MODEL PAPERS

B.TECH III YEAR – II SEM (R17)
(2019-20)

DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

Recognized under 2(f) and 12 (B) of UGC ACT 1956
(Affiliated to JNTUH, Hyderabad, Approved by AICTE - Accredited by NBA & NAAC – 'A' Grade - ISO 9001:2015 Certified)
Maisammaguda, Dhulapally (Post Via. Hakimpet), Secunderabad – 500100, Telangana State, India

R17

Code No: XXXXXX

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech II Semester, Model Paper-I

Distributed Systems

(CSE & IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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SECTION-I

1	a) Discuss how distributed systems are more scalable than the centralized systems	**[7M]**
	b) Demonstrate the design requirements for distributed architectures	**[7M]**
	OR	
2	Explain different types of failures with examples.	**[14M]**

SECTION-II

3	a) Explain external synchronization and internal synchronization.	**[7M]**
	b) Define Consistent-global states, consistent cut and consistent run	**[7M]**
	OR	
4	a) describe in detail about failure detectors	**[14M]**
	b) Explain about Maekawa's algorithm.	

SECTION-III

5	a) Write about group communication.	**[8M]**
	b) What is a middleware? Explain the various layers present in it.	**[6M]**
	OR	
6	a) Write short notes External data representation	**[8M]**
	b) Discuss in detail about CORBA's common data representation	**[6M]**

SECTION-IV

7	a) Discuss various file system operations.	**[7M]**
	b) Discuss in detail about CORBA's common data representation	**[7M]**
	OR	
8	write about group communication.	**[7M]**
	What is a middleware? Explain the various layers present in it.	**[7M]**

SECTION-V

9	a)Explain about Optimistic concurrency control.	**[14M]**
	b)Explain Timestamp ordering	
	OR	
10	Explain distributed deadlock detection mechanism with example.	**[14M]**

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R17

Code No: XXXXXX

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech II Semester, Model Paper-II

Distributed Systems

(CSE & IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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SECTION-I

1 a) Discuss in brief the main features of HTTP **[7M]**

b) List and explain the techniques used for dealing with failures **[7M]**

OR

2 Explain briefly about architectural models **[14M]**

SECTION-II

3 1.) Discuss in brief about, **[14M]**
- i. Mobile agents
- ii. Thin Clients
- iii. Network Computers

OR

4 What is significance of failure models? Explain in detail the taxonomy that distinguishes between he failures of processes and communication channels. **[7M]**

What are the problems of distributed systems? **[7M]**

SECTION-III

5 Explain the Election algorithms with examples. **[14M]**

OR

6 Explain the algorithm for mutual exclusion using multicast and logical clocks **[6M]**

What is meant by interprocess communication? How interprocess communication is used in distributed systems **[8M]**

SECTION-IV

7 What are the Six building blocks of an XML document? Give Examples. **[14M]**

OR

8 a)Draw and explain the architecture of SUN Networks File System **[7M]**

b)What are the various operations provided by NFS Server **[7M]**

SECTION-V

9 a) Discuss in brief about the "ACID" Properties of Transactions **[7M]**

b) Explain with an example how two transactions are interleaved which are serially equivalent at each server but is not serially equivalent globally? **[7M]**

OR

10 Explain concurrency control in Distributed transactions. **[14M]**

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech II Semester, Model Paper-III

Distributed Systems

(CSE & IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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SECTION-I

1 Explain different challenges faced by distributed systems with examples **[14M]**

OR

2 Write short notes on fundamental models **[14M]**

SECTION-II

3 a)Define interacting processes. Also discuss two significant factors effectinginteraction processes in Distributed system. **[7M]**

b)Explain in detail HTML. **[7M]**

OR

4 (a) What is a need of election algorithm. Explain ring based election algorithm. **[7M]**

(b) What are the essential features of multicast communication? **[7M]**

SECTION-III

5 a)Write about the ordering of messages. **[6M]**

b)Explain the algorithm to solve consensus problem in a synchronous system. **[8M]**

OR

6 (a) Discuss in detail about request reply protocol and RPC. **[7M]**

(b) Write about inter process communication in UNIX. **[7M]**

SECTION-IV

7 (a) What are the design characteristics of Andrew file system. How is the distribution of processes done in AFS? **[7M]**

(b) Describe the domain name system. **[7M]**

OR

8 Explain about java RMI. **[14M]**

SECTION-V

9 a) What are the locking rules for nested transitions? **[6M]**

b) Explain about two phase commit protocol. **[8M]**

OR

10 Explain timestamp ordering for concurrency control in distributed systems with examples. **[14M]**

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R17

Code No: XXXXXX

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech II Semester, Model Paper-IV

Distributed Systems

(CSE & IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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SECTION-I

1	a)What are the different methods of sharing resources in distributed systems.	**[7M]**
	c)Explain about mobile and ubiquitous computing.	**[7M]**
	OR	
2	a)Explain interaction models.	**[7M]**
	b)Explain different variations in Client Server model.	**[7M]**

SECTION-II

3	(a) What is the importance of time in distributed systems	**[7M]**
	(b) Describe the algorithm for external synchronization	**[7M]**
	OR	
4	(a) What is Consensus Problem (b) Discuss the two implementation of reliable multi cast	**[14M]**

SECTION-III

5	Explain RPC with a neat example.	**[14M]**
	OR	
6	a) List and discuss the characteristics of network that are hidden by the stream obstruction	**[8M]**
	b) Discuss in detail about HTTP Protocol	**[6M]**

SECTION-IV

7	a) Give an Over View of Types of Storage Systems and their properties	**[7M]**
	b) Explain the file service architecture with a neat diagram	**[7M]**
	OR	
8	a) What are the requirements for the design of distributed file system	**[8M]**
	b)Write about (i) Hierarchic File Systems (ii) File Groups	**[6M]**

SECTION-V

9	a) Discuss in brief about the "ACID" Properties of Transactions	**[6M]**
	b)Write short notes on locks for concurrency control.	**[8M]**
	OR	
10	Explain different transaction recovery mechanisms in distributed transactions.	**[14M]**

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MALLA REDDY COLLEGE OF ENGINEERING AND TECHNOLOGY

III Year B.Tech. CSE & IT-II Sem

(R17A0464) EMBEDDED SYSTEMS

UNIT-I: INTRODUCTION TO MICROPROCESSORS AND MICROCONTROLLERS:
8086 Microprocessor: Architecture of 8086, Register Organization, Programming Model, Memory Segmentation, Signal descriptions of 8086, Addressing modes, Instruction Set. 8051 Microcontroller: 8051 Architecture, I/O Ports, Memory Organization, Instruction set of 8051.

UNIT-II: INTRODUCTION TO EMBEDDED SYSTEMS:
History of embedded systems, Classification of embedded systems based on generation and complexity, Purpose of embedded systems, Applications of embedded systems, and characteristics of embedded systems, Operational and Non-operational attributes of embedded systems.

UNIT-III: TYPICAL EMBEDDED SYSTEM:
Core of the embedded system, Sensors and actuators, Onboard communication interfacesI2C, SPI, parallel interface; External communication interfaces-RS232, USB, infrared, Bluetooth, Wi-Fi, ZigBee, GPRS.

UNIT-IV: EMBEDDED FIRMWARE DESIGN AND DEVELOPMENT:
Embedded firmware design approaches-super loop based approach, operating system based approach; embedded firmware development languages-assembly language based development, high level language based development.

UNIT-V EMBEDDED PROGRAMMING CONCEPTS:
Data types, Structures, Modifiers, Loops and Pointers, Macros and Functions, object oriented Programming, Embedded Programming in C++ &JAVA

TEXT BOOKS:
1. Embedded Systems, Raj Kamal, Second EditionTMH.
2. Kenneth. J. Ayala, The 8051 Microcontroller , 3rd Ed., CengageLearning
3. Introduction to Embedded Systems - shibu k v, Mc Graw HillEducation.

REFERENCE BOOKS:
1. Advanced Microprocessors and Peripherals – A. K. Ray and K.M. Bhurchandi, TMH, 2nd Edition2006
2. Embedded Systems- An integrated approach - Lyla B Das, Pearson education2012.

MODEL QUESTION PAPER-1

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B. Tech I Semester

EMBEDDED SYSTEM DESIGN

(Common to CSE & IT)

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

1. a) Describe the Architecture of 8086 Microprocessor with neat diagram. [14]

OR

b) Define Flag and explain about different flags of 8086 Microprocessor. [14]

SECTION-II

2. a) Define Embedded System and discuss about the Classification of Embedded Systems. [14]

OR

b) i) Write the differences between Embedded Systems and General Computing Systems. [07]

ii) Write the Major Application Areas of Embedded Systems. [07]

SECTION-III

3. a) Explain about Elements of Embedded Systems with neat diagram. [14]

OR

b) Explain about a) Programmable Logic Devices (PLDs) b) COTs. [14]

SECTION-IV

4. a) Explain in detail about Super Loop based approach for Embedded Firmware design. [14]

OR

b) Explain the Assembly language to machine language conversion process with neat sketch. [14]

SECTION-V

5 a) Explain about Loops and Pointers. [14]

OR

b) Discuss about object oriented Programming embedded programming. [14]

MODEL QUESTION PAPER-2

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B. Tech I Semester

EMBEDDED SYSTEM DESIGN

(Common to CSE & IT)

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

1. a) Describe the Architecture of 8051 Microcontroller with neat diagram [14]

OR

5. b) Explain the Memory Segmentation in 8086 Microprocessor . [14]

SECTION-II

2. a) Explain the Purpose of Embedded Systems [14]

OR

b) Explain about the Characteristics of Embedded systems. [14]

SECTION-III

3. a) Explain about a) SPI Bus communication interface b) RS 232C [14]

OR

b) Explain about a) I2C (Inter Integrated Circuit) b) Wi-Fi. [14]

SECTION-IV

4. a) Explain in detail about Embedded OS based Approach for Embedded Firmware design. [14]

OR

b) Explain the High level language to machine language conversion process with neat sketch. [14]

SECTION-V

5 a) Explain about Macros and Functions. [14]

OR

b) Discuss about Structures and how it is useful in embedded programming. [14]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B. Tech III Year II Semester Examinations

Object Oriented Analysis and Design (MODEL PAPER - I)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION – I

1. Explain the Association, Generalization and Realization relationships. Give suitable examples on which context these relationships are specified. [14]

(OR)

2. a) What are the rules of UML.
   b)What is meant by dependency and Realization relationships. For what purpose they are used. Give suitable examples to describe their usage. [7+7]

SECTION – II

3. a) Give a detailed note on stereotypes and tagged vales.
   b)Enumerate the steps to model different views of a system. [7+7]

(OR)

4. a) Draw an Object diagram for a company information system.
   b)Describe forward and Reverse Engineering of an Object diagram. [7+7]

SECTION – III

5. a) What are the contents, common properties and uses of interaction diagrams.
   b) Define Synchronous and Asynchronous messages. [7+7]

(OR)

6. a) Usecase diagrams are essential for managing system requirements. Substantiate this statement.
   b)What is Object flow? Explain. [7+7]

SECTION – IV

7. Explain the following advanced features of states and transitions. [14]

(OR)

8. a) What is the UML approach to process synchronization
   b) What is the UML notation for the following? [7+7]

SECTION – V

9. a) List the steps involved while developing a unified library application.
   b) List and explain the different usecases in the library system. [7+7]

(OR)

10. Explain indetail about the following models
    i) Analysis model.
    ii) Design model. [7+7]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B. Tech III Year II Semester Examinations

Object Oriented Analysis and Design (MODEL PAPER - II)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION – I

1. Draw the architecture of a software intensive system and explain.[14]

(OR)

2. a) What are behavioral things? Explain.
   b)What is UML? Where can the UML to be used? [7+7]

SECTION – II

3 a) What are the various kinds of Classifiers? Explain.
   b)How to model the seams in a system [7+7]

(OR)

4. a) Explain about generalization with an example.
   b)Describe interfaces, types and roles with examples.[7+7]

SECTION – III

5. a)Explain about usecases and actions and usecases and flow of events.
   b)How to model a flow of control? [7+7]

(OR)

6 .a) Explain sequence diagram with suitable example.
   b) How to model the requirements of a system? [7+7]

SECTION – IV

7.a)Explain the following:
   i)History states
   ii)Time and Space
   b) How to model an API? [7+7]

(OR)

8.a) How to model an embedded system?
   b) Differentiate the following:
   i)Components and classes
   ii) Nodes and components[7+7]

SECTION – V

9.Explain the following:
   a)Patterns and architecture
   b)Modeling an executable release. [7+7]

(OR)

10.Draw the following diagrams for the unified library application
   a)Class diagrams
   b)Interaction diagram[7+7]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B. Tech III Year II Semester Examinations

Object Oriented Analysis and Design (MODEL PAPER - III)

(MODEL PAPER - III)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION – I

1. a) Explain the Antisymmetric and Transitive properties of Aggregation

   b)Explain the UML approach to SDLC. [7+7]

(OR)

2. a)) Explain the importance of modeling .
   b)) In what way object oriented approach claims to improve the system development process? Explain. [7+7]

SECTION – II

3. a) What are the five constraints applied to association relationships. Explain briefly.
   b) Enumerate the steps to model groups of elements. [7+7]

(OR)

4. a) Enumerate the steps to model complex views.
   b)Define idiom. Enumerate the steps to model new semantics. [7+7]

SECTION – III

5. a)How branching is represented in activity diagram. Elaborate on it.. [7+7]
   b)Can a transition have multiple sources? Discuss suitable examples to support your argument.

(OR)

6. a) Explain History states.
   b) Give the sketch of a state machine for the controller in a Home Security system which is responsible for monitoring various sensors around the perimeter of the house. Briefly explain. [7+7]

SECTION – IV

7. Enumerate the steps to model the distributions of objects. [14]

(OR)

8. a) Discuss object oriented analysis of Unified Library Application in detail.
   b) Who are the users involved in library system. Explain the functions performed by each of the users. [7+7]

SECTION – V

9. Explain in detail about the following activities.
   i)Designing user interfaces.
   ii)Implementation [7+7]

(OR)

10. Explain about the following.
    i)Polymorphism.
    ii)Iterated messages [7+7]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B. Tech III Year II Semester Examinations

Object Oriented Analysis and Design (MODEL PAPER - IV)

(MODEL PAPER - IV)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks

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SECTION – I

1. Explain briefly the classification of things with UML notation.[14]

(OR)

2. What is the need of architecture? Explain UML architecture.[14]

SECTION – II

3. Briefly discuss about boundary classes, control classes and entity classes. Give suitable examples for them. [14]

(OR)

4. Enumerate the steps involved in forward engineering and reverse engineering of use case diagrams. [14]

SECTION – III

5.Briefly write about messages and sequencing with an illustrating diagram. [14]

(OR)

6. a) Differentiate between sequence and collaboration diagrams.
   b) Explain forward engineering and reverse engineering in respect of interaction diagrams. [7+7]

SECTION – IV

7. a) What is a signal? Explain with suitable examples.
   b) Define the following.
   i) State
   ii) State machine
   iii) Event [7+7]

(OR)

8. a) What is an event? What are different types of events?
   b) Enumerate the steps to model an API. [7+7]

SECTION – V

9. a) How to model design pattern.
   b) Describe the modeling of architectural pattern.[7+7]

(OR)

10. Explain the concept of forward and reverse engineering artifacts.[14]

PYTHON PROGRAMMING [R17A0554]

OPEN ELECTIVE – III

QUESTION BANK

B.TECH III YEAR – II SEM (R17)

(2019-20)

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B.Tech III Year II Semester Examinations

PYTHON PROGRAMMING – OPEN ELECTIVE – III (R17A0554)

Time: 3.00 Hours **MODEL PAPER -1** **Max. Marks: 70**

Answer any Five questions (5x14 = 70 Marks)

Section -1

1. A. Give brief introduction to python and its installation? [4+4+6]
   B. Define python? List the standard data types of python?
   C. Define variable in python and list the rules of python variables?

(OR)

2. A. Write a python program to create variables in terms of integer, float and string? [7+7]
   B. Write a python code to demonstrate type conversions using int (), float () and str ()?

Section -2

3. A. List out the control flows and explain? [5+3+6]
   B. Define Boolean expression?
   C. What are the different types of operators used to evaluate Boolean expression?

(OR)

4. A. Write a python program to accept name from the user and verify whether the user is authorized or not. [7+7]
   B. Write a python program to find biggest of two numbers using conditional if?

Section -3

5. A. Write a python function using with parameter and return type? [5+5+4]
   B. Write a python program using function to the print the value of x as local and global?
   C. Define Composition and write the syntax?

(OR)

6. A. Write a program to create a menu with the following options [10+4]

   1. Area of a circle
   2. Area of a triangle
   3. Area of a rectangle
   4. Area of a square
   5. Area of pyramid.

   Accepts users input and perform the operation accordingly. Use functions with arguments

B. Define local and global scope with syntax?

Section -4

7. A. Define list with an example? [4+4+6]
   B. Define aliasing and show an example?
   C. List out the operations and methods of dictionary?

(OR)

8. A. Does mutability support for list, if yes explain any two methods with example? [7+7]
   B. What is tuple assignment, give an example?

Section -5

9. A. Define file and explain the two categories of files? [5+4+5]
   B. How to import a module from a package show with an example?
   C. Define Exception? List any 6 types of exception?

(OR)

10. A. How to rename a module in python and write the syntax and program? [7+7]
    B. Write a python program to open a file and check what are the access permissions acquired by that file using os module?

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B.Tech III Year II Semester Examinations

PYTHON PROGRAMMING – OPEN ELECTIVE – III (R17A0554)

Time: 3.00 Hours **MODEL PAPER -2** **Max. Marks: 70**

Answer any Five questions (5x14 = 70 Marks)

Section -1

1. A. Illustrate expression with an example? [4+4+6]
   B. Explain the basic statements we use in python?
   C. Show an example how precedence of operators effects an expression evaluation?

(OR)

2. A. Define comment and list out different types of comments with syntax? [7+7]
   B. Define module in python? Write the syntax for import statement and write a program?

Section -2

3. A. Explain If _else statement in python with syntax, flowchart and example? [4+6+4]
   B. What are the different flow control statements available in python? Explain with suitable examples
   C. Explain conditional (If) statement in python with syntax, flowchart and example?

(OR)

4. A. Write a program to create a list with computer languages and display the same by using while loop. [7+7]
   B. Write a python Program to read a number and display corresponding day using if_elif_else?

Section -3

5. A. Write a sample python program to compose more than one function? [5+4+5]
   B. Define Recursion and python Recursive function?
   C. Write a python program to factorial using recursion?

(OR)

6. A. Write a Python function that takes two lists and returns True if they have at least one common member? [7+7]
   B. Write the difference between parameter and arguments in functions and explain with an example?

Section -4

7. A. Define dictionary with an example? [3+6+5]

B. Write a python function that takes list as argument and multiplies each element in the list by 2?

C. Explain dictionary manipulation with an example?

(OR)

8. A. List out different methods of a list and explain at least with 3 examples? [7+7]
   B. Write a python program to create and access the elements of tuple?

Section -5

9. A. Write the syntax to create, open and close a file? [7+3+4]
   B. List out different types of file modes in python?
   C. Write the syntax for import and to import all objects from a module?

(OR)

10. A. Write the syntax and program to handle exceptions? [5+9]
    B. Write a simple code using the modules of sys, calendar, time, datetime, math?

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B.Tech III Year II Semester Examinations

PYTHON PROGRAMMING – OPEN ELECTIVE – III (R17A0554)

Time: 3.00 Hours **MODEL PAPER -3** **Max. Marks: 70**

Answer any Five questions (5x14 = 70 Marks)

Section -1

1. A. Write any program using function and explain how the flow of execution happened? [5+3+6]
   B. Define and show how we pass parameter and arguments in functions?
   C. Writer a program to read one subject mark and print pass or fail use single return Values function with argument.

(OR)

2. A. Write a short note on history and features of python? [9+5]
   B. Define function with syntax and example?

Section -2

3. A. Explain If _elif_else statement in python with syntax, flowchart and example? [6+6+2]
   B. List and define different types of python iteration statements with syntax?
   C. Define pass keyword in python?

(OR)

4. A. Briefly describe about break and continue statements? [5+9]
   B. Write a python program using nested for loop to print the following pattern?

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

Section -3

5. A. Define string and write the syntax to get type of any string? [5+5+4]
   B. Define String slice with syntax and example?
   C. What is immutability in strings explain with an example?

(OR)

6. A. Write a python program using function to the print the value of x as local and global? [6+6+2]
   B. Define Composition and write the syntax with an example?
   C. Define function with syntax?

Section -4

7. A. Consider the following list, list1=[1,2,3,4,5,6,7,8,9,10] and perform slice operation in three different methods ? [5+6+3]
   B. List out some operations of tuple?
   C. What are basic operations of a list? Explain each with an example?

(OR)

8. A. Illustrate cloning list with an example? [6+8]
   B. Write a python program to create and access specific value of dictionary?

Section -5

9. A. Write a python program to open and read a file [4+4+6]
   B. Briefly describe command line arguments?
   C. Explain the following
      i) Zero Division Error
      ii) Overflow Error
      iii) Import Error
      iv) Index Error
      v) Type Error

(OR)

10. A. Write program to read and write files in python? [6+4+4]
    B. What is an Error in python and list types of Errors?
    C. Define package in python with an example?

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

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ISO 9001:2008 Certified

B.Tech III Year II Semester Examinations

PYTHON PROGRAMMING – OPEN ELECTIVE – III (R17A0554)

Time: 3.00 Hours **MODEL PAPER -4** **Max. Marks: 70**

Answer any Five questions (5x14 = 70 Marks)

Section -1

1. A. Program to find area of a circle using function use single return value function with argument. [9+5]
   B. List out some of the python interpreters?

(OR)

2. A. Explain the modes of interpreter? [7+4+3]
   B. Define and create the list to print one of its elements?
   C. List different types of operators with its token?

Section -2

3. A. Write an infinite loop. A infinite loop never ends. Condition is always true? [7+7]
   B. Take 10 integers from keyboard using loop and print their average value on the screen.

(OR)

4. A. Define and explain for loop in python with syntax, flowchart and example [5+5+4]
   B. Write a python program to double the values of a given list.
   List1= [11, 22, 33, 44, 55, 66]
   C. Write a python program to print "MRCET" to print 5 times?

Section -3

5. A. Define string module and write a program by importing string module? [5+5+4]
   B. Explain array representation in python and list out the basic operations?
   C. Write a python program to create and access the elements of an array?

(OR)

6. A. What are fruitful function explain with an example? [5+5+4]
   B. Write a simple program to print "welcome to python" using return keyword with functions?
   C. Write a python program to create and access the elements of an array?

Section -4

7. A. Explain any three methods of a list with an example each? [5+6+3]
   B. Write a python function that returns values as tuples?

C. Define tuple with an example?

(OR)

8. A. Define list, tuple, dictionary comprehensions with an example? [7+7]
   B. Write a python program to iterate over keys and values of a dictionary?

Section -5

9. A. Write a python program to write the content "hi python programming" for the existing file?
   B. Define module in python with syntax and example? [6+6+2]
   C. Write a python program to create a package (Engg), sub-package (years),modules (sem) and create staff and student function to module?

(OR)

10. A. What are the advantages of modularizing code in large applications? [7+7]
    B. Explain the following
       i) Indentation Error
       ii) Syntax Error
       iii) Runtime Error
       iv) Key Error
       v) Value Error

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B. Tech III Year II Semester Examinations

SOFTWARE TESTING METHODOLOGIES

(MODEL PAPER - I)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION – I

1. List out various dichotomies and explain. [14]

(OR)

2. a) Briefly explain various consequences of bugs.
   b) Define Path Sensitization. Explain heuristic procedure for sensitizing paths with the help of an example. [7+7]

SECTION – II

3. a) Describe the complications of transaction flows.
   b) What are data-flow anomalies? Explain. [7+7]

(OR)

4. a) What is meant by Transaction flow testing? Discuss its significance.
   b) List 9 possible two letter combinations of the object states of data flow anomalies. Classify them as buggy, suspicious and ok? [7+7]

SECTION – III

5. a) What are the restrictions of domain testing? Explain
   b) How to test two-dimensional domains? Explain [7+7]

(OR)

6. a) What is the strategy of domain testing? Explain in brief.
   b) Discuss about domains and testability. [7+7]

SECTION – IV

7. Write the steps involved in node reduction procedure. Illustrate all the steps with the help of neat labeled diagrams. [14]

(OR)

8. a) Explain about the mean processing time of a routine with example.
   b) Justify the following statement:
   "Decision tables can also be used to examine a program structure" [7+7]

SECTION – V

9. a) What are the principles of state testing? Explain its advantages and disadvantages.
   b) Write about equivalence relation and partial ordering relation. [7+7]

(OR)

10. Write short notes on,
    a) Transition bugs
    b) Dead states
    c) State bugs
    d) Encoding bugs [3+4+3+4]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B. Tech III Year II Semester Examinations

SOFTWARE TESTING METHODOLOGIES

(MODEL PAPER - II)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION – I

1. Briefly explain about Taxonomy of Bugs. [14]

(OR)

2. a) What are the phases in a Tester's mental life?
   b) Explain Link Marker Method of Path Instrumentation. [7+7]

SECTION – II

3. a) Define a Transaction. Give an example.
   b) How an anomaly can be detected? Explain different types of data flow anomalies and data flow anomaly state graphs. [7+7]

(OR)

4. a) Discuss briefly about Transaction flow testing techniques.
   b) Write about the data flow model with example. [7+7]

SECTION – III

5. Discuss in detail the nice domains and ugly domains with suitable examples. [14]

(OR)

6. Explain the domain boundary bugs for two dimensional domains. [14]

SECTION – IV

7. What is decision table and how is a decision table useful in testing? Also explain with the help of an example. [14]

(OR)

8. a) Explain Push/Pop arithmetic with example.
   b) What are the rules of Boolean algebra? Explain. [7+7]

SECTION – V

9. Explain the following:
   a) Software implementation of state graphs.
   b) Applications of graph matrices. [7+7]

(OR)

10. a) Write the design guide lines for building the finite state machine into code.
    b) Write about loops in matrix representation. [7+7]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B. Tech III Year II Semester Examinations

SOFTWARE TESTING METHODOLOGIES

(MODEL PAPER - III)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks

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SECTION – I

1. a) Is complete testing possible? Explain.
   b) What are the three kinds of loops? Explain with example. [7+7]

(OR)

2. a) Discuss about different kinds of predicate blindness.
   b) Explain the process of achieving (C1+C2) coverage. [7+7]

SECTION – II

3. Name and explain data flow testing strategies. [14]

(OR)

4. a) Define transaction flow testing? Explain transaction flow structure.
   b) Differentiate between transaction flow graphs and data flow graphs. [7+7]

SECTION – III

5. Discuss the following terms:
   a) Linear domain boundaries [3M]
   b) Non-linear domain boundaries[4M]
   c) Complete domain boundaries[3M]
   d) Incomplete domain boundaries[4M] [14]

(OR)

6. a) Discuss with suitable examples the equal-span range/Domain compatibility bugs.
   b) What are domain bugs? Discuss how to test them. [7+7]

SECTION – IV

7. Write short notes on,
   a) Distributive laws b) Absorption rule
   c) Loops d)Identity elements [14]

(OR)

8. Write about Haung's theorem. Explain its implementation with example. Explain its generalizations and limitations. [14]

SECTION – V

9. Explain the following:
   a) Impact of bugs in state testing b) Number of states in a state graph
   c) Properties of relations. [5+5+4]

(OR)

10. a) Discuss briefly about good state graphs and bad state graphs.
    b) Write about matrix powers and products. [7+7]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B. Tech III Year II Semester Examinations

SOFTWARE TESTING METHODOLOGIES

(MODEL PAPER - IV)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks

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SECTION –I

1. a) Distinguish the following:
   i) Function vs Structure
   ii) The Builder vs Buyer
   b) How should you go about quantifying the nightmare? Explain. [7+7]

(OR)

2. a) Explain about control flow graphs.
   b) What are link counters? Discuss their use in path testing. [7+7]

SECTION –II

3. a) How an anomaly can be detected? Explain different types of data flow anomalies and data flow anomaly state graphs. [14]

(OR)

4. a) Explain about data flow graphs.
   b) Define the following terms:
   i)Definition-clear path segment ii)Loop-free path segment
   iii)Simple path segment iv) du path [3+4+3+4]

SECTION –III

5. What is meant by domain testing? Discuss various applications of domain testing. [14]

(OR)

6. a) Discuss testability of domains and interfaces.
   b) Explain the domain boundary bugs for one dimensional domains. [7+7]

SECTION –IV

7. a) Explain about lower path count arithmetic.
   b) Explain with an example the four variable KV Charts. [7+7]

(OR)

8. Explain about Regular Expressions and Flow-Anomaly Detection. [14]

SECTION –V

9. a) What is finite state machine and a state?
   b) Write about building tools of graph matrices. [7+7]

(OR)

10. a) Write all the rules in conversion of specification into a state graph.
    b) Write about partitioning algorithm. [7+7]

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Code No: R15A0521

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution –UGC, Govt. of India)

III B. Tech II Semester Regular Examinations, April/May 2018

SOFTWARE TESTING METHODOLOGIES

(CSE)

Time: 3 hours **Max Marks: 70**

Note: Question paper Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks

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SECTION-I

1. a) Explain different phases of tester mental life? [7+7]
   b) Give difference between functional testing and structural testing

(OR)

2. a) Briefly explain various consequences of bugs. [7+7]
   b) What are the different kinds of bugs?.

SECTION-II

3. a) Explain different types of methods we use for path instrumentation. [14]

(OR)

4 a) What are the advantages and disadvantages of control flow graphs? [7+7]
   b) What is meant by path sensitization and explain in detail

SECTION-III

5a) Explain how the transaction flow graph is used in functional testing [7+7]

   b) Compare the path flow and data flow testing strategies

(OR)

6) What is domain testing? Discuss nice and ugly domains with neat diagram [14]

7 a) Discuss about bode reduction procedure. [7+7]
   b) Discuss the role of decision table in a test case design.

(OR)

8 a) Explain Karnaugh map method to minimize the given function. [7+7]
   b) Explain about the ambiguities and contradictions in the specifications

9 a)Differentiate between good state graphs and bad state graphs
   b) Write about building tools of graph matrices. [7+7]

(OR)

10 a) Write a partitioning algorithm in software testing.
   b) What are relations and give their properties. [7+7]

MODEL PAPER-1 **R17**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B. Tech II Semester Regular Examinations

Web Technologies

(CSE)

Time: 3 hours **Max. Marks: 70**

Note: This question paper contains two parts of FIVE sections

Answer FIVE questions choosing ONE question from each section and each question carries 14 marks

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SECTION – I

1. What is list and explain different types of list by using example programs. (14M)

(OR)

2. What is CSS? Explain different types of CSS with an example. (14 M)

SECTION – II

3. What is DTD? Explain types of DTD with an example.(14M)

(OR)

4. Discuss about document object model in XML and explain DOM with an example.(14M)

SECTION – III

5. Discuss about Tomcat server, testing Tomcat and write a servlet program to read parameters from HTML file.(14M)

(OR)

6. Define Servlet? Explain Servlet program with an example (14M)

SECTION – IV

7. Explain anatomy of JSP page ? (14M)

(OR)

8. Give a detail note on JSP elements and also write one sample program. (14 M)

SECTION – V

9. What are the steps to connect to the database in java and write a JDBC program to insert the values from the database?.

(14M)

(OR)

10. Analyze deploying JAVA beans in JSP Page and write a sample program to illustrate it.

(14 M)

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MODEL PAPER-2 **R17**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B. Tech II Semester Regular Examinations

Web Technologies

(CSE)

Time: 3 hours **Max. Marks: 70**

Note: This question paper contains two parts of FIVE sections

Answer FIVE questions choosing ONE question from each section and each question carries 14 marks

****

SECTION – I

1. Explain the following terms related to Web
   i) Internet (4M) ii) WWW (5M) iii) Web Browsers(5M)

(OR)

2. Define HTML? Explain the following HTML tags: -

   i) Anchor tag (4M) ii) img tag (3M) iii) hr tag (3M) iv) table (4M)

SECTION – II

3. a) Explain the differences between HTML and XHTML with examples.(7M)

   b**)** What is PHP? Explain parameter passing techniques and dynamic function using PHP.(7M)

(OR)

4. Explain XML Schema with an example.14M)

SECTION – III

5. Explain Reading and Initialization parameters using Servlet with example? (14M)

(OR)

6. What is cookie? Explain handling cookies in Servlet with example (14M)

SECTION – IV

7. List out the implicit objects in JSP. Explain about each? (14M)

(OR)

8 a). Describe in detail about the processing of a JSP page. (7M).

b**).** What are the problems with Servlet over JSP? (7M)

SECTION – V

9. Define JDBC. Explain JDBC Drivers with a neat diagram?. (14M)

(OR)

10.Explain Connecting to database in PHP. (14 M)

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MODEL PAPER-3 **R17**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B. Tech II Semester Regular Examinations

Web Technologies

(CSE)

Time: 3 hours **Max. Marks: 70**

Note: This question paper contains two parts of FIVE sections

Answer FIVE questions choosing ONE question from each section and each question carries 14 marks

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SECTION-I

1. Explain features of Java Script? Illustrate popup windows with event handlers in JavaScript.(14M)

OR

2. What are the sub tags of table tag? Explain about nested table with example program (14M)

SECTION-II

3.a) What are the differences between cookies and sessions in PHP? (7M)

b) Write a PHP program to find the 1 to n prime numbers (7M

OR

4.a) Define Parser. List out the differences between DOM and SAX parsers? (7M)

b) What are the differences between Get and Post methods in form submitting?(7M)

SECTION-III

5. Define Servlet. Explain the life cycle methods of a Servlet and Write a program by using Servlet.(14M)

OR

6. a).What are the differences between cookies and sessions in Servlets? (7M)

b). Define web server. Explain about Tomcat web server. (7M)

SECTION-IV

7. a) What are the attributes of PAGE directive? Explain with program (7M)

b) What are the attributes of INCLUDE directive? Explain with program (7M)

OR

8. a).Explain about MVC architecture of JSP. (7M)

b).What are the futures of JSP (7M)

SECTION-V

9.Write a PHP program for Create table and Inserting values into that table using database? (14M)

OR

10. What is a Java Bean? Explain Deploying java beans in a JSP page with example. (14M)

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MODEL PAPER-4 **R17**

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B. Tech II Semester Regular Examinations

Web Technologies

(CSE)

Time: 3 hours **Max. Marks: 70**

Note: This question paper contains two parts of FIVE sections

Answer FIVE questions choosing ONE question from each section and each question carries 14 marks

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SECTION-I

1. a) Define HTML? Explain the following HTML tags (8M)
   i) Anchor tag ii) img tag iii) hr tag iv) table
   b) What is list? Explain types of lists.(6M)

OR

2. Write JavaScript to validate the following fields of the Registration page.
   Name (Name should contains alphabets and the length should not be less than 6 characters).
   Password (Password should not be less than 6 characters length).
   E-mail id (should not contain any invalid and must follow the standard pattern name@domain.com)
   Mobile Number (Phone number should contain 10 digits only). (14M)

SECTION-II

3. a)What is XML Schema? State its purpose and list its advantages over DTD (7M)
   b).Describe XML schema for designing a Web page as an illustration. (7M)

OR

4. a)Write a PHP Script to find out the Sum of the Individual Digits. (7M)
   b)Write a PHP Script to check whether the given number is Palindrome or not(7M)

SECTION-III

5. Write a Servlet Program to display current Date, Time and Day. (14M)

OR

6. Discuss the web application and what is its directory structure (deployment of Servlet)?(14M)

SECTION-IV

7. a) What are the attributes of PAGE directive? Explain with program (7M)
   b) What are the attributes of INCLUDE directive? Explain with program (7M)

OR

8. a). Explain Session tracking techniques in JSP. (7M)
   b). Write in very brief about JSP processing (7M)

SECTION-V

9. Write a servlet program to retrieve data from the database.? (14M)

OR

10. Write a PHP program for Create table and Inserting values into that table using database?. (14M)

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