

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
Diploma Engineering, Mid semester Examination

Semester: 5th
Subject Code: 03606303
Subject Name: ADVANCE JAVA PROGRAMMING

Date: 08/08/2022
Time: 1hr: 30min
Total Marks: 40

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

Q.1	Answer any six out of Ten. (2 Marks Each)	(12)															
	1. What is Operating system? Write goals of operating system?																
	2. What is program and process.																
	3. What is process scheduling criteria?																
	4. Difference between static and dynamic loading.																
	5. List out different types of file.																
	6. Explain the need of operating system.																
	7. Which are the main services provided by OS?																
	8. What is paging?																
	9. Write advantages and disadvantage of Batch OS?																
	10. Define: 1) Completion Time 2) Arrival Time																
Q.2	A) List various types of OS. Describe any two types	(03)															
	OR																
	A) What is the operation performed on the process.	(03)															
	B) Explain Real time OS in detail.	(03)															
	OR																
	B) What is swapping? Benefits of swapping.	(03)															
	C) What is scheduler? Explain any one type in details	(04)															
	OR																
	C) explain Process Control Block	(04)															
	D) Explain Inter Process Communication	(04)															
Q.3	A) What is Fragmentation?	(03)															
	OR																
	A) What is memory management?	(03)															
	B) Explain computer system components in detail	(03)															
	OR																
	B) Explain Multitasking operating system. Write advantage and disadvantage?	(03)															
	C) Consider the following set of processes, the length of the CPU burst time given in milliseconds.	(04)															
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Process</th> <th style="text-align: left;">Arrival Time</th> <th style="text-align: left;">Burst Time</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>0</td> <td>8</td> </tr> <tr> <td>P2</td> <td>1</td> <td>6</td> </tr> <tr> <td>P3</td> <td>2</td> <td>9</td> </tr> <tr> <td>P4</td> <td>5</td> <td>3</td> </tr> </tbody> </table>	Process	Arrival Time	Burst Time	P1	0	8	P2	1	6	P3	2	9	P4	5	3	
Process	Arrival Time	Burst Time															
P1	0	8															
P2	1	6															
P3	2	9															
P4	5	3															

	Assuming the above process being scheduled with the FCFS (first come first serve) scheduling algorithm.																			
	OR																			
	<p>C) Consider the following table</p> <table border="1"> <thead> <tr> <th>Process</th> <th>Arrival Time</th> <th>Burst Time</th> </tr> </thead> <tbody> <tr> <td>P1</td> <td>2</td> <td>3</td> </tr> <tr> <td>P2</td> <td>1</td> <td>6</td> </tr> <tr> <td>P3</td> <td>2</td> <td>4</td> </tr> <tr> <td>P4</td> <td>0</td> <td>8</td> </tr> <tr> <td>P5</td> <td>1</td> <td>2</td> </tr> </tbody> </table> <p>Calculate the average waiting time using FCFS.</p>	Process	Arrival Time	Burst Time	P1	2	3	P2	1	6	P3	2	4	P4	0	8	P5	1	2	(04)
Process	Arrival Time	Burst Time																		
P1	2	3																		
P2	1	6																		
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P4	0	8																		
P5	1	2																		
	D) What are the different types of memory allocation? Explain any one in detail	(04)																		

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Process	Arrival Time	Burst Time	
P1	2	3	
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ડી) મેમરી ફાળવણીના વિવિધ પ્રકારો કયા છે? કોઈપણ એકને વિગતવાર સમજાવો			(૦૪)