

G.V.P.COLLEGE COLLEGE OF ENGINEERING (Autonomous)
(Approved by AICTE, Affiliated to JNTU-Kakinada)
Madhurawada, Visakhapatnam-530048
MCA I Semester Regular Examinations-2021
OPERATING SYSTEMS

Course Code: 20CA3104

Time: 3 hours

Max. Marks: 60

Model Paper

1. Answer ONE QUESTION from each Unit.
 2. Each question carries 12 marks.
 3. All parts of a question must be answered in one place; otherwise they will not be valued.
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Unit-1

1. a) What is an operating system? What are the functions of an Operating System 6 marks
- b) Write Short notes on System calls? 6 marks

OR

2. a) Explain important Services of an Operating System. 6 marks
- b) Write short notes on Distributed & multi processor Systems. 6 marks

Unit-2

3. a) Explain any Two Process scheduling algorithms. 6 marks
- b) Explain about Inter process communication briefly. 6 marks

OR

4. a) Write short notes on Process control block. 6 marks
- b) Explain Scheduling Criteria in Process Scheduling. 6 marks

Unit-3

5. a) Explain what is Binary Semaphore and Critical Section Problem briefly. 8 marks
- b) Write about Dead lock characterization. 4 marks

OR

6. a) Discuss any two Classic problems of Synchronization. 6 marks
- b) Discuss Bankers Algorithm with an example. 6 marks

Unit-4

7. a) What are the different File Access methods explain? 6 marks

b) What are the Differences between Paging and Segmentation? 6 marks

OR

8. a) Explain Briefly Directory Structure in File System. 6 marks

b) What is Demand Paging? 6 marks

Unit-5

9. a) Explain Storage structure in Mass Storage Systems. 6 marks

b) What is Access Matrix. Discuss implementation of Access Matrix? 6 marks

OR

10. Explain LOOK, SCAN, C-LOOK, C-SCAN algorithms for the below problem: 12 marks

A 99 disk drive has 100 cylinders, numbered 0 to 99. Disk requests come to the disk drives for cylinders 12, 26, 24, 4, 42, 8 and 50 in that order. The driver is currently serving a request at cylinder 24.
