Code No.: **50523**

MR15-2015-16 Batch

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Network Security**

Branch: **CSE**

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

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. Discuss about the internet standards.
2. Why do some block cipher modes of operation only use encryption while others use both encryption and decryption?
3. List three approaches to message authentication
4. What are the functions provided by S/MIME? Explain.
5. Discuss in detail about web security requirements?

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. a) Distinguish between TCP hijacking and UDP hijacking? [5M]
   b) Explain OSI security architecture. [5M]

2. a) What are the characteristics of cryptography? [5M]
   b) Briefly explain about feistel cipher structure in detail. [5M]
3. What is the purpose of the X.509 standard? How is an X.509 certificate revoked? [10M]
4. Justify why S/MIME is a security enhancement to MIME internet e-mail format Standard? [10M]
5. What is web security? Discuss web security considerations. [10M]

6. a) Explain about IP spoofing in detail. [5M]
   b) Draw and explain DES algorithm with feistal cipher structure? [5M]
7. a) What are the requirements of the hash function? [5M]
   b) Explain how pretty good privacy uses the concept of trust? [5M]

8. **Answer any TWO Questions of the following** **2x5 Marks= 10Marks**

   Write short notes on a) SNMPv3
   b) Principles of public key cryptosystems?
   c) Triple encryption

Code No.: **50540** | **MR15-2015-16 Batch**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Distributed Computing**

Branch: **CSE**

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

PART-A

Answer ALL Questions of the following **5x2M=10M**

1. Mention the challenges in distributed system?
2. Write the importance of middleware layer in distributed computing.
3. What is the responsibility of process manager in the Core OS?
4. What is clock skew and clock drift?
5. What is dirty read?

PART-B

Answer any FIVE Questions of the following **5x10M=50M**

1. a) What is the purpose of fundamental model? Explain briefly? [5M]
   b)What is the function of firewall? Explain? [5M]
2. Explain in detail about Remote Procedure call with a case study? [10M]
3. Discuss about the different cryptographic algorithms? [10M]
4. a) What are the major goals of Sun NFS? [5M]
   b) Explain Time stamp ordering in detail. [5M]
5. Discuss in detail about deadlock and locking schemes in concurrency control [10M]
6. a) How resource sharing is done in distributed systems. [5M]
   b) Explain UDP datagram communication. [5M]
7. a) Write a sho rt note on distributed mutual exclusion? [5M]
   b) Write short notes on Triple DES algorithm. [5M]
8. **Write short notes on TWO of the following:** **2 x 5M= 10M**
   a) NAT b) Key distribution center c) System call trap

Code No.: **50570**

MR15-2015-16 Batch

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Computer Graphics**

Branch: **CSE**

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

PART-A

Answer ALL Questions of the following **5x2M=10M**

1.List out the merits and demerits of DVST

2.Briefly discuss about scaling in composite transformations

3.List the properties of Bezier Curves.

4.What is 3D viewing pipeline?

5.Explain about Raster animations.

PART-B

Answer any FIVE Questions of the following **5x10M=50M**

1. Explain the functionalities of CRT device with the help of a diagram? [10M]
2. Decline the transformation matrix for rotation about origin? [10M]
3. Give explanation about Bezier curves with relevant examples. [10M]
4. Explain in detail about the working process of 3D clipping. [10M]
5. List the categories of animation language? Briefly explain the characteristics of each of these languages. [10M]
6. a) Write midpoint circle generation algorithm. **(5M)**
   b) Explain about cyrus-back line clipping algorithm. [5M]
7. a) Explain Hermite interpolation in detail [5M]
   b) Explain the stages in 3D viewing pipeline. [5M]
8. **Write short notes on TWO of the following:** **2 x 5M= 10M**
   a) Shadow-mask CRT b) Bezier curve c) 3D Shear transformations

Code No.: **50558** **MR15-2015-16 Batch**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Software Testing Methodologies**

Branch: **CSE**

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

PART-A

Answer ALL Questions of the following **5x2M=10M**

1. Define bug and defect.
2. Describe about unit test plan
3. Describe about integration testing.
4. Define the state graph with an example
5. How do you locate test items?

PART-B

Answer any FIVE Questions of the following **5x10M=50M**

1. a) What are the taxonomies of bugs? Explain. [5M]
   b) Explain about the some Dichotomies [5M]
2. a) Discuss about transaction flow testing and data flow testing with suitable examples [6M]
   b) The transaction flows are often ill structured. Discuss its reasons [4M]
3. Define a test case, test case design, test suite and explain black box testing approach to test case design? [10M]
4. Illustrate on Decision table based testing and Graph based testing. [10M]
5. How people act in organization structure for testing teams. [10M]
6. a) Discuss in detail about evolution of software testing [5M]
   b) Write about the applications of data flow testing. [5M]
7. a) Write a short note on Domain Dimensionality. [5M]
   b) How can we determine paths in domains in Logic based testing? [5M]
8. **Write short notes on TWO of the following:** **2 x 5M= 10M**
   a) Defect classes b) Smoke testing c) User Documentation Testing

Code No.: **50522**

MR15-2015-16 Batch

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Compiler Design**

Branch: **CSE**

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

PART-A

Answer ALL Questions of the following **5x2M=10M**

1. Write about Phase and Pass of a compiler
2. Define Left factoring and Left recursion in grammars with example
3. Why compilers use intermediate codes.
4. Define code optimization technique and its types
5. State the target programs and its advantages

PART-B

Answer any **FIVE** Questions of the following **5x10M=50M**

1. Explain the functions of a lexical Analyzer with example. Also write about lexical errors. [10M]
2. Generate LL(1) Parsing table for grammar [10M]
   a. $E \rightarrow TE^1$
   b. $E^1 \rightarrow +TE^1 / \varepsilon$
   c. $T \rightarrow FT^1$
   d. $T^1 \rightarrow *FT^1 / \varepsilon$
   e. $F \rightarrow (E)/id$

   and parse the input string id+(id*id)
3. Explain about storage allocation techniques in details [10M]
4. Explain how the following global code optimization technique transform the code [10M]
   i) CopyPropagation
   ii) Redundant Sub expression elimination
5. Write about code generation algorithm with example. [10M]
6. a) Explain compiler construction tools in details. [5M]
   b) Write short notes on LALR Parser [5M]
7. a) Write short notes on: a) List out the implementation in symbol table [5M]
   b) Flow Graphs [5M]
8. **Answer any TWO of the following** **2x5M=10M**
   a) Single pass and Multi-pass compiler. b) SLR parsing
   c) Function preserving transformations

Code No.: **50521** | **MR15-2015-16 Batch**

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)

Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Object Oriented Analysis and Design**

Branch: **CSE**

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

PART-A

Answer ALL questions of the following **5 x 2 M=10 M**

1. What are annotational things?
2. Differentiate between generalization and aggregation.
3. What is Focus of control and life line of an object?
4. What is meant by transition?
5. What is a component diagram?

PART-B

Answer any FIVE questions of the following **5 x 10 M=50 M**

1. Explain in brief about UML architecture? [10M]
2. Explain about common modeling techniques of use case diagram? [10M]
3. Draw an object diagram for Library Management System? [10M]
4. a) Write about sequential sub states. [5M]

   b) Write about concurrent sub states. [5M]
5. Draw and explain deployment diagram for Unified Library Application. [10M]
6. a) Discuss about Scope and Visibility [5M]

   b) Write the class diagram for the university library application [5M]
7. a) Write short notes on How to model life time of an object? [5M]

   b) Explain about processes and threads. (5M)
8. **Write short notes on any TWO of the following** **2*5 =10M**

   (a) Template classes (b) Object diagrams in UML (c) State chart diagram

Code No.: **50449**

MR15-2015-16 Batch

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Embedded System Design**

Branch: **CSE**

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

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. What is the significance of time-to-market in product development?
2. What is meant by an interface?
3. What are the advantages of high-level language based development?
4. List the basic functions of real-time kernel
5. What is the difference between shared memory and message passing technique?

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. Explain the various purposes of an embedded system in detail with illustrative examples. [10M]
2. What is sensor? Explain its role in embedded system design. Illustrate with an example. [10M]
3. What is embedded firmware? What are the different approaches available for embedded firmware development? Explain. [10M]
4. What is kernel? What is kernel space and user space? What is monolithic and microkernel? Explain. [10M]
5. What is semaphore? Explain the semaphore based process synchronization under Windows OS. [10M]
6. a) Distinguish between General computing machine and Embedded system [5M]
   b) Differentiate between SRAM and DRAM. [5M]
7. a) What is an oscillator circuit? Explain. [5M]
   b) What is process control box (PCB)? Explain the structure of PCB. [5M]
8. **Answer any TWO Questions of the following** **2X5M=10M**
   a) Explain DRAM. [5M]
   b) Differentiate between compiler and cross compiler. [5M]
   c) Write short notes on Interrupt handler [5M]

Code No.: **50448**

MR15-2015-16 Batch

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Principles of Communication Engineering**

Branch: **CSE**

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

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. Draw and describe the frequency spectrum of an amplitude modulated wave.
2. What is Shannon's Limit for information capacity?
3. What is companding in PCM system?
4. What is a pseudo-noise sequence?
5. Define link model

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. The equation of amplitude wave is given by $m(t)=20\sin(2\pi\times10^2t)$ is amplitude modulated with a carrier signal $c(t) = 60\sin(2\pi\times10^4t)$. Find the modulation index the carrier power and the power required for transmitting AM wave. [10M]
2. Explain about QPSK with transmitter and receiver block diagrams. [10M]
3. Draw the block diagram of a PCM system. Explain in detail, the concept of PCM and the steps involved. [10M]
4. Explain frequency hopping spread spectrum technique with neat diagram. [10M]
5. Define Keplers Law and discuss in details about Satellite Communication system with suitable diagram [10M]
6. a) Define modulation index and percentage of modulation for amplitude modulation. [5M]
   b) Draw the block diagram of Costas loop and explain its operation? [5M]
7. a) Write short notes on a) ncoder b) Receiver [5M+5M]
8. **Answer any TWO Questions of the following** **2X5M=10M**
   Write short notes on: a) Demodulation b) Eye patterns c) GEO orbit

Code No.: 50H12 | MR15-2015-16 Batch

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

III B.TECH II SEMESTER REGULAR END EXAMINATIONS, MAY-2018

Subject: **Engineering Economics and Accountancy**

Branch: **Common to EEE, ECE & CSE**

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

PART-A

Answer ALL questions of the following **5 x 2 M=10 M**

1. Define the nature of Managerial Economics.
2. What are the key terms used in break even analysis.
3. Differentiate features Perfect and Monopoly completion markets.
4. Identify any three differences between soletradership and partnership firms
5. Write journal entry for purchase of a Machinery from M/s, Girloskar Oil Machines Ltd. worth Rs.50.00 Lakhs and made advance payment in form of cash Rs.10000.00 and a bank cheque from The Karnataka Mercantile Bank Ltd. Rs. 4.90 Lakhs and remaining balance is on credit against erection of machinery.

PART-B

Answer any FIVE questions of the following **5 x 10 M=50 M**

1. a) List different types of demand and draw graph for income demand? [3M]
   b) Determine Type of Elasticity if P1=Rs.100/-, P2=110/-, Q1=1000 Units, and Q2=950 Units.[3M]
   c) Qualitative Methods of demand forecasting. [4M]

2. a) Differentiate Isoquants and Isocost curves?
   b) Depict graph for short run cost output relations covering AVC, AFC, ATC& MC curves and define fixed and variable costs
   c) Determine BEP volume and sales volume that is required to get a target profit of Rs. 20.00 Lakhs, if Fixed Cost is Rs.10.00 Lakhs, Per Unit is Rs.50/- and Variable Cost Per Unit is Rs.40/-.

3. a) Compare local, regional, national and international markets [3M+3M+4M]
   b) Compare features of perfect and monopolistic market structures.
   c) Differentiate Bundle Pricing, Block Pricing, Two Part Pricing and loss leader pricing methods.

4. a) Differentiate Private Limited Companies to that of Public Limited Companies in their features. [3M]
   b) Factors influencing working capital requirements [3M]
   c) Determine Pay Back Period if Initial Cost of Investment is Rs.2.00 Lakhs, Life of project is 5 Years, No Salvage Value, Cash flows are Rs.25000/-, Rs.75000/-, Rs..100,000/-, Rs.80000/- and Rs.50000/-. [4M]

5. From the following figures prepare Trading and Profit and Loss Account for the year ended 31st March, 2014 and a Balance Sheet as on that date:

Capital	86,800	Bad debts	700
Drawing	15,000	Bad debts provision	2,100
Investments	14,000	Sundry debtors	40,400
Cash	8,000	Sundry creditors	25,700
Rent and Insurance	3,000	Furniture	8,000
Opening Stock	36,600	Plant and machinery	50,000
Purchases	1,86,000	Salaries	11,000
Sales	3,05,000	Advertisement	4,400
Sales return	5,000	Goodwill	6,000
Wages	22,000	Freight	6,300
Carriage	4,200	Commission (Cr.)	1,000

Adjustments :

1. Stock on 31st march 2014 was Rs. 31,500
2. Salary and wages for March 2010 were unpaid.
3. Rent outstanding amounted to Rs. 600 and insurance unexpired amounted to Rs. 400.
4. Commission amounting to Rs. 200 has been received in advance.
5. Depreciate furniture and plant and machinery by 10% [10M]

6. a) What are the objectives, importance, uses and limitations of demand forecasting? [5M]

   b) What are Assumptions and limitations of Break Even Analysis? [5M]

7. a) Write in brief about different pricing methods? [5M]

   b) Enumerate the merits of partnership firm. [5M]

8. **Answer Any TWO questions of the following** **2 x 5 M=10 M**

   Write short notes on: a) Ratio Analysis b) Break Even Analysis c) Monopolistic Competition