RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR OPERATING SYSTEM	FORMAT- 3	Sheet No. 1/3
Branch	**Computer Science and Engineering/Information Technology**	**Semester**	**III**
Course Code	**302** **Course Name**	**OPERATING SYSTEM**	

Course Outcome 1	Describe basics Concept of Operating System and its functionality.	**Hrs**	**Marks**
Learning Outcome 1	Apply the function and objectives of OS.	8	12
Contents	Basics of Operating System System components and functions.		
Method of Assessment	**Question Paper -External- End Sem Exam**		
Learning Outcome 2	List Types of Operating System its structure and System call.	10	10
Contents	Types of Operating System: Batch processing, Multiprogramming, Multitasking, Multiprocessor: symmetric and asymmetric, Time Sharing, Real Time, Network & Distributed OS. OS Structure: Monolithic, Microkernel and Layered. System Call.		
Method of Assessment	**Question Paper -Internal Progressive Test**		
Learning Outcome 3	Identify the concept of BIOS Setup and Driver Installation.	7	10
Contents	Installation, Up gradation, Troubleshooting of Windows Device Driver Installation, BIOS Setup. Installation and Troubleshooting devices.		
Method of Assessment	**Lab Manual - External-Practical**		
Course Outcome 2	Describe Computer System Processes management concept and apply concept on	Hrs	Marks

	given problem.		
Learning Outcome 1	Identify Process management concept	10	10
Contents	Process concept, Process state diagram. Process control block. CPU Scheduler, Context Switch.		
Method of Assessment	**Assignment- Internal(Term work)**		
Learning Outcome 2	Explain different CPU Scheduling algorithm.	10	10
Contents	Scheduling criteria, Scheduling. Algorithms- FCFS, SJF, Priority, RR, Multilevel queue scheduling, Multilevel Feedback queue scheduling.		
Method of Assessment	**Lab Manual -Internal Practical- lab work**		
Course Outcome 3	Describe Deadlock and disk management.	Hrs	Marks
Learning Outcome 1	Identify the various conditions of deadlock.	10	10
Contents	Basic Concept of deadlock, Necessary conditions for deadlock. Resource allocation graph. Method for handling deadlock.		
Method of Assessment	**Question Paper –Internal Assesment- Progressive**		
Learning Outcome 2	To Evaluate the performance of Banker's algorithm.	5	10
Contents	Deadlock prevention scheme. Deadlock avoidance, Banker's Algorithm. Deadlock Detection.		
Method of Assessment	**External- End Sem Exam**		
Learning Outcome 3	List the type of Disk scheduling algorithms and identify RAID Technology concept.	10	10

Contents	Disc Structure, Seek Time, Latency Time, Rotational Delay, Transfer Time, and Bandwidth. Disk Scheduling Algorithm: FCFS, SSTF, Scan, C-Scan, Look, CLook. RAID technology definition, uses, advantages. Format disk and Create disk partition		
Method of Assessment	**External-Practical**		
Course Outcome 4	Explain concept of Memory Management	Hrs	Marks
Learning Outcome 1	Identify Basics of Memory Management and its Schemes.	15	15
Contents	Goal of Memory Management, Overlays, and Swapping, Logical and Physical Address, Allocation Techniques: First Fit, Best Fit, Worst Fit, Contiguous Memory Allocation, Non-Contiguous Memory Allocation. Fragmentation, Paging, page Table. Segmentation Difference between paging and segmentation		
Method of Assessment	**External- End Sem Exam**		
Learning Outcome 2	Explain concept of Virtual Memory and paging.	10	15
Contents	Basic concept of Virtual Memory. Demand paging Basic concept. Steps of handling a page fault, Pure demand paging.		
Method of Assessment	**External- End Sem Exam**		
Learning Outcome 3	Develop Program using page replacement algorithm	5	10
Contents	Working of Page replacement algorithm.(FIFO LRU and Optimal)		
Method of Assessment	**Internal Practical-Lab Work**		
Course Outcome 5	Describe techniques of file system & Security mechanism in OS	Hrs	Marks
Learning Outcome 1	Explain the concept of file and directory system.	6	10

Contents	File concept in OS. File System and its types. File access methods. Directory structure.		
Method of Assessment	**External- End Sem Exam**		
Learning Outcome 2	Identify the security policies and related issues.	6	8
Contents	Goal of Protection. Domain of Protection. Authentication. Security Issues.		
Method of Assessment	**External- End Sem Exam**		
Learning Outcome 3	Apply concept of Mobile operating system and check its version.	8	10
Contents	Various mobile Operating Systems. Timeline of android and version, Download and install Mobile OS.		
Method of Assessment	**External Practical**		