

AR18

CODE: 18IET443

SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

IV B.Tech I Semester Regular/Supplementary Examinations, November 2022

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 qualities of Entrepreneur. 12M
(OR)
2. Explain the role of Women Entrepreneurs in the today's competitive world. 12M

UNIT-II

3. Explain the nature and development of entrepreneurship in India. 12M
(OR)
4. Explain the institutions supporting for Entrepreneurship development programmes. 12M

UNIT-III

5. Explain the advantages to be gained from a well-balanced Project Plan. 12M
(OR)
6. Briefly write about report writing? Explain the contents of a Project report 12M

UNIT-IV

7. Explain the different sources of long term and short term capital. 12M
(OR)
8. Describe the role of Industrial Development Bank of India (IDBI) to extend support to entrepreneurs. 12M

UNIT-V

9. List the factors affecting working capital of an MSME. 12M
(OR)
10. Explain the problems and prospects of MSMEs in India. 12M

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 do you mean by Map? Explain how the maps have been classified based on purpose? 6M
b) Explain the following scales types with the figure representation 6M
a) Linear or Graphical b) Verbal/Statement c) Representative Fraction
- (OR)
2. a) Explain the concept of Spatial Referencing System in GIS 6M
b) Discuss the following projection properties. 6M
a) Equirectangular b) Lambert's cylindrical equal-area projection

UNIT-II

3. a) Discuss the types of geospatial data in GIS 6M
b) Explain what is data analysis in GIS 6M
- (OR)
4. a) Explain the following methods of spatial data input 6M
a) Digitizing b) Keyboard Entry of coordinates using coordinate geometry
b) Discuss what the components of GIS with a neat sketch. 6M

UNIT-III

5. a) Demonstrate with flowchart about Hierarchical Database Model in GIS 6M
b) Explain briefly DBMS components with a schematic diagram 6M
- (OR)
6. a) Discuss briefly what are the DBMS functions 6M
b) Explain the following 6M
a) Simple list b) Network Systems

UNIT-IV

7. a) Explain what is meant by vector data and discuss graphical representation of vector data 6M
b) Discuss briefly with a neat sketch about topological features 6M
- (OR)
8. a) Explain data modelling stages in GIS 6M
b) Discuss the following with a neat sketch 6M
a) Entity Model b) Pixel values c) File structure

UNIT-V

9. Discuss the application of GIS in urban studies 12M
- (OR)
10. How would you explain role of GIS in agricultural studies 12M

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)****IV B.Tech I Semester Regular/Supplementary Examinations, November-2022****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) Classify of automation? Explain them with examples. 6M
b) What are the different types of the end effectors of a robot and explain them? 6M
- (OR)
2. a) Classify robot by coordinate system. 2M
b) Explain any two coordinate systems with neat sketch. 10M

UNIT-II

3. a) List the advantages and disadvantages of Pneumatic manipulators. 5M
b) Discuss hydraulic actuators used for robots? 7M
- (OR)
4. a) List out the sensors used in robots. 2M
b) Briefly explain the working principle of any two types of position sensors with neat sketch. 10M

UNIT-III

5. a) What are the properties of Transformation matrix? 4M
b) The coordinates of point P in frame{1} are $[3 \ 2 \ 1]^T$. The position vector P is rotated about x-axis by 60° . Find the coordinates of Q, the new position of point P. 8M
- (OR)
6. a) A point $P(7,3,2)^T$ is attached to frame{1} and subjected to rotation of 60° about z-axis followed by rotation of 90° about y-axis followed by translation of $[4,-3,7]$. Find the coordinates of point relative to the reference frame at the conclusion of transformations. 10M
b) What are the fundamental transformations? 2M

UNIT-IV

7. a) Write a short note on teach pendant method. 4M
b) Write a note on lead –through programming method and write down their advantages and disadvantages 8M
- (OR)
8. a) What is robot offline programming method and write down advantages over online programming. 4M
b) Briefly explain offline programming method. 8M

UNIT-V

9. a) List out the applications of Robots in manufacturing. 2M
b) Discuss palatizing and depalletizing and part placement with neat sketch. 10M
- (OR)
10. a) List out robot non-manufacturing applications 3M
b) Briefly explain robot applications in assembling and inspection with neat sketch. 9M

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SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

IV B.Tech I Semester Regular & Supplementary Examinations, November-2022

BASICS OF MOBILE CELLULAR COMMUNICATIONS

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 limitations of Conventional Mobile Communication Systems 6 M
- b) Explain in detail about Performance criteria of mobile communication systems 6 M

(OR)

2. a) Explain about the co channel reduction factor 6 M
- b) What are the types of cell shapes and explain in detail. 6 M

UNIT-II

3. Describe the different types of propagation models in signal propagation 12 M

(OR)

4. a) Explain the factors that are influencing the fading 6 M
- b) Explain signal reflections in flat and hilly terrain 6 M

UNIT-III

5. Explain the hand off mechanism in mobile cellular communication with neat sketches 12 M

(OR)

6. What are the types of hand offs and explain in detail 12 M

UNIT-IV

7. Explain the concept of Numbering the Radio channels 12 M

(OR)

8. How the radio channels are Grouping into subsets and explain about set up channels 12 M

UNIT-V

9. Explain about Time Division Multiple Access Technique 12 M

(OR)

10. Explain about Frequency Division Multiple Access Technique 12 M

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) Differentiate fixed and wireless telephone networks. 6M
b) Explain about traffic routing in wireless networks 6M
- (OR)
2. a) Explain the operation of Infrared Wireless LAN 6M
b) Explain the operation of Spread spectrum Wireless LAN. 6M

UNIT-II

3. a) Illustrate the Bluetooth protocol architecture in detail. 6M
b) Name the channels of ISDN explain about ISDN interfaces. 6M
- (OR)
4. a) Explain about the radio specification of Bluetooth technology. 6M
b) Summarize the operation of ARDIS and RMD 6M

UNIT-III

5. a) Explain about Mobile IP and its working with neat diagrams. 6M
b) Explain about Registration procedure in mobile IP 6M
- (OR)
6. a) Explain about wireless application protocol Architecture 6M
b) Explain about Wireless Session Protocol. 6M

UNIT-IV

7. a) Explain about 802.11 medium access control layer 6M
b) Explain about 802.11 physical layer 6M
- (OR)
8. a) Explain about the architecture of IEEE 802.11 6M
b) Explain about services of IEEE 802.11 6M

UNIT-V

9. a) Explain about WAP services and Wireless Session Protocol 6M
b) Explain the operation of Hiper LAN? 6M
- (OR)
10. a) Explain about basic architecture of WATM Network. 6M
b) Explain about protocol entities in WATM 6M

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SET-2

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
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IV B.Tech I Semester Regular/Supplementary Examinations, November-2022

INTRODUCTION TO CLOUD COMPUTING

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 is the NIST definition of cloud computing and write the cloud benefits for enterprise. 6M
b) Explain briefly about Cluster computing, Grid computing and Quantum computing. 6M
(OR)
2. a) Define cloud computing fundamentals and motivation for cloud computing 6M
b) Discuss about the Nano computing, Mobile computing and Network computing. 6M

UNIT-II

3. a) What are the five essential characteristics of cloud computing? 6M
b) Discuss the operational and economic benefits of PaaS model of cloud computing 6M
(OR)
4. a) Explain briefly about the cloud ecosystem and plot its diagram. 6M
b) Demonstrate briefly about the various requirements for cloud services. 6M

UNIT-III

5. a) Illustrate briefly about the different online scheduling applications. 6M
b) Describe in detail about the online planning and task management. 6M
(OR)
6. a) Explain briefly about the Google calendar and draw the diagram. 6M
b) Demonstrate the event planning and workflow management in cloud services. 6M

UNIT-IV

7. a) Write the several features or characteristics of virtualization. 6M
b) Explain briefly about the various types available under virtualization technology. 6M
(OR)
8. a) Discuss the classification or taxonomy of virtualization at different levels. 6M
b) Discuss Microsoft Azure as major platform of public cloud service. 6M

UNIT-V

9. a) Explain storage model describing the layout of data structure in physical storage. 6M
b) Explain briefly about the Google File System (GFS) with neat diagram. 6M
(OR)
10. a) Explain briefly about the online transaction processing and NOSQL databases. 6M
b) Demonstrate briefly about the Apache Hadoop in major IT industry. 6M

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) Explain about ER model with example. 6M
b) Write Database System Applications 6M
- (OR)
2. a) Compare and contrast Database Systems versus file Systems 6M
b) Describe DML commands with example. 6M

UNIT-II

3. a) What is an attribute? Explain different types of attributes in database. 6M
b) Describe integrity constraints over relations. 6M
- (OR)
4. a) Explain Conceptual Design with the ER Model. 8M
b) Define entity. Give different entity types. 4M

UNIT-III

5. a) Explain Nested Queries with example. 6M
b) Describe comparison using NULL values and dis allowing NULL values in tables. Give example. 6M
- (OR)
6. a) Explain Aggregative Operators with example. 6M
b) Explain Inner and Outer joins on the relations with example. 6M

UNIT-IV

7. 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
- (OR)
8. Discuss in detail about Normal forms with suitable examples. 12M

UNIT-V

9. a) Describe ACID properties of a transaction. 6M
b) Explain Hash based indexing with example. 6M
- (OR)
10. a) Discuss Transaction Serializability in detail. 6M
b) Explain cluster-based indexing with example. 6M

AR16

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SET-1

**ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)**

IV B.Tech I Semester Supplementary Examinations, November-2022

BASICS OF MOBILE COMMUNICATIONS

(Open Elective)

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. Explain the limitations of conventional mobile telephone system 14marks
- (OR)**
2. Describe the three categories that specifies the performance criteria of a cellular system 14marks

UNIT-II

3. Explain the point to point propagation model(Lee model) 14marks
- (OR)**
4. a) Explain different signal propagation models 7marks
- b) Write the details of signal loss in foliage environment 7marks

UNIT-III

5. a) Define handoff and explain different types of handoff 7marks
- b) Explain about dropped call rate 7marks
- (OR)**
6. Write the details of various mobile antennas 14marks

UNIT-IV

7. Write different channel assignment techniques 14marks
- (OR)**
8. a) Explain different types of setup channels 7marks
- b) Write the differences between frequency management and channel assignment 7marks

UNIT-V

9. Explain architecture of GSM network 14marks
- (OR)**
10. a) Explain the services offered by GSM 7marks
- b) Write about TDMA 7marks

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) Elaborate the concepts of an Intrapreneur. 7M
b) Highlight the Role of Entrepreneurship in Economic development. 7M
- (OR)**
2. a) Elaborate the role of Ethics and social responsibility of an entrepreneur. 7M
b) Focus on the Future of Entrepreneurship in India. 7M

UNIT-II

3. a) Define Entrepreneurship Development Programme (EDP) **and explain the need** and objectives of EDPs. 7M
b) Elaborate the role of Institutions supporting for EDP. 7M
- (OR)**
4. a) Evaluate the working of MSMEDI. 7M
b) Evaluate the working of DICs. 7M

UNIT-III

7. a) What do you understand by Project selection and **explain** the relevance of project report 7M
b) Define a Business Plan, and design a Business Plan for a Mobile Repairing Shop. 7M
- (OR)**
6. a) Elaborate the steps in Formulation of a project report. 7M
b) Design a Preparation of sample project report of any one product and service. 7M

UNIT-IV

7. a) Elaborate the different sources of Long Term Capital. 7M
b) Explain the concept of Venture capital. 7M
- (OR)**
8. a) Elaborate the Role of SIDBI and NSIC in Entrepreneurial Development. 7M
b) Elaborate the Role of APSFC, in Entrepreneurial Development. 7M

UNIT-V

9. a) Elaborate the concepts of TQM. 7M
b) Explain the Problems and prospects of MSME in India 7M
- (OR)**
10. a) Elaborate the Profile of any Male Entrepreneur of your choice. 7M
b) Elaborate the Profile of any Woman Entrepreneur of your choice. 7M