

<b>Paper Code:</b> HCSCR3062T	<b>Operating Systems (Theory)</b>	<b>Marks: 60</b>
<b>Sl. No.</b>	<b>Topic</b>	<b>No. of Periods</b>
<b>Group – A (31 Periods)</b>		
1	Introduction: Basic OS functions, resource abstraction, types of operating systems, interrupt driven program, concurrent processing, multiprogramming, batch processing, time sharing.	4
2	Operating systems for personal computers & workstations, process control & real time systems.	2
3	Operating System Organization - Processor and user modes, kernels, system calls and system programs.	5
4	Process System - view of the process and resources, process abstraction, process hierarchy, threads, threading issues, thread libraries;	5
5	Process Scheduling, non-pre-emptive and pre-emptive scheduling algorithms.	5
6	Concurrent processes, critical section, semaphores.	5
7	Methods for inter-process communication; deadlocks.	5
<b>Group – B (21 periods)</b>		
8	Memory Management Physical and virtual address space; memory allocation strategies –fixed and variable partitions	5
9	Paging, segmentation, virtual memory	4
10	File and I/O Management Directory structure, file operations, file allocation methods,	5
11	Device management, disk scheduling algorithms	5
12	Protection and Security - Authentication, Internal access Authorization	2
<b>Total</b>		<b>52</b>
<ol style="list-style-type: none"> <li>1. Books and References:</li> <li>2. A Silberschatz, P.B. Galvin, G. Gagne, Operating Systems Concepts, 8th Edition, John Wiley Publications 2008.</li> <li>3. A.S. Tanenbaum, Modern Operating Systems, 3rd Edition, Pearson Education 2007.</li> <li>4. G. Nutt, Operating Systems: A Modern Perspective, 2nd Edition Pearson Education 1997.</li> <li>5. W. Stallings, Operating Systems, Internals &amp; Design Principles , 5th Edition, Prentice Hall of India. 2008.</li> <li>6. Operating Systems : Principles And Design, Choudhury, Pabitra Pal, Prentice Hall of India</li> </ol>		
<b>Paper Code:</b> HCSCR3062P	<b>Operating Systems (Practical)</b>	<b>Marks: 40</b>