

END SEMESTER/RETEST, 2020**Semester: 5th****Subject code: CO-505****Subject: Operating System (OLD & NEW Syllabus)****Full Marks = (part A-25 + Part B-45) 70****Duration:(1 hour+ 2 hours) =3 hours****Instructions:**

1. Questions on Part A are compulsory
2. Answer any five questions from Part B

PART-A		
MARK-25		
Questions no.	questions	marks
Question 1	Multiple choice question/ short question	1x10-10
1a	The principle function of a _____ is to execute machine instructions residing in main memory.	
1b	Which of the following is not advantage of Multiprogramming? i)Increased throughputii) Shorter response time iii)Decreased OS overheadiv)Abilities to assign priorities to job.	
1c	Operating System is a _____, which controls all the resources..	
1d	Expand Spooling: _____	
1e	Expand BIOS: _____	
1f	In the multiprogramming environment the main memory consists of _____ number of processes. i) _____ >100 ii) only one ii) _____ >50 iv) more than one	
1g	Expand PMT: _____	
1h	A thread is a _____ i)Task ii) Process iii)Program iv)Light weight process	
1i	Which of the following resources can cause deadlocks i)Read only files ii)Shared programs iii)Printers iv) all of the above	
1j	A set of resources allocations such that the system can allocate resources to each process in some order, and still avoid a deadlock is called i)Unsafe state ii) Safe state	



	<p>Scheduling which require the following CPU time</p> <table> <tr> <th>Process</th><th>CPU time</th><th>Priority</th></tr> <tr> <td>P₁</td><td>10</td><td>2</td></tr> <tr> <td>P₂</td><td>5</td><td>4</td></tr> <tr> <td>P₃</td><td>7</td><td>1</td></tr> <tr> <td>P₄</td><td>6</td><td>3</td></tr> </table> <p>Assume that all the processes have arrived at time 0.</p> <p>(i) Draw the Gantt chart.</p> <p>(ii) Find the average waiting time.</p> <p>(iii) Find the average turn around time.</p>	Process	CPU time	Priority	P ₁	10	2	P ₂	5	4	P ₃	7	1	P ₄	6	3	
Process	CPU time	Priority															
P ₁	10	2															
P ₂	5	4															
P ₃	7	1															
P ₄	6	3															
Question no. 6																	
Q6a	What are the different types of schedulers?	3															
Q6b	Briefly explain the purposes of different types of schedulers..	6															
Question no. 7																	
Q7a	What are the different states of a process?	3															
Q7b	Explain PCB. & its contents.	3															
Q7c	What is the Paging memory management system? Explain.	3															
Question no. 8																	
Q8a	Define the term swapping.	2															
Q8b	Define deadlock and explain a deadlock avoidance mechanism.	2+5=7															
Question no. 9	Differentiate between	4.5x2=9															
Q9a	Internal fragmentation and External Fragmentation.																
Q9b	Contiguous allocation & Linked allocation																
Question no. 10																	
Q10a	Draw the figure of OS structure.	3															
Q10b	Write the differences between paging and segmentation.	6															

