following weights and profits

n=4 capacity = 10 w={7, 2, 3, 6} P= { 25, 15, 20, 36}

OR

What is greedy method? Explain Prim's algorithm with example. **(10)**

Q.5 What is backtracking design strategy? State N- Queen's problem and solve 8 Queen's problem by stating one possible solution. **(10)**

OR

What is a Hamiltonian Circuit? How to solve the Hamiltonian Circuit problem using backtracking technique? **(10)**

Q.6 State two practical applications of greedy design technique. **(10)**

OR

State Heuristic search algorithm and explain with example. **(10)**

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : WINTER - 2017

SUBJECT: DESIGN AND ANALYSIS OF ALGORITHMS

Day : **Wednesday** Time **10.00 AM TO 01.00 PM**

Date : **22/11/2017** **W-2017-2218** Max.Marks:60

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Use of non-programmable **CALCULATOR** is allowed.
4) Neat diagram must be drawn **WHEREVEER** necessary.
5) Assume suitable dada wherever necessary.

Q.1 What are linear and non linear data structures? Explain in detail one data structure of each type. **(10)**

OR

What is "analysis of algorithms" ? Which are the various ways of analyzing algorithms? Explain in detail any one. **(10)**

Q.2 Enlist the features of brute force algorithm. Explain and analyze any one brute force algorithm in detail. **(10)**

OR

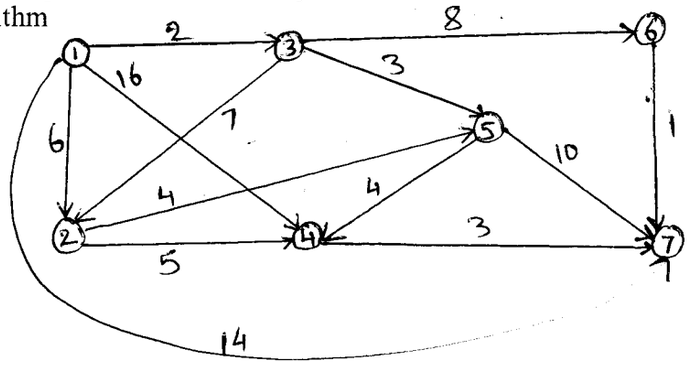
What is the convex hull problem? How can brute force strategy be applied for convex hull problem? Explain with the help of algorithm and its efficiency. **(10)**

Q.3 How is divide and conquer strategy most efficient for binary tree traversal than any other available strategy? Explain any one binary tree traversal using divide and conquer strategy. **(10)**

OR

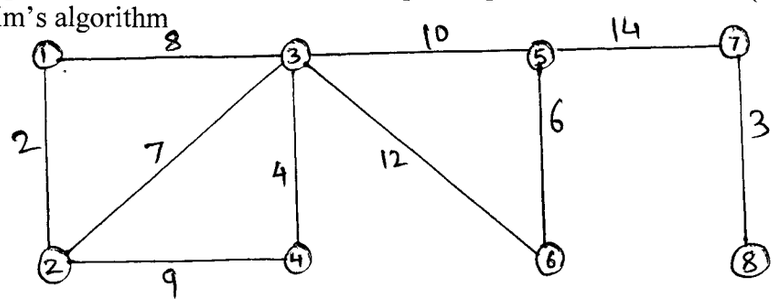
What is a heap? Explain the heap sort algorithm and analyze is efficiency. **(10)**

Q.4 State greedy technique. Find the shortest path from node 1 to all nodes using Dijkstra's algorithm **(10)**



OR

State Prim's algorithm. Find out the minimum spanning tree for the below graph using Prim's algorithm **(10)**



Q.5 State backtracking design strategy. State N- Queen's problem and solve 4 Queen's problem by stating two possible solutions. **(10)**

OR

State P, NP Complete and NP Hard problems. Explain each with example. **(10)**

Q.6 What is deadlock? Explain deadlock detection with example. **(10)**

OR

State resource allocation algorithm with deadlock avoidance using suitable example. **(10)**

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : SUMMER - 2019
SUBJECT: 1) ELECTIVE – II MULTIMEDIA TECHNIQUES

Day: Friday
Date: 31/05/2019
Time: 02.30 PM TO 05.30 PM
Max Marks : 60

S-2019-2752

N.B. :

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Use of non-programmable calculator is **ALLOWED.**
4) Assume suitable data, if necessary.

Q.1 Explain different types of Media. How do you integrate the different types of media in multimedia system? **(10)**

OR

Q.1 With the help of neat diagram, explain how a color picture is represented in a computer? **(10)**

Q.2 Mention and discuss the different parameters used to evaluate the performance of compression algorithms. **(10)**

OR

Q.2 State and explain various properties of Huffman coding. Distinguish between Arithmetic coding and Huffman coding. **(10)**

Q.3 Describe the various multimedia Audio files formats with their applications. **(10)**

OR

Q.3 Briefly discuss about Video compression techniques. **(10)**

Q.4 Define types of Image compression techniques and explain any two image compression techniques in detail. **(10)**

OR

Q.4 What is the need of Image/Graphics standards? Explain different MPEG standards and also give their frame structure. **(10)**

Q.5 Discuss the Optical media storage technology with example. **(10)**

OR

Q.5 Elaborate Traditional file system with example, what are its limitations? **(10)**

Q.6 Illustrate key features of Multimedia application in various fields. **(10)**

OR

Q.6 Write short note on: **(10)**

i) Video-on-demand
ii) Digital libraries

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : WINTER - 2018

SUBJECT- : 1) ELECTIVE – II MULTIMEDIA TECHNIQUES

Day: Saturday | **W-2018-2487** | Time: 10.00 AM TO 01.00 PM

Date: 17/11/2018 | Max. Marks: 60

N.B.:

1) All questions are questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Use of non-programmable calculator is **ALLOWED.**
4) Assume suitable data if necessary.

Q.1 With the help of neat diagram, explain the architecture of Multimedia system and also discuss different types of Multimedia system. **(10)**

OR

Q.1 How Multimedia help to enhance day to day activities of business firms and workplaces? **(10)**

Q.2 Justify the need of Data Compression. Explain basic compression techniques. **(10)**

OR

Q.2 Give LZ77 approach for Adaptive Dictionary Based encoding. **(10)**

Q.3 What is MIDI? Compare and contrast the use of MIDI and digitized audio in multimedia applications. **(10)**

OR

Q.3 Describe the various multimedia Video file formats used for web. Explain the mechanisms used for video and audio synchronization in Multimedia. **(10)**

Q.4 Differentiate between various types of graphics. List and explain various file formats for graphics supported by Multimedia. **(10)**

OR

Q.4 Discuss JPEG Image compression and decompression. **(10)**

Q.5 Explain different storage technologies and differentiate them in terms of their storage and speed. **(10)**

OR

Q.5 Compare CD vs DVD. Explain DVD specifications in detail. **(10)**

Q.6 List and explain in brief single-user, multi-user and networked multimedia applications from various fields. **(10)**

OR

Q.6 Write short note on : **(10)**

i) Interactive television
ii) Media editors

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B.TECH. SEM -VI INFO. TECH. 2014 COURSE (CBCS) :
WINTER - 2017
SUBJECT: COMPUTER ORGANIZATION AND ARCHITECTURE

Day: Thursday
Date: 23/11/2017

Time: 10.00 AM TO 01.00 PM
Max. Marks: 60

W-2017-2219

N.B:

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if **NECESSARY.**

Q.1 Explain the protected mode programmer's model of 80386 processor. **(10)**

OR

Explain the function of following pins of 80386 processor-
i) PEREQ ii) CLK_2 iii) $\overline{ERROR}$

Q.2 Explain the concept of magnetoresistive RAM in detail. **(10)**

OR

What are the various replacement algorithms of cache memory? Explain.

Q.3 Explain the block diagram of microprogrammed control unit in detail. **(10)**

OR

Explain the state-table method of hardwired control unit design with neat diagram.

Q.4 Explain how pipelining is achieved in Pentium processor with neat diagram. **(10)**

OR

Explain the internal architecture of Pentium processor with neat figure.

Q.5 Explain the SPARC architecture with neat diagram. **(10)**

OR

Explain the concept of multicore architecture in detail.

Q.6 Explain the Handler's classification of parallel processing with suitable example. **(10)**

OR

How the performance of a pipeline is measured? Explain in detail.

B.TECH. SEM -VI INFO. TECH. 2014 COURSE (CBCS) :
SUMMER - 2018
SUBJECT: COMPUTER ORGANIZATION AND ARCHITECTURE

Day: Friday **S-2018-2431** **Time:** 02.30 PM TO 05.30 PM
Date: 08/06/2018 **Max. Marks: 60**

N.B:

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if **NECESSARY.**

Q.1 Explain the different features of 80386 DX processor in detail. **(10)**

OR

With suitable figure, explain the internal architecture of 80386 in detail.

Q.2 Explain the detailed working of flash-memory in detail. **(10)**

OR

Explain DDR3 and DDR4 memory technology.

Q.3 List and explain the microperations for the instruction- ADD AL, BL **(10)**

OR

With neat diagram, explain the working of hardwired control unit.

Q.4 Draw and explain the internal architecture of Pentium processor. **(10)**

OR

What are the different addressing modes of Pentium processor? Explain with suitable example.

Q.5 Explain the loosely coupled multiprocessor architecture with neat figure. **(10)**

OR

Explain the feature of RISC architecture with suitable diagram.

Q.6 How parallelism can be achieved in a uniprocessor system? Explain. **(10)**

OR

What are the different levels of parallelism? Explain.

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : WINTER - 2018

SUBJECT: COMPUTER ORGANIZATION & ARCHITECTURE

Day: Friday
Date: 16/11/2018

W-2018-2486

Time; 10.00 AM TO 01.00 PM
Max Marks: 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data, if necessary.
4) Use of non programmable calculator is **ALLOWED**.
5) Draw neat and labeled diagrams **WHEREVER** necessary.

Q.1 Write a note on segmentation of 80386DX and compare it with 8086. **(10)**

OR

Q.1 Describe 80386DX descriptor tables also explain code, data and stack descriptors. **(10)**

Q.2 Explain flash memory, SDRAM and PRAM in detail. **(10)**

OR

Q.2 Describe segmentation and paging in 80386DX in detail. **(10)**

Q.3 Explain multiplier control unit with neat diagram. **(10)**

OR

Q.3 What is microprogram? Write applications of microprogramming. **(10)**

Q.4 Explain addressing modes of Intel Pentium processor. What are the features of Pentium processor? **(10)**

OR

Q.4 Describe features of superscalar architecture. **(10)**

Q.5 Write detailed note on SPARC architecture. **(10)**

OR

Q.5 What is RISC? Explain RISC Processor architecture. **(10)**

Q.6 Write detailed note on Bernstein conditions of parallelism. **(10)**

OR

Q.6 Explain architectural classification of parallel processors. **(10)**

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B.Tech. SEM -VI Info. Tech. 2014 Course (CBCS) : SUMMER - 2019

SUBJECT: COMPUTER ORGANIZATION & ARCHITECTURE

Day: Wednesday
Date: 29/05/2019

Time; 02.30 PM TO 05.30 PM
Max Marks: 60

S-2019-2751

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data, if necessary.
4) Use of non programmable calculator is **ALLOWED**.
5) Draw neat and labeled diagrams **WHEREVER** necessary.

Q.1 Draw functional block diagram of 80386DX. Explain features of 80386DX. **(10)**

OR

Q.1 Write difference between three operating modes of 80386DX. Explain any one in detail. **(10)**

Q.2 Describe UMA, NUMA and COMA with neat diagram. **(10)**

OR

Q.2 What is secondary storage? Explain RAID, Blue ray Disk, SSD and cloud storage in brief. **(10)**

Q.3 Explain sequence counter hardwired control design method in detail. **(10)**

OR

Q.3 Explain applications of microprogramming in detail. **(10)**

Q.4 What are the features of Intel Pentium processor? Draw and explain block diagram. **(10)**

OR

Q.4 Describe cache coherence in Pentium processor. **(10)**

Q.5 Explain closely coupled and loosely coupled multiprocessor systems. **(10)**

OR

Q.5 Explain Intel core i3, i5 and i7 architectures. **(10)**

Q.6 What is instruction pipelining? Explain pipelining in 80386DX Processor. **(10)**

OR

Q.6 Explain Flynn's classification of parallel processing. **(10)**

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