Hall Ticket Number :										

R-17

Code: 7P2B44

M.C.A. IV Semester Regular Examinations November 2020

Data Mining

Max. Marks: 60 Time: 3 Hours

Answer *any five* questions from the following (5 x 12 = 60 Marks)

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			Marks	CO	Blooms Level
1.	a)	Define Data Mining. Explain about major functionalities of Data Mining.	6M	1	5
	b)	What are the differences between Data Visualization and Data Representation in Data Mining	6M	1	5
2.		Write a short note on following			
	a)	Data Preprocessing	4M	1	5
	b)	Data Discretization.	4M		
	c)	Data Mart	4M		
3.	a)	What is Bayesian classifiers? Illustrate Naïve Bayesian Classification with help of an example.	6M	2	5
	b)	Describe about Rule Based Classification	6M	2	4
4.		What is association Rule Mining? Illustrate a method to construct frequent sets with generating a candidate set. Give an example	12M	3	6
5.	a)	What are functional differences between FP Tree and Apriori Approaches	6M	3	5
	b)	Briefly explain about the criteria for classifying association rules.	6M	3	4
6.		Describe about different kinds of Data used for Clustering? Give an example for each.	12M	4	5
7.	a)	Briefly explain about construction of K-Means Clustering Method.	6M	4	5
	b)	Construct two clusters by using K-Means Clustering for the following Data. D= { 1,6,4,2,8,9 ,6,1,3,10,5}	6M	4	5
8.	a)	Discuss about different causes for Anomalies	6M	5	5
	b)	Explain about model-based Anomaly Detection	6M	5	5

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Hall Ticket Number :										

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Code: 7P2B41

M.C.A. IV Semester Regular & Supplementary Examinations November 2020

Software Engineering

Max. Marks: 60 Time: 3 Hours

Answer *any five* questions from the following (5 x 12 = 60 Marks)

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			Marks	CO	Blooms Level
1.	a)	Write IEEE definition of software engineering. Describe the nature of software.	6M		1
	b)	Describe Adaptive Software Development (ASD) agile model.	6M		2
2.	a)	Summarize the general principles of software engineering practice	6M		2
	b)	Illustrate Capability Maturity Model Integration (CMMI).	6M		3
3.	a)	Explain water fall model. List out the advantages and disadvantages when the waterfall model is applied?	6M		2
	b)	Illustrate functional and non-functional requirements.	6M		3
4.	a)	Explain evolutionary process models	6M		2
	b)	Discuss requirements validation and management	6M		2
5.	a)	Explain the concept of modular decomposition styles.	6M		2
	b)	List out the features of Object Oriented Design (OOD)?	6M		1
6.	a)	Differentiate between verification and validation.	6M		2
	b)	Describe the principles of system and component testing.	6M		2
7.	a)	Describe strategies for generating system test cases.	6M		2
	b)	Discuss software quality assurance elements, tasks, goals and metrics.	6M		2
8.	a)	Explain various activities in software project management	6M		2
	b)	Justify why should several estimation techniques be used to produce a cost estimate for a large, complex software system?	6M		5

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Hall Ticket Number :										

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Code: 7P2B4F

M.C.A. IV Semester Regular Examinations November 2020

System Software

Max. Marks: 60 Time: 3 Hours

Answer *any five* questions from the following (5 x 12 = 60 Marks)

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1. Apply the knowledge of machine architecture and explain the Registers, Instruction Formats and Addressing modes of SIC/XE machine? 12M

2. a) Contrast between System Software and Application Software with an example each. 4M
   b) Describe the components of a system programming in detail. 8M

3. a) Build a SIC/XE program to add **APLHA** and **BETA**, an arrays of 100 word each and store the result in GAMMA, an array of 100 words. 6M
   b) Develop PASS-1 algorithm of a TWO-PASS assembler. 6M

4. Explain the functionalities and types of macro processor. 12M

5. Analyze and design single and multi-pass macro processor. 12M

6. a) Differentiate between loader and linker in a system programming. 6M
   b) Apply the knowledge of system booting and explain the bootstrap loader with an assembly code. 6M

7. Explain the machine dependent loaders with an example. 12M

8. Apply the knowledge of translators and explain the phases of compiler for the given source code **initial: = rate * position + 60** 12M

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Hall Ticket Number :										

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Code: 7P2B43

M.C.A. IV Semester Regular & Supplementary Examinations November 2020

Unix & Network Programming

Max. Marks: 60 Time: 3 Hours

Answer *any five* questions from the following (5 x 12 = 60 Marks)

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			Marks	CO	Blooms Level
1.		Outline the different features of the Unix Operating System.	12M		
2.		Illustrate grep, egrep and fgrep Commands	12M		
3.	a)	List different file attributes and permissions.	6M		
	b)	Explain the method of altering file access permissions of a file.	6M		
4.	a)	Briefly describe setjmp and longjmp Functions	6M		
	b)	Difference between fork and vfork system calls	6M		
5.		Explain exec, wait, exit system calls	12M		
6.		Define signal and Outline different signals.	12M		
7.		Briefly describe kill, alarm, raise, pause functions	12M		
8.		Describe Interprocess Communication using Message Queues	12M		

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Code: 7P2B4A

M.C.A. IV Semester Regular Examinations November 2020

Cloud Computing

Max. Marks: 60 Time: 3 Hours

Answer *any five* questions from the following (5 x 12 = 60 Marks)

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			Marks	CO	Blooms Level
1.	a)	Discuss any three advantageous of making use of cloud computing services in Medium and Small-Scale businesses.	8M		
	b)	Give the differences between public cloud and private cloud models.	4M		
2.	a)	Discuss any two personal services, where cloud collaboration is advantageous.	8M		
	b)	How does cloud computing helps in maintaining schedules at the level of corporations?	4M		
3.	a)	Define project management. Why do you require cloud-support for the same?	4M		
	b)	Give a scenario how education institutes and schools would make use of cloud computing in their regular activities?	8M		
4.	a)	Give the purpose of Google calendar. Mention any two scenarios you may make use of this tool.	6M		
	b)	You are asked to manage the grocery stock at home, how you will make use of cloud services for this?	6M		
5.	a)	List and discuss various components of event-management applications.	6M		
	b)	Discuss working of one of the industrially available event-management tool.	6M		
6.	a)	Compare salient features of Gmail with Yahoo mail.	6M		
	b)	How an instant messenger is different from Mail. Discuss the working of AOL instant messenger.	6M		
7.	a)	Why do you think efficient storage service is a backbone of successful operations of cloud computing?	8M		
	b)	Write a note on Google Drive.	4M		
8.	a)	Photo editing applications are most widely used cloud-based services, give their role and importance in today's applications scenario.	8M		
	b)	Write a note on one of the photo editing tool familiar to you.	4M		

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Code: 7P2B42

M.C.A. IV Semester Regular Examinations November 2020

Data Communication & Computer Networks

Max. Marks: 60 Time: 3 Hours

Answer *any five* questions from the following (5 x 12 = 60 Marks)

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			Marks	CO	Blooms Level
1.	a)	Explain different Layers and their functionalities in TCP/IP network model?	6M	CO1	L2
	b)	Discuss in detail about Frequency division Multiplexing?	6M	CO1	L2
2.	a)	Discuss about various types of transmission media?	6M	CO1	L2
	b)	Explain Circuit Switched Networks with suitable examples?	6M	CO1	L2
3.	a)	Explain any two error detection mechanisms in detail?	6M	CO2	L2
	b)	What are the requirements and applications of Wireless LAN?	6M	CO2	L2
4.	a)	With a suitable example, explain Distance Vector Routing algorithm.	6M	CO3	L2
	b)	What is the serious drawback of Distance Vector Routing algorithm? Explain?	6M	CO3	L3
5.	a)	Explain hierarchical routing with an example and mention its advantages and disadvantages?	6M	CO3	L2
	b)	Discuss the notation, representation and address space of IPv6?	6M	CO3	L2
6.	a)	Discuss in detail about UDP services and applications?	6M	CO4	L4
	b)	Draw neat architecture of an Electronic Mail system and explain its message format?	6M	CO4	L3
7.	a)	Compare TCP and UDP protocols?	6M	CO4	E
	b)	Explain in detail about Domain Name System (DNS)?	6M	CO4	L2
8.	a)	Explain Data Encryption standard (DES) in detail?	6M	CO5	L2
	b)	Mention the strengths and weakness of DES algorithm?	6M	CO5	L3

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