TED (21) 5132
(Revision-2021)

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Reg.No.....
Signature.....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL - 2025

OPERATYING SYSTEM

[Maximum marks: 75] [Time: 3 Hours]

PART A

I. Answer all the following questions in one word or one sentence. Each question carries 1 mark

(9 x 1 = 9 Marks)

		Module outcome	Cognitive level
1	Define Application software.	M1.01	R
2	Differentiate between Compiler and Interpreter.	M1.02	R
3	List different types of schedulers.	M2.03	R
4	List any two non preemptive CPU scheduling algorithms.	M2.03	R
5	Give any one example for virtual memory technique.	M3.04	R
6	What do you mean by compile time binding?	M3.02	R
7	LRU stands for.	M3.05	R
8	Define a file.	M4.01	R
9	List different file operations.	M4.01	R

PART B

II. Answer any eight questions from the following. Each question carries 3 marks.

(8 x 3 = 24 Marks)

		Module outcome	Cognitive level
1	Describe multiprocessor system with its advantages.	M1.04	R
2	Write short notes on Assembler, Loader and Linker.	M1.02	R
3	Daw the process control block diagram.	M2.01	U
4	Write short notes on resource allocation graph.	M2.04	U
5	Explain Priority scheduling.	M2.03	U
6	Write the difference between logical address and physical address.	M3.02	U
7	Briefly explain page fault in memory management.	M3.04	U
8	Describe fragmentation.	M3.03	U
9	List different disk scheduling algorithms.	M4.05	R
10	Write short notes on indexed file allocation method.	M4.04	U

PART C

Answer all questions. Each question carries seven marks

(6 x 7 = 42 Marks)

<table>
<tr><th></th><th></th><th>Module outcome</th><th>Cognitive level</th></tr>
<tr><td>III</td><td>Explain the functions of Operating System.</td><td>M1.03</td><td>R</td></tr>
<tr><td></td><td>OR</td><td></td><td></td></tr>
<tr><td>IV</td><td>Explain Real time and time sharing Operating systems.</td><td>M1.04</td><td>U</td></tr>
<tr><td>V</td><td>Explain various states of a process with state diagram.</td><td>M2.02</td><td>U</td></tr>
<tr><td></td><td>OR</td><td></td><td></td></tr>
<tr><td>VI</td><td>Write short notes on Process synchronization.</td><td>M2.06</td><td>U</td></tr>
<tr><td>VII</td><td>Explain Deadlock and its causes.</td><td>M2.05</td><td>U</td></tr>
<tr><td></td><td>OR</td><td></td><td></td></tr>
<tr><td>VIII</td><td>Consider the following set of processes that arrive at time 0 with the length of the CPU burst given in milliseconds.
<table><tr><th>Process</th><th>Burst Time</th></tr><tr><td>P1</td><td>20</td></tr><tr><td>P2</td><td>3</td></tr><tr><td>P3</td><td>10</td></tr><tr><td>P4</td><td>5</td></tr></table>Find the average waiting time under SJF scheduling scheme</td><td>M2.03</td><td>U</td></tr>
<tr><td>IX</td><td>Explain LRU,FIFO and optimal page replacement algorithms.</td><td>M3.05</td><td>U</td></tr>
<tr><td></td><td>OR</td><td></td><td></td></tr>
<tr><td>X</td><td>Explain any two memory allocation strategies.</td><td>M3.04</td><td>U</td></tr>
<tr><td>XI</td><td>Briefly explain different address binding schemes.</td><td>M3.02</td><td>U</td></tr>
<tr><td></td><td>OR</td><td></td><td></td></tr>
<tr><td>XII</td><td>Explain advantages of segmentation over paging.</td><td>M3.03</td><td>U</td></tr>
<tr><td>XIII</td><td>Explain different file organizations.</td><td>M4.02</td><td>U</td></tr>
<tr><td></td><td>OR</td><td></td><td></td></tr>
<tr><td>XIV</td><td>Explain directory structures.</td><td>M4.03</td><td>U</td></tr>
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