USN | | | | | | | | | | 22SCS31

Third Semester M.Tech. Degree Examination, Dec.2024/Jan.2025
Cloud Computing

Time: 3 hrs.   Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	With a neat representation of NIST reference model, Explain the entities involved in cloud computing.	10	L2	CO1
	b.	Explain with neat diagram services offered by AWS.	10	L2	CO1
		OR			
Q.2	a.	Show the structure of SaaS and explain the core components of windows Azure with neat diagram.	10	L2	CO1
	b.	Explain how RAID-5 system is used for reliable data storage in cloud.	10	L2	CO1
		Module – 2			
Q.3	a.	Illustrate the similarities and differences between life cycle of a work flow and a computer program.	10	L2	CO2
	b.	Illustrate the basic workflow patterns.	10	L2	CO2
		OR			
Q.4	a.	Briefly explain the zookeeper coordination service model with a neat diagram.	10	L2	CO2
	b.	Explain MapReduce programming model.	10	L2	CO2
		Module – 3			
Q.5	a.	Identify three classes of VM for systems with the same ISA with neat representations and explain.	10	L3	CO3
	b.	Identify the different layering and interfaces between layers in a computer system and explain.	10	L3	CO3
		OR			
Q.6	a.	Utilizing the Xen original architecture explain the communication between guest domain and the driver domain over an I/O and an event channel.	10	L3	CO3
	b.	Identify the roles of VMBR in an isolated environment. Also explain how a 'rogue VMM' can be inserted between physical hardware and an operating system.	10	L3	CO3

		Module – 4			
Q.7	a.	Identify and explain the different 'Policies' and 'Mechanisms' for cloud resource management.	10	L3	CO4
	b.	Utilizing control theory concepts explain stability of a two level resource allocation architecture.	10	L3	CO4
		OR			
Q.8	a.	Construct the pseudocode for ASCA algorithm and explain ASCA combinatorial auction algorithm in detail.	10	L3	CO4
	b.	FCFS algorithm does not guarantee fairness. Making use of FQ algorithm, explain how this problem can be addresses.	10	L3	CO4
		Module – 5			
Q.9	a.	Virtually all surveys report that "security is the top concern". Explain why is security top concern for cloud users.	10	L2	CO5
	b.	Classify and explain VMM based threats and VM based threats.	10	L2	CO5
		OR			
Q.10	a.	Explain how to launch an ECZ Linux instance and connect to it.	10	L2	CO5
	b.	Explain the architecture of a cloud based system to optimize the routing and placement of components used in FPGA.	10	L2	CO5

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22SCS325

Third Semester M.Tech. Degree Examination, Dec.2024/Jan.2025
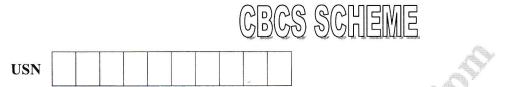## Business Intelligence and its Applications

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

			M	L	C
		Module – 1			
Q.1	a.	Explain with neat diagram, Engineering stages and the Development steps in BI.	10	L2	CO1
	b.	Explain BI project Team structure along with additional limited roles.	10	L2	CO1
		OR			
Q.2	a.	List and explain two major categories of the middleware platforms.	10	L2	CO1
	b.	Explain with neat diagram Business Case Assessment Activities.	10	L2	CO1
		Module – 2			
Q.3	a.	Define the BI Project. Explain with diagram Project Planning Activities.	12	L2	CO1
	b.	Explain the sides involved in the project planning activities.	8	L2	CO1
		OR			
Q.4	a.	Explain in detail about general business requirements.	10	L2	CO1
	b.	Explain the interviewing process.	10	L2	CO1
		Module – 3			
Q.5	a.	With a neat diagram, explain star schema and snowflake schema which is used for logical database design.	10	L3	CO2
	b.	Describe the steps for implementing the security in a multier environment.	10	L3	CO2
		OR			
Q.6	a.	Explain database design activities with neat diagram.	10	L3	CO2
	b.	Explain the differences between operational databases and BI target databases.	10	L2	CO2
		Module – 4			
Q.7	a.	List and explain the three key growth areas of growth management.	10	L2	CO3
	b.	Explain the post implementation review process in growth management with neat diagram.	10	L2	CO3

		OR			
Q.8	a.	Explain release evaluation activities in detail.	10	L2	CO3
	b.	Write a brief note on the Intelligence Dashboard.	10	L2	CO3
		Module – 5			
Q.9	a.	What are the key purpose of using IT in business process? Explain.	12	L2	CO3
	b.	Explain BI road ahead.	8	L2	CO3
		OR			
Q.10	a.	Illustrate the criteria for performance excellence with a neat diagram.	10	L3	CO3
	b.	What is structural data? Explain the characteristics and sources of structural data and managing them.	10	L2	CO3

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22SCS335

Third Semester M.Tech Degree Examination, Dec.2024/Jan.2025
Block Chain Technology

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Explain the growth of blockchain technology.	10	L1	CO1
	b.	Why is distributed system essential for bockchain technology? Explain.	10	L1	CO2
		OR			
Q.2	a.	Explain the generic elements of block chain with the help of neat diagram.	10	L2	CO1
	b.	What is consensus? Explain its mechanism. Briefly write about some of the consensus algorithms.	10	L1	CO1
		Module – 2			
Q.3	a.	Explain decentralization in blockchain technology. What are the different methods of decentralization?	10	L2	CO1
	b.	Briefly explain the taxonomy of the cryptographic primitives.	10	L2	CO1
		OR			
Q.4	a.	What is public key cryptography? Explain the working of asymmetric cryptography.	10	L3	CO2
	b.	Explain the following : i) Hash function ii) Digital signature.	10	L3	CO2
		Module – 3			
Q.5	a.	What is Bitcoin? Explain its emergence.	10	L2	CO3
	b.	Write short notes on : i) Bitcoin limitation ii) Litecoin.	10	L2	CO3
		OR			
Q.6	a.	Explain transactions and its life cycle.	10	L3	CO2
	b.	Write short notes on : i) Proof – of – work ii) Proof – of – stake.	10	L3	CO2
		Module – 4			
Q.7	a.	Explain the components of ethereum eco – system.	8	L3	CO3
	b.	What is a smart contract? Give some use cases.	8	L3	CO3
	c.	Specify the properties of smart contract.	4	L3	CO3
		OR			
Q.8	a.	Explain in detail the structure of Ethereum virtual machine.	10	L3	CO3
	b.	What is hyperleader? Discuss on the hyper leader projects.	10	L3	CO3
		Module – 5			
Q.9	a.	How does blockchain technology benefit. The health and finance industry.	10	L4	CO3
	b.	Write short notes on : i) IoT blocchain ii) e-governance.	10	L3	CO3
		OR			
Q.10	a.	Give an example of how a government is actively .promoting the use of block chain.	10	L4	CO3
	b.	Mention some of the alternative block chain and explain any one in detail.	10	L3	CO3

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