AR18

CODE: 18IET443 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.Tech I Semester Supplementary Examinations, February-2023

ENTREPRENEURIAL DEVELOPMENT

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	Define Entrepreneur? Explain the chief characteristics of Entrepreneur	12M
	(OR)	
2.	Explain the role of Entrepreneurship in Economic Development.	12M

UNIT-II

3.	Explain the factors effecting Entrepreneurship.	12M
	(OR)	
4.	Explain the phases of Entrepreneurship Development Programmes?	12M

UNIT-III

5.	Explain the sources of Business ideas..	12M
	(OR)	
6.	Briefly write about report writing? Explain the contents of a Project report.	12M

UNIT-IV

7.	Define MSMEs? Explain MSME development act 2006.	12M
	(OR)	
8.	Explain the role of Export and Import Bank of India.	12M

UNIT-V

9.	Define Marketing Management? Explain the importance of Marketing Management in an MSME.	12M
	(OR)	
10.	Explain the characteristics of Total Quality Management	12M

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ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.Tech I Semester Supplementary Examinations, February-2023

FUNDAMENTALS OF ROBOTICS

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	What are the basic components of robot and explain them?	5M
	b)	Classify robot by control system, and explain them.	7M
		(OR)	
2.	a)	What are the different types of gripper mechanisms used for robots? Explain any one of them in detail?	6M
	b)	Explain cartesian and cylindrical coordinate system with neat sketch.	6M

UNIT-II

3.	a)	Write down the differences between electrical and pneumatic actuators?	4M
	b)	Briefly explain hydraulic actuators with neat sketch.	8M
		(OR)	
4.	a)	Briefly explain the working of a stepper motor.	8M
	b)	Write importance of sensing system in robot.	4M

UNIT-III

5.	a)	Derive the expression for rotational matrix along x-axis and z-axis.	6M
	b)	A vector P= 3i-2j+5k is first rotated by 90^0 about x-axis, then by 90^0 about z-axis. Finally, it is translated by -3i+2j-5k. Determine new position vector P.	6M
		(OR)	
6.	a)	A point $P(7,3,2)^T$ is attached to frame{1} and subjected to rotation of 90^0 about z-axis followed by translation of [4,-3,7] followed by rotation of 90^0 about y-axis. Find the coordinates of point relative to the reference frame at the conclusion of transformations.	9M
	b)	Write expression for overall transformation matrix which include both rotation and translation.	3M

UNIT-IV

7.	a)	List out online programming methods.	2M
	b)	Briefly explain online programming method and write down the advantages and limitations.	10M
		(OR)	
8.	a)	What are robot programming languages?	2M
	b)	Briefly explain any four robot programming languages.	10M

UNIT-V

9.	a)	What are robot material handling applications?	2M
	b)	Briefly explain robot applications in material handling and assembling.	10M
		(OR)	
10.	a)	List out processing applications of robot.	2M
	b)	Discuss processing applications of robot with neat sketch.	10M

AR18

CODE: 18IET448 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.Tech I Semester Supplementary Examinations, February-2023

INTRODUCTION TO WIRELESS NETWORKS

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Explain the advantages of wireless networks over wired networks	6M
	b)	Explain disadvantages of fixed telephone networks	6M
		(OR)	
2.	a)	Differentiate Infrared LANs, Spread spectrum in operation wise	6M
	b)	Explain the concept of Wireless Networking	6M

UNIT-II

3.	a)	Explain the Architecture of CDPD networks	6M
	b)	Explain ISDN channels for data transmission	6M
		(OR)	
4.	a)	Explain the basic concepts of ISDN with necessary diagram.	6M
	b)	Explain ISDN architecture in detail.	6M

UNIT-III

5.	a)	Differentiate between circuit switching and packet switching?	6M
	b)	Explain the Discovery, registration and tunnelling operations in Mobile IP	6M
		(OR)	
6.	a)	Explain WAP service in detail with neat diagrams.	6M
	b)	Differentiate Mobile Ip And Wireless Access Protocol	6M

UNIT-IV

7.	a)	Illustrate IEEE 802 protocol Architecture with diagrams	6M
	b)	Explain 802.11 physical layers operation	6M
		(OR)	
8.	a)	Explain IEEE802 architecture and services with diagrams	6M
	b)	Write the differences between IEEE 802.11a and IEEE 802.11b services	6M

UNIT-V

9.	a)	Illustrate the operation of wireless ATM Network.	6M
	b)	Explain the operation of Hiper LAN?	6M
		(OR)	
10.	a)	Differentiate Wireless ATM Hiper LAN with neat diagrams.	6M
	b)	Explain about types of HIPERLAN s.	6M

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AR18

CODE: 18IET44A **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.Tech I Semester Supplementary Examinations, February-2023

INTRODUCTION TO DBMS

Time: 3 Hours **Max Marks: 60**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	Describe DDL commands with example.	8M
	b)	Write Database System Applications	4M
		(OR)	
2.		Discuss data models in detail.	12M

UNIT-II

3.	a)	Define entity. Give different entity types.	6M
	b)	Describe integrity constraints over relations.	6M
		(OR)	
4.	a)	Explain Conceptual Design with the ER Model.	6M
	b)	Discuss different types of attributes in RDBMS.	6M

UNIT-III

5.	a)	Explain the Set operators on a relation with example.	6M
	b)	Describe comparison using NULL values and dis allowing NULL values in tables. Give example.	6M
		(OR)	
6.	a)	Explain Logical connectives in RDBMS with example.	6M
	b)	Explain various joins on the relations with example.	6M

UNIT-IV

7.		Discuss in detail about Normal forms with suitable examples.	12M
		(OR)	
8.	a)	What is Redundancy? Discuss problems caused by Redundancy.	6M
	b)	Discuss the need of decomposing a relation. Also explain the types of decomposition.	6M

UNIT-V

9.	a)	Discuss the problems caused by concurrent execution of transaction.	6M
	b)	Explain Primary indexing with example.	6M
		(OR)	
10.	a)	What is the objective of serializability? Explain.	4M
	b)	Explain about B+ trees.	8M

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AR16

CODE: 16EE4028 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

IV B.Tech I Semester Supplementary Examinations, February-2023

SPECIALELECTRICALMACHINES

(Electrical and Electronics Engineering)

Time: 3 Hours **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1.	a)	What is the need for position feedback in the operation of switched Reluctance motor? Explain.	[7M]
	b)	List and discuss different applications of switched reluctance motors.	[7M]
		(OR)	
2.	a)	Discuss the operating principle of switched reluctance motor.	[7M]
	b)	With a neat circuit diagram, explain the asymmetric bridge converter for a four-phase 8/6 switched reluctance motor.	[7M]

UNIT-II

3.	a)	Explain the construction and operation of a variable reluctance stepper motors.	[7M]
	b)	What is a step angle, Define stepping rate of a stepper motor?	[7M]
		(OR)	
4.	a)	What are hybrid stepper motors? Explain its construction and operation.	[7M]
	b)	Discuss different applications of a stepper motor.	[7M]

UNIT-III

5.	a)	Draw and explain the back emf waveforms of a three-phase BLDC motor.	[7M]
	b)	Explain the commutation process in BLDC machines.	[7M]
		(OR)	
6.	a)	Explain the constructional details of a PMBLDC motor.	[7M]
	b)	Prove that the PM BLDC machines have 15% more power density than the PMSM.	[7M]

UNIT-IV

7.	a)	Explain the principle of operation of a linear induction motor.	[8M]
	b)	Explain different applications of linear motors.	[6M]
		(OR)	
8.	a)	With a neat diagram explain the operation of Permanent magnet motors, Derive the torque equation. List out the advantages.	[14M]

UNIT-V

9.	a)	a) Discuss the main characteristics of traction drives.	[6M]
		Discuss the suitability of linear induction motors for traction drives.	[8M]
		(OR)	
10.	a)	Discuss different AC motors suitable for traction systems.	[6M]
	b)	Compare between AC and DC traction systems.	[8M]

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