AR13 **Set-02**

CODE NO: 13MTE1012

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I M.TECH. II SEMESTER Regular Examinations July-2014
ENERGY MANAGEMENT
(THERMAL ENGINEERING)

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

Answer any FIVE questions
All questions carry EQUAL marks

1. How educational planning is done energy management Program? 12M

2. a) Explain safety considerations in energy audit 6M
   b) What are different types of energy audits? 6M

3. a) How to generate the report for energy audit. 6M
   b) Explain different steps involved in Conducting the Audit Visit. 6M

4. a) Explain MACRS Depreciation method. 6M
   b) Determine depreciation allowances during each recovery year for a MACRS 5-year property with a basis of Rs.10,000. 6M

5. Discuss general characteristics of project investments in detail. 12M

6. a) What is internal rate of return? Compare it with present worth method. 6M
   b) What is the need for energy consultant? Explain in detail. 6M

7. Classify and explain solar energy collectors. 12M

8. Explain different thermal storage systems. 12M

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AR13 **Set-02**

Code No: 13MDE1004

ADITYA INSTITUE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I M.Tech II Semester Regular Examinations, July – 2014

WIRELESS COMMUNICATION AND NETWORKS
(Digital Electronics and Communication Systems)

Time: 3 hours **Max. Marks: 60**

Answer any FIVE questions
All questions carry equal marks

1. a) Explain CDPD wireless data services [6M]
   b) Appraise the importance of ARDIS wireless data services [6M]

2. a) Explain TDMA techniques [6M]
   b) Differentiate hybrid spread spectrum techniques [6M]

3. a) Explain channel capacity of CDMA in multiple cells [6M]
   b) Highlight the importance of Channel capacity of SDMA [6M]

4. a) Explain DSSS-BPSK with an example [6M]
   b) Describe DSSS performance considerations with an example [6M]

5. a) Explain mobile IP operation and registration. [6M]
   b) Explain in details about WTLS protocol stack [6M]

6. a) Differentiate spread spectrum and narrow band microwave LNAS [6M]
   b) Explain transmission techniques of Infrared LANs. [6M]

7. a) How does FH-CDMA differ from DS-CDMA. [6M]
   b) Describe L2CAP logical channels [6M]

8. a) Differentiate ISDN, BISDN and ATM [6M]
   b) Explain SS7 protocol architecture with neat diagram. [6M]

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AR13 **Set-01**

CODE: 13MIT1008

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I M.Tech II Semester Regular Examinations, July – 2014

PARALLEL COMPUTING ARCHITECTURE
(Information Technology)

Time: 3 hours **Max. Marks: 60**

Answer any FIVE questions
All questions carry equal marks

1) Write a brief note on parallel and distributed computers (12M)

2) Explain various parallel computation models (12M)

3) Write a brief note on Partitioning and divide-and-conquer concepts with examples (12M)

4) Explain in detail about Global and Local Synchronization (12M)

5) Write a brief note on performance measures of parallel computing architectures (12M)

6) Explain various concepts involved in shared memory programming (12M)

7) Explain both shared and distributed memory parallel computer along with merits and demerits (12 M)

8) Write a brief note on pipelined computations (12 M)

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AR13 **Set1**

Code No: 13MPE1010

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT,TEKKALI
(AUTONOMOUS)
I M.Tech. II Semester Regular Examinations, July-2014
POWER ELECTRONIC CONTROL OF AC DRIVES
(Power Electronics and Electric Drives)

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

Answer any FIVE questions
All questions carry EQUAL marks

1. Explain open loop V/f speed control of an induction motor with voltage source inverter. Also explain acceleration/deceleration characteristics on speed-torque curves.

2. Explain efficiency optimization control by flux program. Draw the loss variation of converter-machine system with varying flux.

3. a) Give applications and advantages of slip power recovery drives.
   b) V/f control of current fed induction motor drive.

4. Describe static Kramer drive for speed control of induction motor and show that steady state torque is not influenced by whether a transformer is used or not. Derive appropriate expression to obtain speed torque characteristics of static Kramer drive.

5. Explain fundamentals of vector control implementation with machine d-q model.

6. Explain operation with neat sketch load commutated inverter fed synchronous motor drive.

7. Explain the operation of 3-phase full-wave brushless motor also explain the related waveforms.

8. Explain briefly the torque production in variable reluctance motor drive with diagram & also explain drive characteristics.

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AR13 **Set-02**

Code No: 13MVL1010

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I M.Tech. II Semester Regular Examinations, July - 2014

ALGORITHMS FOR VLSI DESIGN AUTOMATION
(VLSI System Design)

Time: 3 hours **Max.Marks: 60**

Answer any FIVE questions
All questions carry equal marks

1. (a) Explain about design methodologies and automation tools in VLSI? (6M)
   (b) Explain and write the pseudo-code for DFS algorithm with example? (6M)

2. (a) Discuss briefly about pseudo code for backtracking algorithm with example. (6M)
   (b) Explain about dynamic programming in VLSI? (6M)

3. (a) Explain about layout compaction in VLSI? (6M)
   (b) Discuss about various placement methods in VLSI? (6M)

4. Discuss about switch and gate level modeling and simulation methods in VLSI? (12M)

5. (a) Explain the techniques of BDD to obtain ROBDD? (6M)
   (b) Write short notes on variable ordering? (6M)

6. (a) List out various scheduling algorithms? Explain about any one scheduling algorithm? (6M)
   (b) Briefly explain about allocation, assignment and scheduling? (6M)

7. (a) Explain about various routing models for FPGA's? (6M)
   (b) Explain about physical design cycle for FPGA's? (6M)

8. (a) Explain about various routing models of MCM? (6M)
   (b) With neat diagrams explain about physical design cycle for MCM? (6M)

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AR13 **Set-01**

CODE: 13MCS1008

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(Autonomous)

I M.Tech, II Semester Regular Examinations, July – 2014

COMPUTER NETWORKS

(Computer Science and Engineering)

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

Answer any FIVE questions

All questions carry EQUAL marks

1.	Explain OSI Reference Model in detail.	12M
2.	a. Explain Twisted Pair Transmission Media and its applications.	6M
	b. Write Short notes on Coaxial Cables.	6M
3.	a. Explain in detail CRC with an example.	8M
	b. Define Error Control and Flow Control.	4M
4.	a. What is congestion? Explain Leaky bucket algorithm for congestion control.	7M
	b. Explain Token bucket algorithm for congestion control.	5M
5.	What is Routing? Explain Distance Vector Routing with Example.	12M
6.	Explain Three way Handshaking for connection establishment and release.	12M
7.	a. Write Short notes on DNS	7M
	b. Write Short notes on HTTP	5M
8.	a. ExplainDES Algorithm.	6M
	b. Explain about Digital Signatures.	6M

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