



# MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous Institution – UGC, Govt. of India)

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## DEPARTMENT OF INFORMATION TECHNOLOGY III B.TECH I SEMESTER R15 SUPPLEMENTARY PREVIOUS QUESTION PAPERS



## LIST OF SUBJECTS

<b>CODE</b>	<b>NAME OF THE SUBJECT</b>
<b>R15A0527</b>	<b>Linux Programming</b>
<b>R15A0512</b>	<b>Compiler Design</b>
<b>R15A0065</b>	<b>Management Science</b>
<b>R15A0513</b>	<b>Operating Systems</b>
<b>R15A0524</b>	<b>Distributed Systems</b>
<b>R15A0520</b>	<b>Web Technologies</b>

Code No: **R15A0527****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

**III B.Tech I Semester Supplementary Examinations, July/August 2021****Linux Programming****(IT)**

<b>Roll No</b>									
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**Time: 3 hours****Max. Marks: 75**

Answer Any **Five** Questions  
All Questions carries equal marks.

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- 1 a) Explain associative arrays. [7M]  
b) Write an awk script to find the largest of 10 integers. [8M]
  
- 2 a) Write about text processing utilities. [7M]  
b) Describe about I/O Redirection operations and built in variables in Shell [8M]
  
- 3 a) With an example script explain the differences between ‘while’ and ‘until’ statements. [7M]  
[8M]  
b) Describe usage of dup(), dup2() system calls with an example.
  
- 4 Write the syntax of the following system calls and explain with an example code. [7M]  
[8M]  
a) telldir b) mkdir
  
- 5 a) Differentiate between fork( ) and vfork( ). [7M]  
b) Write a program that demonstrates the use of exit( ). [8M]
  
- 6 What is a signal? How can it be generated? Also explain kernel’s action on signal. [15M]
  
- 7 Write a program and explain how to transfer a large amount of data between two processes using Message queues [15M]
  
- 8 Explain with a program how to copy file data from server to client using shared memory [15M]

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Code No: **R15A0512****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**  
(Autonomous Institution – UGC, Govt. of India)**III B.Tech I Semester Supplementary Examinations, July/August 2021****Compiler Design****(CSE&IT)**

<b>Roll No</b>										
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**Time: 3 hours****Max. Marks: 75**Answer Any **Five** Questions  
All Questions carries equal marks.

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- 1 Regular expressions are important for lexical analysis? Explain the reason with [15M]  
examples.
- 2 Explain the various phases of a compiler in detail. Also write down the output [15M]  
for the following expression after each phase a: =b\*cd.
- 3 Write a YACC program that will take regular expression as input and produce its [15M]  
parse tree as output.
- 4 Construct predictive parsing table for the following grammar [15M]  
 $S \rightarrow (L) \mid a$   
 $L \rightarrow L, S \mid S$
- 5 What is symbol table? Discuss various ways to organize a symbol table. [15M]
- 6 Describe in detail the syntax directed translation of case statements. [15M]
- 7 Discuss about the following: [15M]
  - a) Copy Propagation
  - b) Dead code Elimination and
  - c) Code motion.
- 8 What are the object code forms? Explain the issues in code generation [15M]

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Code No: **R15A0065****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

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**III B.Tech I Semester Supplementary Examinations, July/August 2021****Management Science****(CSE & IT)**

<b>Roll No</b>										
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**Time: 3 hours****Max. Marks: 75**Answer Any **Five** Questions

All Questions carries equal marks.

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- 1 Taylor is known as father of scientific management. Analyse his contributions towards management. [15M]
- 2 Explain, with suitable diagram and examples, Abraham Maslow's Hierarchy of needs in a business organization. [15M]
- 3 State the conflicts between line, line and staff organisation. Also point out the merits and demerits of both. [15M]
- 4 The following data represent the number of defects found on each sewing machine cabinet inspected. Plot a control chart with control limits. Comment on the C chart. [15M]

Sample number	1	2	3	4	5	6	7	8	9	10
Number of defects	8	10	7	9	6	7	8	9	4	5

- 5 Outline the steps in performance appraisal. Also discuss the different criteria to measure the performance of an employee. [15M]
- 6 “Right employee is an asset while wrong employee is a liability”. In this context explain selection process in the organisation. [15M]
- 7 What do mean by network analysis? Differentiate between CPM and PERT. [15M]
- 8 What is Mission? What are the characteristics of a Mission statement? [15M]

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Code No: **R15A0513****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

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**III B.Tech I Semester Supplementary Examinations, July/August 2021****Operating Systems****(CSE&IT)**

<b>Roll No</b>									
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**Time: 3 hours****Max. Marks: 75**Answer Any **Five** Questions

All Questions carries equal marks.

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- 1 In a multiprogramming and time sharing environment several users share the system simultaneously. This situation can result in various security problems. Discuss these problems? [15M]
- 2 Explain various operating System Generations? [15M]
- 3
  - a. What are various issues to be considered in Multiple-Processor scheduling? [7M]
  - b. Explain about various states of process with neat diagram. [8M]
- 4 What are various operations performed on a process? Explain each one in detail considering operating systems examples? [15M]
- 5 Illustrate the following Page Replacement algorithms with clear examples. [15M]  
FIFO (b)Optimal
- 6 Analyze the concept of Segmentation with paging and its use in OS Memory Management [15M]
- 7 Classify different types of files and list their extensions. [15M]
- 8 Consider the following snapshot of a system: [15M]

	Allocation	Max	Available
	-----	-----	-----
	A B C D	A B C D	A B C D
Po	0 0 1 2	0 0 1 2	1 5 2 0
P1	1 0 0 0	1 7 5 0	
p2	1 3 5 4	2 3 5 6	
p3	0 6 3 2	0 6 5 2	
p4	0 0 1 4	0 6 5 6	

Apply Banker's Algorithm and determine whether the system is in safe state or not?

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Code No: **R15A0524****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

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**III B.Tech I Semester Supplementary Examinations, July/August 2021****Distributed Systems****(IT)**

<b>Roll No</b>									
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**Time: 3 hours****Max. Marks: 75**Answer Any **Five** Questions

All Questions carries equal marks.

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- 1 Write the difference between Architectural model and Fundamental model in distributed systems. [15M]
- 2 What are the Web challenges involved in distributed system? explain with examples. [15M]
- 3 What is logical time in distributed system?and explain in Email Scenario. [15M]
- 4 What is Distributed mutual exclusion and explain with an example. [15M]
- 5 Explain how Inter process communication is handled in UNIX. [15M]
- 6 What are events and notifications in distributed system? [15M]
- 7 Write and Explain in detail the Sun network File System. [15M]
- 8 Write about Flat and Nested Distributed Transactions. [15M]

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Code No: **R15A0520****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

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**III B.Tech I Semester Supplementary Examinations, July/August 2021****Web Technologies****(IT)**

<b>Roll No</b>										
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**Time: 3 hours****Max. Marks: 75**

Answer Any **Five** Questions  
All Questions carries equal marks.

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- 1 a) Show how group and alignment of tables, rows and columns is achieved using HTML [8M]  
b) Write about World wide web? [7M]
- 2 a) What is Cascading Style sheets explain. [8M]  
b) Explain built in objects in JavaScript with the examples. [7M]
- 3 Explain in detail about XML processors? [15M]
- 4 a) Explain the creation of XML schema with an example. [8M]  
b) Show how SAX is an alternative method for parsing XML documents. [7M]  
Write its advantages
- 5 a) What is Servlet? and Explain the Lifecycle of a Servlet. [8M]  
b) Explain the handling of cookies and sessions in Java, using Servlets . [7M]
- 6 a) What is HTTP package, Explain Handling Http Request & Responses [8M]  
b) What is Jsdk? [7M]
- 7 What is JSP and write down its Anatomy of JSP page and JSP processing [15M]
- 8 Explain the Features of JSP ?and write down the Steps for Execution of JSP? [15M]

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