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QP Code DW-184

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

(An Autonomous Institute)

Semester End Examination – Winter 2019-20

Class - Program	Final Year B.Tech. (CS)
Course Code	CSL406
Course Title	Cloud Computing

Day &Date	14/11/19 THU
Time	2:30 to 5:30 PM
Max.Marks	100

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	Define Cloud and explain various features of cloud Computing	8	1	1
	B	Explain various deployment models of Cloud computing	7	2	1
2	A	What do you mean by virtualization? What are the benefits of Virtualization?	8	2	2
		Attempt any one of B & C			
	B	Draw and explain hosted virtualization structure. How I/O access takes place in it?	7	2	2
	C	What are the different techniques that implement virtualization at the OS level? Discuss in detail.	7	2	2
3	A	Explain in detail Infrastructure as a Service(IAAS)	8	2	3
	B	What do you mean by Cloud Storage Gateways (CSG)? What are different features CSGs has to provide?	7	1	3
4	A	Explain Open Source Eucalyptus Cloud Architecture	8	2	4
		Attempt any one of B & C			
	B	Explain various features of Open Source OpenStack Cloud Architecture	7	2	4
	C	Describe network problems and their migration in Cloud architecture	7	2	4
5		**Attempt any one ofA&B**			
	A	Explain the role of cloud computing in online health monitoring with a reference model	8	2	4
	B	Explain the role of cloud computing in online health monitoring in geoscience satellite image processing	8	2	4
		Attempt any twoof C, D & E			
	C	Explain the following a) Jeeva Portal b) Cancer diagnosis using cloud	6	2	4
	D	Explain role of cloud computing in CRM	6	2	4
	E	Explain role of cloud computing in ERP	6	2	4
6		**Attempt any one ofA&B**			
	A	Explain Green Cloud computing architecture	8	2	4
	B	Explain in detail how energy efficiency is achieved in cloud computing	8	2	4
		Attempt any twoof C, D & E			
	C	Explain the following a) Spot instances b) Virtual Marketplace	6	2	4
	D	Describe cloud security alliance(CSA)	6	2	4
	E	Explain legal issues and laws in cloud computing	6	2	4

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

(An Autonomous Institute)

Semester End Examination - Winter 2019-20

Class - Program	Final Year B.Tech. (CS)	Day &Date	MON , 11/11/19
Course Code	CSL403	Time	to 2:30 to 5:30
Course Title	Image Processing	Max.Marks	100

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 in detail about the steps in an Image Processing System.	8	2	1
	B	How RGB to CMY conversion is done illustrate with example.	7	3	2
2	A	Explain the basics of intensity thresholding in image segmentation	8	2	2
		Attempt any one of B & C			
	B	Explain the pattern and pattern classes in object recognition	7	2	2
	C	What is meant by discontinuities in an image? Explain in detail about point detection in an image.	7	2	2
3	A	Explain application of imaging which uses: a. Gamma---Rays B. X---Ray c. Ultraviolet d. Visible rays	8	2	1
	B	Explain in detail about Pseudo color image processing with help of diagram.	7	2	2
4	A	What is meant by image enhancement by point processing? Describe any two methods in it.	8	2	4
		Attempt any one of B & C			
	B	Define histogram of a digital image. Explain how histogram is useful in image enhancement.	7	2	4
	C	How to measure different distances between two pixels in an image? Explain with the help of example	7	2	3
5		**Attempt any one ofA&B**			
	A	Explain the procedure for conversion from RGB color model to HSI color model.	8	2	2
	B	Explain with example a) Neighbors of pixel b) Connectivity.	8	2	3
		Attempt any twoof C, D & E			
	C	How image averaging are is used to enhance the image?	6	4	4
	D	How gamma correction can be used in image enhancement?	6	4	4
	E	Explain logical operations on images with its application.	6	2	3
6		**Attempt any one ofA&B**			
	A	Explain the principle of sampling and quantization. Evaluate the effect of increasing the a) Sampling frequency b) Quantization levels on image	8	4	1
	B	Explain about region based segmentation.	8	2	2
		Attempt any twoof C, D & E			
	C	Explain in detail the matching the shape numbers in object recognition.	6	2	2
	D	What is meant by image segmentations? Describe various applications of it.	6	1	2
	E	Explain in detail about Log Transformations with the help of diagram.	6	2	4

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QP Code -1

D.K.T.E. Society's TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJI. DW 041

(An Autonomous Institute)

Semester End Examination - Winter 2019-20

Class - Program	Final Year B.Tech. (CS)
Course Code	CSL 401
Course Title	High Performance Computer Architectures

Day &Date	Wed , 6/11/19
Time	to 2.30 to 5.30 PM
Max.Marks	100

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 computer architectures are classified according to the multiplicity of instruction and data streams? Which classification corresponds to array processor? Why?	8	2	1
	B	How overlapped processing of multiple tasks are executed in linear pipeline processor? Draw space-time diagram for depicting the overlapped operations.	7	4	1
2	A	Distinguish vector processing from scalar processing. How vector instructions are classified? Draw and explain Cray-1 architecture .	8	2	2
		Attempt any one of B & C			
	B	What is Speedup? Derive the equation for speedup. Consider the execution of a program of 15000 instructions by a linear pipeline processor with a clock rate of 25 MHz. Assume that the instruction pipeline has five stages and one instruction is issued per clock cycle. The penalties due to branch instructions are ignored. Calculate the Speedup factor and efficiency using this pipeline.	7	3	2
	C	How SIMD array computer is characterized by 4 tuple model? Draw SIMD array processor configuration for BSP. What is function of Alignment network ?	7	3	2
3	A	Why associative memories are called as content addressable memories? How associative memories are different than RAM ? With diagram explain how bit Bij is addressed in associative memory.	8	2	3
	B	What are different associative memory organizations ? How bit parallel organization is faster?	7	2	3
4	A	What are architectural models for a multiprocessor systems? How memory conflict problem is not encountered in loosely coupled multiprocessors systems? Illustrate architecture of loosely coupled multiprocessor system.	8	2	4
		Attempt any one of B & C			
	B	What is function of slocal in Cm* architecture? How different clusters are formed and interconnected in Cm * architecture?	7	2	4
	C	What are components of Kmap in Cm* Explain function of each component in Kmap.	7	2	4
5		**Attempt any one ofA&B**			
	A	Explain stepwise intra-cluster memory access in Cm* architecture	8	2	4

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QP Code - DW - 641

Que No		Question	Marks	BL	CO
	B	How high-speed or real time processing is achieved better in tightly coupled systems? Illustrate tightly coupled multiprocessor configuration with private cache.	8	2	4
		Attempt any twoof C, D & E			
	C	How data flow architectures are different than conventional architectures? State different data flow operators	6	2	3
	D	Draw and explain static and dynamic data flow architectures	6	2	3
	E	State data flow language properties, what are advantages of data flow architectures?	6	1	3
6		**Attempt any one ofA&B**			
	A	State different parallel programming models specifically designed for multiprocessor architectures. How shared variable model is designed?.	8	2	4
	B	Distinguish between following operational models used in programming multiprocessor systems. I] Multiprogramming II] Multiprocessing	8	2	4
		Attempt any twoof C, D & E			
	C	Distinguish between control flow and data flow computer architectures.	6	2	4
	D	What are different operators and links for construction of dataflow graphs	6	2	4
	E	How two processes residing at different processor nodes communicate with each other by passing messages ?	6	2	4

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PRN		QP Code	DW-077

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

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Semester End Examination - Winter 2019-20

Class - Program	Final Year B.Tech. (CS)	Day &Date	FRI , 8/11/19
Course Code	CSL402	Time	to 2:30 to 5:30 PM
Course Title	Data warehouse and Business Intelligence	Max.Marks	100

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 with diagram	8	2	1
	B	Explain the difference between OLAP and OLTP	7	2	2
2	A	Construct Star schema and galaxy schema for following	8	3	2

Time	Product	Payment Method	Customer Demo-graphics	Dealer	
Year	Model Name	Finance Type	Age	Dealer Name	
Quarter	Model Year	Term (Months)	Gender	City	
Month	Package Styling	Interest Rate	Income Range	State	
Date	Product Line	Agent	Marital Status	Single Brand Flag	
Day of Week	Product Category		House-hold Size	Date First Operation	
Day of Month	Exterior Color		Vehicles Owned		
Season	Interior Color		Home Value		
Holiday Flag	First Year		Own or Rent		

Facts: Actual Sale Price, MSRP Sale Price, Options Price, Full Price, Dealer Add-ons, Dealer Credits, Dealer Invoice, Down Payment, Proceeds, Finance

		Attempt any one of B & C			
	B	Explain aggregates and aggregates navigation	7	2	1
	C	Explain Back Room Architecture with diagram	7	2	1
3	A	Explain "Bus matrix for manufacturing supply chain" with diagram?	8	2	2
	B	Explain extract process in the ETL system?	7	2	3
4	A	Explain process metadata, technical metadata and business metadata in the ETL system?	8	2	3
		Attempt any one of B & C			
	B	Compare type 1, type 2 and type 3 slow changing dimensions.	7	4	2
	C	Compare grain of transaction fact table and periodic snapshot fact table	7	4	2
5		**Attempt any one ofA&B**			
	A	What are technical features required in query tool for Business Intelligent applications?	8	2	4
	B	How Clustering and Affinity grouping is used for Data mining in BIS?	8	2	4
		Attempt any twoof C, D & E			
	C	Explain Analytic Cycle for BI application	6	2	4

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Que No		Question	Marks	BL	CO
	D	How Analytic applications are used in BIS?	6	2	4
	E	Explain different types of BI applications.	6	2	4
6		**Attempt any one ofA&B**			
	A	Explain Testing , Verification of Applications and Data in BI Application Development	8	2	4
	B	Describe process of creating application standards and templates in development of BI application?	8	2	4
		Attempt any twoof C, D & E			
	C	Explain Business Intelligent application resource planning	6	2	4
	D	Explain steps in creating detailed BI application specification	6	2	4
	E	What are the three major activities in building BI applications	6	2	4

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