PRN

FW-026

D.K.T.E. Society's TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJI.

(An Autonomous Institute)

Semester End Examination - Winter-21

Class - Program	Final Year B.Tech. (CS)	Day & Date	Sat. ,13/11/21
Course Code	CSL401 / ITL429	Time	2:30 to 5:00 PM
Course Title	High Performance Computer Architectures	Max.Marks	60

Instructions:

1. *All Questions are compulsory; assume suitable data if necessary and mention it clearly.*
2. *Mobile phones and programmable calculators are strictly prohibited.*
3. *Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.*

Que No		Question	Marks	BL	CO
1	A	With block diagram explain basic structure of a linear pipeline processor? How tasks are executed ? Derive an equation for Speedup.	8	1	1
2		**Attempt any one of A & B**			
	A	How Computer architectures are classified using multiplicity of instruction stream & data stream.	7	2	1
	B	Compare the advantages and disadvantages of three interleaved memory organizations used in Pipeline Vector Processing . i) S-access ii) C-access iii) C/S access	7	2	2
3	A	How the system performance of a pipeline architecture is measured over serial architecture ? Efficiency of Computer is dependent on which factors? Explain following performance measures : i) CPI rate ii) MIPS rate III) Throughput Rate iv) Execution Time	8	3	2
4		**Attempt any one of A & B**			
	A	Why associative memories are used for storage and retrieval of rapidly changing databases? Explain searching operation in Associative memory.	7	2	2
	B	Draw Multithreaded architecture and its computation model for a massively parallel processing systems.	7	1	1
5		**Attempt any three of A, B, C & D**			
	A	What is the difference between multicomputer and multiprocessor systems? What are different architectural models for multiprocessor systems.	5	1	2
	B	How the degree of memory conflicts is not encountered in Loosely coupled multiprocessor systems? Draw and explain Nonhierarchical loosely coupled multiprocessor system.	5	2	2
	C	How data -driven computation is different from conventional von Neumann machine? Compare concept of control flow and data flow computing .	5	3	2
	D	What are the functions of Kmap processor in Cm* architecture? Explain with steps how intra cluster memory access is achieved in Cm* architecture.	5	3	2
6		**Attempt any three of A, B, C & D**			
	A	Why tightly coupled systems are preferred for high speed and real time processing ? Draw and explain Tightly coupled multiprocessor configuration.	5	1	2
	B	With block diagram explain static dataflow architecture	5	2	3
	C	What is processor -memory interconnection network in Tightly coupled multiprocessor configurations? How simultaneous memory access is problem is resolved?	5	2	1
	D	Explain following parallel programming models : i)Shared variable mode	5	2	3

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D.K.T.E. Society's TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJI.

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Semester End Examination - Winter-21

Class - Program	Final Year B.Tech. (CS)/(IT)
Course Code	CSL402 / ITL430
Course Title	Data Warehouse & Business Intelligence

Day & Date	Tues, 16/11/2021
Time	2:30 to 5:00 PM
Max.Marks	60

Instructions:

1. *All Questions are compulsory; assume suitable data if necessary and mention it clearly.*
2. *Mobile phones and programmable calculators are strictly prohibited.*
3. *Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.*

Que No		Question	Marks	BL	CO
1	A	Explain Front Room Architecture model of BWBI Systems	8	2	1
2		**Attempt any one of A & B**			
	A	Explain Factless fact tables and consolidated fact tables	7	2	2
	B	Explain Role playing and Mini Dimensions	7	2	2
3	A	Describe major participants and their roles in Dimensional Modeling Process	8	2	2
4		**Attempt any one of A & B**			
	A	Explain Deduplication and Conforming system in ETL process	7	2	3
	B	Explain Change Data Capture System in ETL	7	2	3
5		**Attempt any three of A, B, C & D**			
	A	Explain any two query formulation capabilities required in query tool for Business Intelligent applications?	5	2	4
	B	Explain Pivoting the results and Drill down w.r.t. presentation and analytical Capabilities of query tool in BI applications	5	2	4
	C	Explain Analytic Cycle for BI application	5	2	4
	D	Explain additional functionalities required for BI portal.	5	2	4
6		**Attempt any three of A, B, C & D**			
	A	What kind of preparation is required for BI application development?	5	2	4
	B	What are the steps in creating application templates in BI application specification?	5	2	4
	C	What are the set of documents required for developing report/application in BI systems?	5	2	4
	D	Explain Formatting of results w.r.t BI application development?	5	2	4

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D.K.T.E. Society's TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJI.

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Semester End Examination - Winter-21

Class - Program	Final Year B.Tech. (CS)/IT
Course Code	CSL403/ITL431
Course Title	Image Processing

Day & Date	Tues, 18/11/2021
Time	2:30 to 5:00 PM
Max.Marks	60

Instructions:

1. *All Questions are compulsory; assume suitable data if necessary and mention it clearly.*
2. *Mobile phones and programmable calculators are strictly prohibited.*
3. *Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.*

Que No		Question	Marks	BL	CO
1	A	How to measure distance between two pixels in an image? Explain with the help of example.	8	3	3
2		**Attempt any one of A & B**			
	A	Discuss the procedure for conversion from RGB color model to CMY color model.	7	3	2
	B	What is color image processing?	7	1	2
3	A	How image averaging is used to t reduce noise in the image?	8	3	3
4		**Attempt any one of A & B**			
	A	Explain in detail about RGB color model and its application	7	2	2
	B	Explain the string matching in object recognition.	7	2	2
5		**Attempt any three of A, B, C & D**			
	A	Explain in detail about web safe colors.	5	2	2
	B	Write short note on Histogram processing	5	1	4
	C	What is meant by image segmentations? Give two applications of image segmentation	5	4	2
	D	Classify the types of edges in the digital image.	5	3	2
6		**Attempt any three of A, B, C & D**			
	A	What is meant by image subtraction? Discuss various areas of application of image subtraction.	5	1	4
	B	How image is enhanced by histogram Equalization?	5	3	4
	C	Write note on following, also give its application: Bit-plane slicing	5	1	4
	D	Explain logical operation on images. Give its application.	5	2	4

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D.K.T.E. Society's TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJI.

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Semester End Examination - Winter-21

Class - Program	Final Year B.Tech. (CS/IT)	**Day & Date**	Friday, 26/11/2021
Course Code	CSL406/ITL434]	**Time**	2:30 to 5:00 PM
Course Title	Cloud Computing]	**Max.Marks**	60

Instructions:

1. *All Questions are compulsory; assume suitable data if necessary and mention it clearly.*
2. *Mobile phones and programmable calculators are strictly prohibited.*
3. *Writing anything on question paper (except PRN), ~~exchange/sharing of stationery, calculator etc. are not allowed.~~*

Que No		Question	Marks	BL	CO
1	A	Explain different cloud computing implementation models	8	2	1
2		**Attempt any one of A & B**			
	A	List and discuss various types of virtualizations?	7	1	2
	B	Explain binary translation with full virtualization in cloud computing?	7	1	2
3	A	What are the main characteristics of platform-as-a-service solution?	8	2	2
4		**Attempt any one of A & B**			
	A	Explain various features of Open Source OpenStack Cloud Architecture	7	2	2
	B	Describe network problems and their migration in Cloud architecture	7	2	2
5		**Attempt any three of A, B, C & D**			
	A	Explain the role of cloud computing in online health monitoring in geoscience satellite image processing	5	2	3
	B	Explain Cancer diagnosis using cloud	5	2	3
	C	Explain role of cloud computing in ERP	5	2	3
	D	Explain Video encoding on cloud	5	2	3
6		**Attempt any three of A, B, C & D**			
	A	Explain in detail how energy efficiency is achieved in cloud computing	5	2	4
	B	Explain Virtual Marketplace in Cloud Computing	5	2	4
	C	Explain legal issues and laws in cloud computing	5	2	4
	D	What is Service Level Agreement (SLA)? Explain in detail	5	2	4

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