

A.Y. 2019-20

MCA (IV Sem.)(R17) Reg/Suppl.

**LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING  
(AUTONOMOUS)**

MCA (IV-Semester)(R17) – Regular & Supplementary Examinations, October 2020

**TIME TABLE**

**TIME : 10.00 AM to 1.00 PM**

DATE	Name of the Course
12-10-2020 (Monday)	17MC17 - Cloud Computing
14-10-2020 (Wednesday)	17MC18 - Data Warehousing and Mining
16-10-2020 (Friday)	17MC19 - Object Oriented Analysis and Design
19-10-2020 (Monday)	17MC20 - Web Technologies
21-10-2020 (Wednesday)	17MC21 - Cryptography and Network Security (PE-I)
	<b>17MC22 - Distributed Operating Systems (PE-I)</b>

**NOTE:**

- (i) Any omissions or clashes in this time table may please be informed to the Controller of Examinations immediately.
- (ii) Even if government/JNTUK/College declares holiday on any of the above dates, the examinations shall be conducted as notified only.
- (iii) For any clarification in respect of the above examinations, please contact the Controller of Examinations.

Date : 28-09-2020

**CONTROLLER OF EXAMINATIONS**

Copy to:

1. MCA H.o.D. for N.A.,
2. MCA Notice Boards

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**PRINCIPAL 28/9/2020**

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Principal

**LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING  
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L.B. Reddy Nagar :: Mylavaram – 521 230 :: Krishna Dist.:A.P.

M.C.A (IV Semester) Regular/Supplementary Examinations

**17MC20-WEB TECHNOLOGIES**

(MCA)

Time : 3 hours

Max. Marks : 60

Answer all questions with either or choice

All questions carry equal marks

Q.No	Questions	Marks	CO	BL
1(a)	Write an HTML program to display your class time table using table tag.	6M	CO1	L2
(b)	Write an HTML code to generate feedback form using form elements.	6M	CO1	L2
<b>(OR)</b>				
2(a)	Develop a JavaScript to prompt the user for the radius of a circle and call the function circle_Area to calculate and display the area of the circle.	6M	CO1	L3
(b)	Create a JavaScript code to generate the current date in words format "Day, Month Date, Year". (Hint: Monday, September 07, 2020)	6M	CO1	L3
<b>(OR)</b>				
3(a)	With the neat block diagram explain the CSS Box Model.	6M	CO2	L2
(b)	Define Z-index. Write a java script to demonstrate Z-index property?	6M	CO2	L1
<b>(OR)</b>				
4(a)	Write a DTD for the following schema (emp_id, emp_name (firstname, lastname), dob (dd,mm,yyyy), address(city, state)).	6M	CO2	L2
(b)	Compare and contrast Traditional Web Applications and Ajax Web Applications.	6M	CO2	L2
<b>(OR)</b>				
5(a)	List and explain different types of Statements in JDBC with example.	6M	CO3	L2
(b)	Discuss in detail Javax.sql.* package.	6M	CO3	L2
<b>(OR)</b>				
6(a)	What is a Java Bean? Explain the advantages of Java Beans.	6M	CO3	L2
(b)	Discuss in detail Java Beans API.	6M	CO3	L2
<b>(OR)</b>				
7(a)	Define servlet. Explain Servlet life cycle methods.	6M	CO4	L1
(b)	How to handle Get and Post methods using Servlet? Explain with an example.	6M	CO4	L2
<b>(OR)</b>				
8(a)	What is a cookie? Explain in detail reading and writing a cookies.	6M	CO4	L3
(b)	Discuss in detail directory structure for a web application.	6M	CO4	L2
<b>(OR)</b>				
9(a)	List out the drawbacks of Servlet? Explain the anatomy of a JSP page.	6M	CO5	L2
(b)	Discuss in detail JSP implicit objects.	6M	CO5	L2
<b>(OR)</b>				
10(a)	Illustrate the error handling with JSP.	6M	CO5	L2
(b)	Write a short note on struts.	6M	CO5	L2

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**17MC17-CLOUD COMPUTING  
(MCA)**

Time : 3 hours

Max. Marks : 60

Answer all questions with either or choice

All questions carry equal marks

Q.No	Questions	Marks	CO	BL
1(a)	Define Cloud Computing. List and describe various cloud service models.	6M	CO1	L2
(b)	Discuss in detail about various technological influences for Cloud Computing.	6M	CO1	L2
<b>(OR)</b>				
2(a)	List and explain essential characteristics for Cloud Computing.	6M	CO1	L2
(b)	Write in detail about various Operational influences for Cloud Computing.	6M	CO1	L2
<b>(OR)</b>				
3(a)	Explain about SPI framework.	6M	CO2	L2
(b)	Discuss in detail about Cloud Deployment models.	6M	CO2	L2
<b>(OR)</b>				
4(a)	List and explain Amazon cloud services under IaaS.	6M	CO2	L2
(b)	Write and explain the benefits of cloud computing.	6M	CO2	L2
<b>(OR)</b>				
5(a)	Describe the Cloud Information Security Objectives.	6M	CO3	L2
(b)	List and explain Cloud Security Design Principles.	6M	CO3	L2
<b>(OR)</b>				
6(a)	Discuss in detail about various Cloud security services.	6M	CO3	L2
(b)	What are the major elements of the software requirements engineering process? Explain.	6M	CO3	L2
<b>(OR)</b>				
7(a)	Explain about Health Insurance Portability and Accountability Act.	6M	CO4	L2
(b)	Describe about Common Threats and Vulnerabilities.	6M	CO4	L2
<b>(OR)</b>				
8.	Discuss the threats and vulnerabilities in virtualized systems.	12M	CO4	L2
<b>(OR)</b>				
9(a)	What is meant by Microarchitectures? Discuss in detail.	6M	CO5	L2
(b)	Explain about models for Controlling Access.	6M	CO5	L2
<b>(OR)</b>				
10(a)	Describe the Trusted Computing Characteristics	6M	CO5	L2
(b)	Define the PKI? Explain the elements of PKI.	6M	CO5	L2



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**17MC18-DATA WAREHOUSING AND MINING**

(MCA)

Time : 3 hours

Max.Marks : 60

Answer all questions with either or choice

All questions carry equal marks

Q.No	Questions	Marks	CO	BL
1(a)	Discuss in detail about data mining steps in the process of knowledge discovery.	6M	CO1	L2
(b)	Illustrate the overall architecture of data warehouse.	6M	CO1	L2
<b>(OR)</b>				
2(a)	Explain about OLAP operations with suitable examples.	6M	CO1	L2
(b)	Describe in detail about Multidimensional Data Model.	6M	CO1	L1
3(a)	Discuss in detail about various data transformation techniques.	6M	CO2	L2
(b)	Describe in detail about reduction in data preprocessing.	6M	CO2	L2
<b>(OR)</b>				
4(a)	Explain about data discretization techniques.	6M	CO2	L2
(b)	Discuss the methods for numeric concept hierarchy generation.	6M	CO2	L2
5(a)	Explain Apriori algorithm with an example.	6M	CO3	L2
(b)	Describe Mining Multiple Association rules with an example.	6M	CO3	L2
<b>(OR)</b>				
6(a)	Discuss general road map on pattern mining	6M	CO3	L2
(b)	Describe in detail about the process of Generating Association Rules from Frequent Itemsets.	6M	CO3	L2
7.	How are classification and prediction handled? Explain in detail the Bayesian Classification.	12M	CO4	L2
<b>(OR)</b>				
8.	Define Decision Tree. Explain how Classification is done using decision tree induction.	12M	CO4	L2
9(a)	Define Cluster Analysis. Explain the types of Data in Cluster Analysis.	6M	CO5	L2
(b)	Discuss in detail about Outlier analysis.	6M	CO5	L2
<b>(OR)</b>				
10(a)	Explain k-means partitioning method in detail.	6M	CO5	L2
(b)	Explain k-medoids partitioning method in detail.	6M	CO5	L2

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M.C.A (IV Semester) Regular/Supplementary Examinations

**17MC19-OBJECT ORIENTED ANALYSIS AND DESIGN**

(MCA)

Time : 3 hours

Max. Marks : 60

Answer all questions with either or choice

All questions carry equal marks

Q.No	Questions	Marks	CO	BL
1(a)	What is modelling? Explain importance of modelling.	6M	CO1	L1
(b)	Illustrate object oriented analysis and design With a real life example.	6M	CO1	L3
<b>(OR)</b>				
2(a)	List the basic Structural Things of UML?	6M	CO1	L1
(b)	Explain Software Development Life Cycle of UML with the help of a neat sketch.	6M	CO1	L2
3(a)	Explain about classes in UML.	6M	CO1	L1
(b)	Briefly describe Relationships in Structural Modelling.	6M	CO1	L2
<b>(OR)</b>				
4(a)	With suitable example, explain the following advanced features of association relationship (i) Navigation (ii) Visibility (iii) Association qualification.	6M	CO1	L3
(b)	Illustrate Classifiers in UML.	6M	CO2	L2
5(a)	Identify the classes that constitute the vocabulary of Online Shopping System and Provide the Class Diagram for it.	6M	CO1	L3
(b)	Explain Common Modelling Techniques for Object Diagram.	6M	CO1	L2
<b>(OR)</b>				
6(a)	What are interaction Diagrams? Explain them with suitable example.	6M	CO1	L3
(b)	Explain forward engineering and reverse engineering in respect of interaction Diagrams.	6M	CO3	L2
7(a)	Consider example for actor specialization use case generalization. Illustrate the UML notation.	6M	CO1	L4
(b)	Design an Activity Diagram for ATM System.	6M	CO1	L3
<b>(OR)</b>				
8(a)	With Suitable example, Explain Sequential Sub-States.	6M	CO1	L2
(b)	What is State Chart Diagram? Draw State Chart Diagram for Hospital Management System.	6M	CO1	L4
9(a)	Distinguish between components and interfaces.	6M	CO2	L3
(b)	Enumerate the steps to model an Forward Engineering of component diagram. Illustrate with a UML Diagrams.	6M	CO1	L1
<b>(OR)</b>				
10(a)	Design a Component Diagram for Library Management System.	6M	CO1	L3
(b)	What are the common uses of Deployment Diagrams? Draw the Deployment Diagram for Library Information System.	6M	CO1	L3



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M.C.A (IV Semester) Regular/Supplementary Examinations

**17MC21-CRYPTOGRAPHY AND NETWORK SECURITY**  
(MCA)

Time : 3 hours

Max. Marks : 60

Answer one question from each unit

All questions carry equal marks

Q.No	Questions	Marks	CO	BL
1(a)	Describe various security services provided by OSI architecture.	6M	CO1	L2
(b)	Discuss Key Expansion technique in AES Algorithm.	6M	CO1	L2
<b>(OR)</b>				
2(a)	Illustrate Different transposition techniques.	6M	CO1	L2
(b)	Discuss Various Key Distribution Methods.	6M	CO1	L1
3(a)	Perform Encryption and Decryption using RSA algorithm for $p=11$ , $q=13$ , $e=11$ , $m=7$ .	6M	CO2	L3
(b)	Discuss any Random number generation technique.	6M	CO2	L1
<b>(OR)</b>				
4(a)	Illustrate the Diffie-Hellman key exchange scheme.	6M	CO2	L2
(b)	State and prove Chinese remainder theorem for number theory.	6M	CO2	L1
5(a)	How to achieve confidentiality and authentication using public key encryption?	6M	CO3	L1
(b)	Differentiate between HMAC and CMAC.	6M	CO3	L3
<b>(OR)</b>				
6.	State and explain digital signature algorithm.	12M	CO3	L1
7(a)	Explain the Kerberos system. What are its strength and weaknesses? State the requirements for Kerberos.	6M	CO4	L2
(b)	List different threats, consequences and countermeasures on web.	6M	CO4	L3
<b>(OR)</b>				
8(a)	Describe the compression technique used in PGP.	6M	CO4	L2
(b)	Give overview of Kerberos Authentication system.	6M	CO4	L1
9(a)	Demonstrate the life cycle of virus.	6M	CO5	L2
(b)	How data access control provide security against intruders and malicious programs?	6M	CO5	L2
<b>(OR)</b>				
10(a)	Discuss the working of statistical anomaly detection system.	6M	CO5	L2
(b)	Discuss Markova model for proactive password checking.	6M	CO5	L2



H.T.No

21 OCT 2020

R17

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M.C.A (IV Semester) ~~Regular~~/Supplementary Examinations

**17MC22-DISTRIBUTED OPERATING SYSTEMS**

Time : 3 hours

Max. Marks : 60

Answer one question from each unit.

All questions carry equal marks

Q.No	Questions	Marks	CO	BL
1(a)	Discuss in detail about DNS name space.	6M	CO1	L6
(b)	Differentiate between user level threads and kernel level threads.	6M	CO1	L4
<b>(OR)</b>				
2(a)	Demonstrate any two examples of distributed system.	6M	CO1	L2
(b)	What is code migration? Discuss different approaches to code migration.	6M	CO1	L1
3(a)	Outline the centralized algorithm of distributed mutual exclusion.	6M	CO2	L2
(b)	Explain Lamport's timestamps for logical clocks.	6M	CO2	L2
<b>(OR)</b>				
4(a)	Outline Berkeley algorithm for clock synchronization.	6M	CO2	L2
(b)	Demonstrate the process of global state of distributed system using distributed snapshot.	6M	CO2	L3
5(a)	What is meant by total ordering and where it is used?	6M	CO3	L2
(b)	Differentiate passive and active replications.	6M	CO3	L4
<b>(OR)</b>				
6(a)	Elaborate primary based consistency protocols.	6M	CO3	L6
(b)	Discuss about message ordering techniques in reliable group communication.	6M	CO3	L6
7(a)	How do you maintain security in coda file system? Explain.	6M	CO4	L1
(b)	Differentiate between multiprocessors and multi computers.	6M	CO4	L4
<b>(OR)</b>				
8(a)	Discuss about the SFS file system.	6M	CO4	L6
(b)	Explain ring-based multiprocessor architecture for DSM.	6M	CO4	L2
9(a)	How do you achieve fault tolerance in CORBA? Discuss in detail.	6M	CO5	L1
(b)	List and explain the services provided by DCOM.	6M	CO5	L1
<b>(OR)</b>				
10(a)	How replications play a key role in GLOBE?	6M	CO5	L1
(b)	Compare WWW with lotus notes on different issues.	6M	CO5	L5

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