

AR18

CODE: 18IET443

SET-1

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

IV B.Tech I Semester Regular Examinations, February-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 chief characteristics of Entrepreneur. 12M

(OR)

2. Explain the role of Women Entrepreneurs in the today's competitive word. 12M

UNIT-II

3. Explain the nature and development of entrepreneurship in India. 12M

(OR)

4. Explain the phases of 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. Define MSMEs? Explain MSME development act 2006. 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 characteristics of Total Quality Management 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) Explain different classifications of maps 6M
b) Explain which properties of surface to be considered for map projection 6M
- (OR)
2. a) Explain about azimuthal projection 6M
b) Draw a figure an example of a layout ? 6M

UNIT-II

3. a) Mention different source of data for GIS 6M
b) List out different types of GIS and explain one of them 6M
- (OR)
4. a) Define the term GIS and list out the objectives? 6M
b) Explain different component of GIS 6M

UNIT-III

5. a) Explain the function of DBMS 6M
b) Write the advantages of DBMS 6M
- (OR)
6. a) List out the DBMS models and explain network model 6M
b) Explain components of DBMS 6M

UNIT-IV

7. a) Draw flow chart for stages of GIS 6M
b) List the raster data types and its advantages 6M
- (OR)
8. a) List vector data types and its advantages 6M
b) List out the methods of encoding the Raster data and give an example 6M

UNIT-V

9. a) Explain how GIS techniques are used in Urban studies? 6M
b) Explain how GIS techniques are used in agriculture? 6M
- (OR)
10. a) Explain how GIS techniques are used in Landuse and landcover studies? 6M
b) Explain how GIS techniques are used in flood zone delineation and mapping? 6M

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. What is Automation? Explain different types of automation. 12 M
(OR)
2. Sketch and explain the four basic robot configurations classified according to the coordinate system 12 M

UNIT-II

3. a) Compare stepper motor and D.C. motor drives for a robot 6 M
b) Discuss different types of actuators used for robots? 6 M
(OR)
4. a) Briefly explain the working principle of any two types of position sensors with neat sketch. 6 M
b) What are the uses of sensor in robotics? What are the types of sensors used in robotics? 6 M

UNIT-III

5. For the point [3 7 5] perform the following operations: a) Rotate 30^0 about X-axis 12 M
b) Translate 8 units along y-axis c) Rotate 30^0 about x then translate 6 units along Y-axis d) Rotate 90^0 about z-axis.
(OR)
6. Compute the homogeneous transformation representing a translation of 3 units along the x-axis and followed by rotation of 90^0 about the current z-axis followed by a translation of 1 unit along the fixed y-axis 12 M

UNIT-IV

7. a) Explain the different types of Robot languages. 6 M
b) Explain about importance of Robot Programming lead through programming 6 M
(OR)
8. a) Discuss the software elements of robot and different teaching methods of robot. 6 M
b) Write down the capabilities and limitations of Lead through methods. 6 M

UNIT-V

9. a) What are future manufacturing applications of robot? 6 M
b) Describe the Spray coating operation with robot system. 6 M
(OR)
10. a) Define material transfer application? Explain about simple pick and operation with neat sketch. 6 M
b) Explain use of robot in assembly operation. 6 M

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SET-2

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

IV B.Tech I Semester Regular Examinations, February, 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) Explain about Frequency Re use concept in mobile cellular communication 6 M
b) Explain about the co channel reduction factor 6 M
(OR)
2. Explain the operation of a cellular system with neat diagram and also explain Performance criteria of mobile communication systems 12 M

UNIT-II

3. Explain about the Foliage Loss in Mobile communication with suitable examples. 12 M
(OR)
4. a) Explain the different types of Fading in signal propagation 6 M
b) Explain signal reflections in flat and hilly terrain 6 M

UNIT-III

5. Explain in detail about hand off initiations 12 M
(OR)
6. Explain the concept of Dropped call rates and estimation. 12 M

UNIT-IV

7. Describe the Channel assignments techniques in mobile communication, 12 M
(OR)
8. Explain about Channel sharing and borrowing. 12 M

UNIT-V

9. Explain the concept of CDMA technique 12 M
(OR)
10. a) What is GSM and explain 6 M
b) List out the advantages of 4G technologies 6 M

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SET-2

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

IV B.Tech I Semester Regular Examinations, February,2022

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) Classify Wireless LAN s and explain them in detail. 6M
b) Differentiate fixed and wireless telephone networks. 6M
- (OR)**
2. a) Explain about the traffic routing in wireless networks. 6M
b) Discuss the spread spectrum LAN. 6M

UNIT-II

3. a) Illustrate the reference architecture of CDPD networks. 6M
b) Summarize the operation of ARDIS and RMD networks. 6M
- (OR)**
4. a) Explain the ISDN architecture and its channels. 6M
b) Discuss the radio specifications of Bluetooth technology. 6M

UNIT-III

5. a) What are the various services of WAP? List the advantages of WAP. 6M
b) Explain about the WAP architecture with a neat diagram. 6M
- (OR)**
6. a) Explain about the WAP session protocol. 6M
b) Discuss Mobile IP and its working with neat diagram. 6M

UNIT-IV

7. a) Explain the IEEE 802 protocol architecture. 6M
b) Write about IEEE 802.11a and IEEE 802.11b services. 6M
- (OR)**
8. a) What are the different IEEE 802.11 services? 6M
b) Explain the IEEE 802.11 medium access control. 6M

UNIT-V

9. a) Build the architecture of Wireless ATM. 6M
b) Explain about the Hiper LAN in detail. 6M
- (OR)**
10. a) Classify Hiper LAN s and explain them in detail. 6M
b) Explain about the wireless ATM. 6M

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SET-1

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

IV B.Tech I Semester Regular Examinations, February,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 cloud computing and explain the importance of Cloud Computing **6M**
b) Compare cluster computing and grid computing **6M**
(OR)
2. a) Explain the importance of parallel computing **6M**
b) Discuss about High-performance computing **6M**

UNIT-II

3. a) Discuss the Principles of Cloud computing **6M**
b) Compare SaaS and PaaS **6M**
(OR)
4. a) Explain the five Essential Characteristics of cloud. **6M**
b) Explain about public and private cloud deployment models **6M**

UNIT-III

5. a) Explain Cloud Services Collaborating on Calendars **6M**
b) Discuss Cloud Services Collaborating on Task Management **6M**
(OR)
6. a) Explain about Contact Management a cloud Services **6M**
b) Discuss about Project Management as real time example Cloud services **6M**

UNIT-IV

7. a) Discuss the characteristics of Virtualized Environments **6M**
b) Explain about Microsoft Azure **6M**
(OR)
8. a) Explain about Amazon Web Services **6M**
b) Summarize the Pros and Cons of Virtualization **6M**

UNIT-V

9. a) Discuss about Apache Hadoop **6M**
b) Explain about distributed file systems **6M**
(OR)
10. a) Explain about Google File system **6M**
b) Discuss about NoSQL database **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 the structure of Database Management System with a neat diagram. 8M
b) What is data consistency and how does a DBMS support it? Explain. 4M
- (OR)
2. a) Describe the three-level schema – architecture in DBMS 6M
b) Discuss the main characteristics of Database approach and how differ from traditional approach. 6M

UNIT-II

3. a) Define an Entity and attribute. Explain the different types of attributes that occur in Entity Relationship model, with an example diagram. 6M
b) Draw an ER diagram of an airlines reservation system, taking into at least six entities. 6M
- (OR)
4. a) What is an integrity constraint? Explain briefly various types of constraints. 8M
b) What is datatype? Explain data types in SQL. 4M

UNIT-III

5. a) What is query? and explain nested query with example. 6M
b) Explain aggregate functions with suitable examples 6M
- (OR)
6. a) Explain various join operations with examples. 6M
b) Write about the usability of 'group by' and 'having' clauses in SQL. 6M

UNIT-IV

7. a) What is decomposition? Explain Lossless-join decomposition? 6M
b) Explain the difference between 1NF, 2NF and 3NF briefly. 6M
- (OR)
8. What is normalization? Why do we need to normalize our database? Explain various normal forms by taking proper examples 12M

UNIT-V

9. a) Define transaction and explain desirable properties of transactions. 6M
b) Why the concurrency control is needed? Explain it. 6M
- (OR)
10. a) Compare and contrast between heap files and sorted files 6M
b) Explain briefly Primary and Secondary index 6M

AR16

CODE: 16OE4052

SET-2

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

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

GEOGRAPHICAL INFORMATION SYSTEMS

(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. a) Explain UTM projection and give the advantages? 7M
- b) What are the basic elements in a map to identify the particular location give example? 7M

(OR)

2. a) Explain the classification of maps based on scale? 7M
- b) Define the term scale and explain various types of scales? 7M

UNIT-II

3. a) What are the objectives of GIS? 7M
- b) List out types of GIS and explain desktop GIS? 7M

(OR)

4. a) Define the term GIS and explain its components with figure? 7M
- b) What are the different input devices in to GIS? 7M

UNIT-III

5. a) Explain about the components of DBMS? 7M
- b) Show the hierarchical database model with flowchart? 7M

(OR)

6. a) List out and explain various functions of DBMS? 7M
- b) Explain about the Ordered Sequential Files? 7M

UNIT-IV

7. a) Differentiate between raster data and vector data? 7M
- b) List out the various vector data models and explain TIN model with sketch? 7M

(OR)

8. a) What are the raster data coding give example? 7M
- b) List out the various raster data models and explain with sketch? 7M

UNIT-V

9. a) Explain how GIS techniques are used in agriculture studies? 7M
- b) Explain how GIS techniques are used in forest studies? 7M

(OR)

10. a) What are the levels of classification in land use and land cover? 7M
- b) Explain how GIS techniques are used in Urban applications? 7M

AR16

CODE: 16OE4053

SET-2

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

IV B.Tech I Semester Supplementary Examinations, February, 2021

**POWER QUALITY MANAGEMENT
(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 about the power quality issues that a Power system will face? 14M
(OR)
2. a) Explain power quality Vs equipment immunity? 7M
b) Define the following terms: 7M
i) Frequency ii) Surge iii) Swell iv) Transient v) Notch
vi) Flicker vii) Sag

UNIT-II

3. Explain about Isolation transformer and Voltage regulators? 14M
(OR)
4. List out common power frequency disturbances in electrical power system. Explain these disturbances briefly? 14M

UNIT-III

5. Explain how Transient waveforms generated under different loading conditions? 14M
(OR)
6. a) List the causes of electrical transients? Explain any two of them. 9M
b) Explain how the interruption of fault will create the transient with suitable diagram. 5M

UNIT-IV

7. a) Determine the Individual Harmonic distortion, total harmonic distortion of a voltage waveform with the following harmonic frequency make up: 7M
Fundamental = $V_1 = 114\text{ V}$
3rd Harmonic = $V_3 = 4\text{ V}$
5th Harmonic = $V_5 = 2\text{ V}$
7th Harmonic = $V_7 = 1.5\text{ V}$
9th Harmonic = $V_9 = 1\text{ V}$
b) Explain about harmonic filters? 7M
(OR)
8. a) Explain the effect of harmonics on power system devices? 8M
b) Explain about Harmonic number, ODD and EVEN harmonics? 6M

UNIT-V

9. a) Explain about Number of Test location, Test duration for solving Power quality problems? 6M
b) Write short notes on: 8M
Harmonic Analyzers b) Transient-Disturbance Analyzers
(OR)
10. List the harmonic measuring devices and explain any two of them with suitable diagrams. 14M

AR16

CODE: 16OE4054

SET-1

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

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

Fundamentals of Robotics

(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. a) Discuss in detail the architecture of robot system. 7M
- b) Sketch and explain any two basic robot configurations classified according to the coordinate system. 7M

(OR)

2. a) What is the importance of Automation in industry? Explain. 7M
- b) Discuss in detail about Magnetic gripper with neat sketch. 7M

UNIT-II

3. Explain the various drive system used with an industrial robot and compare their features, merits and demerits. 14M

(OR)

4. a) Briefly explain the working principle of any two types of position sensors with neat sketch. 7M
- b) Describe the principle and application of LVDT. 7M

UNIT-III

5. For the point [3, 7, 5] perform the following operations: 14M
 - a) Rotate 30° about X-axis
 - b) Translate 8 units along y-axis
 - c) Rotate 30° about x then translate 6 units along Y- axis
 - d) Rotate 90° about z-axis

(OR)

6. a) What is homogenous transformation matrix? Explain four sub matrices. 7M
- b) Find the new location of a point $[3 \ 0 \ -1 \ 1]^T$ if it is rotated by 180° about Z-axis and then translated by 3 units along Y – axis. 7M

UNIT-IV

7. a) Write down the capabilities and limitations of Lead through methods 7M
- b) What are the differences between Lead through programming and Manual programming method. 7M

(OR)

8. a) Discuss the relative merits and demerits of different robot programming languages 7M
- b) Explain the different types of Robot languages. 7M

UNIT-V

9. a) Describe the various considerations taken into account for material handling. 7M
- b) List out different processing applications of robot. 7M

(OR)

10. Explain different material handling applications of industrial robots. 14M

AR16

CODE: 16OE4055

SET-1

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

IV B.Tech I Semester Supplementary Examinations, February,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

AR16

CODE: 16OE4057

SET-1

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

IV B.Tech I Semester Supplementary Examinations, February, 2022

INTRODUCTION TO DBMS

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) With a neat diagram, explain the structure of Database Management System. 10M
b) What is data independence and how does a DBMS support it? Explain. 4M
- (OR)
2. a) Describe the three level schema – architecture of a DBMS 7M
b) Discuss the main characteristics of Database approach and how differ from traditional approach. 7M

UNIT-II

3. a) Define an Entity and attribute. Explain the different types of attributes that occur in Entity Relationship model, with an example diagram. 6M
b) Draw an ER diagram of an airlines reservation system, taking into at least six entities. 8M
- (OR)
4. a) What is an integrity constraint? Explain briefly different types of constraints. 10M
b) Explain different data types available in SQL. 4M

UNIT-III

5. a) What is query? Explain about nested query with example. 7M
b) Explain aggregate functions in sql with suitable examples 7M
- (OR)
6. a) Explain four types of join operations with examples. 7M
b) Write about the usability of 'group by' and 'having' clauses in SQL. 7M

UNIT-IV

7. a) What is Lossless-join decomposition? 6M
b) What are different types of normalization? Also explain the difference between 2NF and 3NF briefly. 8M
- (OR)
8. What is normalization? Why do we need to normalize our database? Explain various normal forms by taking proper examples 14M

UNIT-V

9. a) Define transaction and explain desirable properties of transactions. 8M
b) Why the concurrency control is needed? Explain it. 6M
- (OR)
10. a) Compare and contrast between heap files and sorted files 7M
b) Distinguish between: i) Primary and Secondary indexing. ii) Ordered indexing and hashing. 7M

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

UNIT-II

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

UNIT-III

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

UNIT-IV

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

UNIT-V

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

AR16

CODE: 16OE405A

SET-1

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

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

INTRODUCTION TO WIRELESS NETWORKS

(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. a) Explain about evolution of wireless communication systems. 7M
b) Distinguish fixed and wireless telephone networks. 7M
- (OR)**
2. a) Explain about traffic routing in wireless networks 7M
b) Explain about i) Infrared Wireless LAN ii) Spread spectrum Wireless LAN 7M

UNIT-II

3. a) Explain about architecture of CDPD in detail 7M
b) Explain the basic concepts of ISDN with necessary diagram. 7M
- (OR)**
4. Explain about Protocol architecture of Bluetooth. 14M

UNIT-III

5. a) Explain about Mobile IP and its working with neat diagrams. 7M
b) Explain about Wireless Session Protocol. 7M
- (OR)**
6. a) Explain about wireless application protocol Architecture 7M
b) Explain about Registration procedure in mobile IP 7M

UNIT-IV

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

UNIT-V

9. a) Explain about basic architecture of WATM Network. 7M
b) Explain about architecture of HIPERLAN 7M
- (OR)**
10. a) Explain about types of HIPERLAN s. 7M
b) Explain about protocol entities in WATM 7M