Hall Ticket No: | | | | | | | | | | |

Question Paper Code: 18MCAP107

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R18) Regular End Semester Examinations – December 2019

(Regulations: R18)

OBJECT ORIENTED PROGRAMMING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either Part-A or B only

Q.1(A)	Discuss data types and operators in java.	12M
	OR	
Q.1(B)	Define constructor overloading with a suitable example.	12M
Q.2(A)	Illustrate the Abstract class with a suitable java code.	12M
	OR	
Q.2(B)	What is exception? Explain exception types.	12M
Q.3(A)	Illustrate the process of creating multiple threads in detail.	12M
	OR	
Q.3(B)	Write and explain java code to creation of a file using FileOutputStream.	12M
Q.4(A)	Write a detailed note on ArrayList with a sample program.	12M
	OR	
Q.4(B)	Define IP, TCP and UDP. Explain any three Networking classes in Java.	12M
Q.5(A)	Discuss in detail about JMenuBar, JMenu and JMenuItem in Java swings.	12M
	OR	
Q.5(B)	Explain different Adapter Classes of java.	12M

*** END***

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MCA II Year I Semester (R18) Regular End Semester Examinations – December 2019

(Regulations: R18)

FULL STACK WEB DEVELOPMENT

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either Part-A or B only

Q.1(A)	i. What do you mean be Responsive design on a web page? Explain with an example. ii. Mention what are some bad examples of web design. iii.What are different ceremonies and their importance in Scrum.	4M 3M 5M
	OR	
Q.1(B)	What is meant by SOLID? Explain the design principles that uses the concepts of SOLID.	12M
Q.2(A)	Explain in detail about CSS3 and types with suitable example program.	12M
	OR	
Q.2(B)	Create a HTML document that displays a table of basketball scores at national games in which the team names have their respective team colours. The score of the leading/winning team should appear larger and in a different font than the losing team. Use CSS3	12M
Q.3(A)	i. What is the difference between Bootstrap and Foundation? ii. What are the steps for creating basic or vertical forms? iii. What are the input groups in Bootstrap? Explain in detail with an example.	3M 3M 6M
	OR	
Q.3(B)	Write a java script that asks the user to enter two numbers and outputs text that displays the sum , product, different and quotient of the two numbers.	12M
Q.4(A)	i. Create a database for employee salary processing system. ii. Write queries to insert data, to update and to delete the data from the database. iii. Find out the sum of the salary, average salary, Minimum and Maximum Salary from the employee database.	2M 6M 4M
	OR	
Q.4(B)	i. Define Functional Dependence and Normalization ? ii. Consider the relation Treatment with the schema Treatment. (doctorID, doctorName, patientID, diagnosis) and functional dependencies; doctorID → doctorName and (doctorID, patientID) → diagnosis. Describe different types of anomaly that can arise for this table with example records.	3M 9M
Q.5(A)	i. How will you explain closures in JavaScript? When are they used? ii.How else can the JavaScript code below be written using Node.Js to produce the same output?	4M 8M
	OR	
Q.5(B)	Explain different NodeJS authentication Methods	12M

***** END*****

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MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R18) Regular End Semester Examinations – Dec'2019

(Regulations: R18)

INTRODUCTION TO MACHINE LEARNING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either Part-A or B only

Q.1(A)	i. Define Machine learning along with schematic diagram. ii. Write any five real time applications of Machine learning.	6M 6M
	OR	
Q.1(B)	i. Discuss the perspectives and issues in machine learning. ii. Suppose that a test for using a particular drug is 99% sensitive and 99% specific. That is, the test will produce 99% true positive results for drug users and 99% true negative results for non-drug users. Suppose that 0.5% of people are users of the drug. What is the probability that a randomly selected individual with a positive test is a drug user?	6M 6M
Q.2(A)	Build a classification model that estimates the probability of admission based on the exam scores using logistic regression	12M
	OR	
Q.2(B)	List various classification methods and Why do we use Perceptions for binary classifications?	12M
Q.3(A)	i. Discuss the importance of Bayesian networks. ii. Explain inference in graphical models.	6M 6M
	OR	
Q.3(B)	Discuss the Markov model conditional independence in Machine Learning	12M
Q.4(A)	Explain K-Mean clustering in detail discuss with an example	12M
	OR	
Q.4(B)	State the impact of Density based Clustering with real time scenario	12M
Q.5(A)	Write the Back propagation algorithm and explain its advantages	12M
	OR	
Q.5(B)	State and Explain the importance of using Artificial Neural network for medical field	12M

*** END***

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MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R18) Regular End Semester Examinations – December 2019

(Regulations: R18)

COMPUTER NETWORKS

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either Part-A or B only

Q.1(A)	i. Discuss different types of transmission impairments.	6M
	ii. Justify the need for Network Protocol Architecture with example.	6M
	OR	
Q.1(B)	i. Discuss different types of guided media.	6M
	ii. Compare the OSI model and TCP/IP model.	6M
Q.2(A)	i. Define Error Detection and Correction.	4M
	ii. Describe the cyclic redundancy check (CRC) with suitable example.	8M
	OR	
Q.2(B)	i. What is error control? Discuss checksum method with suitable example.	6M
	ii. What is access control? Discuss ALOHA in detail.	6M
Q.3(A)	i. Discuss ICMP in detail.	4M
	ii. Describe the Distance Vector Routing (DVR) protocol in detail.	8M
	OR	
Q.3(B)	i. Explain the Distance Vector Routing protocol in detail.	6M
	ii. An IPv4 packet has arrived with the first few hexadecimal digits as shown.	6M
	0x4B000040000100000806xxxx0A0C0E050C060709	
	Create a header format of the IP datagram and given answers of the following questions:	
	What is the value of HLEN and option?	
	How many hops can this packet travel before being dropped?	
	The data belong to what upper-layer protocol?	
Q.4(A)	i. Define socket. State the role of port number and IP address.	6M
	ii. Describe Domain Name System (DNS) in detail.	6M
	OR	
Q.4(B)	i. Discuss TCP protocol in detail.	6M
	ii. Explain the SMTP in detail.	6M
Q.5(A)	ii. Examine the IPSec (IP SECURITY) functionalities in detail.	12M
	OR	
Q.5(B)	i. State the different attacks.	4M
	ii. Demonstrate the DES and AES in detail.	8M

*** END***

Hall Ticket No: | | | | | | | | | | | Question Paper Code: 18MBA302

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE, MADANAPALLE

(UGC-AUTONOMOUS)

MCA II Year I Semester (R18) Regular End Semester Examinations – December 2019

INTRODUCTION TO DESIGN THINKING

Time: 3Hrs **Max Marks: 60**

Attempt all the questions. All parts of the question must be answered in one place only.
In Q.no 1 to 5 answer either Part-A or B only

Q.1(A)	Explain the principles of design thinking with examples.	12M
	OR	
Q.1(B)	How do you develop design thinking mindset? Explain.	12M
Q.2(A)	How would you apply the 7-steps to effective decision-making process in design thinking.	12M
	OR	
Q.2(B)	Explain how the assessment tools are applied to measure empathy.	12M
Q.3(A)	Explain the steps involved in synthesizing and integrating the ideas.	12M
	OR	
Q.3(B)	Explain the steps in generic brain storming process in evolving and identifying the pragmatic ideas.	12M
Q.4(A)	Discuss the criterion for selection of a programmatic idea out of pool of ideas.	12M
	OR	
Q.4(B)	Assess the innovation and competitive uniqueness with suitable examples	12M
Q.5(A)	Is design thinking a team sport? Explain.	12M
	OR	
Q.5(B)	When Braun and Oral-B enlisted Colin and Hecht to help a Consultancy come up with an IoT electric toothbrush, the manufacturers initially wanted to develop a sophisticated data-tracking tool that could sense how well users were brushing each and every tooth, tell them about their gum sensitivity, and play music. The designers convinced them to instead think about how additional technology could solve a couple of really big frustrations with the product. "A toothbrush is already loaded with guilt, that you're not doing it properly or enough," Colin says. "The companies weren't thinking about the customers' experience. They were thinking about the toothbrush the same way you would an athletic activity tracker, that it records and processes information." Instead of adding to a user's neurosis about brushing, Colin and Hecht wanted to give them less to worry about. The two features they decided would be most useful were around charging the toothbrush and ordering replacement heads. At home, the toothbrush charges on a dock through induction but also comes equipped with a USB hookup for use on the road. The other problem to tackle was ordering replacement heads. You notice that the brush is worn down when you use it, but often forget to order a replacement after you leave the bathroom. To solve that problem, the designers built an app that the toothbrush connects to via Bluetooth. Pressing a button on the brush sends a reminder notification to your phone to buy replacements. "We're curators of technology and looking for what's realistic and what's pleasurable and beneficial to users," Colin says of the philosophy guiding their design decisions. Question: Explain the design thinking phenomenon involved in this case	12M

*** END***