MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

II B.Tech I Semester (MR20-2020-21 Batch) Mid Term Examinations-II, Febrauary-2021

Subject Code & Name: - A0511 & **operating Systems** Max. Marks: **25M**

Branch: Common to **CSE,CS, and IT** Time: **90 Mins** Date:

Answer ALL the Questions

MODULE-III

S No	Question	MArks	Blooms Taxonomy Level	CO
1	Explain demanded paging ?	5	2	**3**
2	Calculate page faults using FIFO AND LRU algorithms for reference string 7,0.1.2,0,3,0,4,2,3,0,3,2,1,2, ,0,1,7,0,1 for frame size 4 ?	5	3	**3**
3	Describe Trashing and working set model with neat diagrams?.	5	2	**3**
4	calculate page faults using Otpimal page replacement AND LFU algorithms for reference string 7,0.1.2,0,3,0,4,2,3,0,3,2,1,2, ,0,1,7,0,1 for frame size 4 ?	5	3	**3**

MODULE-IV

S No	Question	Marks	Blooms Taxonomy Level	Co
1	Explain the File System Structure in detail ?	5	4	**4**
2	Describe any FCFS ,SSTF disk scheduling algorithms with 98, 183,37,122, 14,124,65,67 suitable illustrations?	5	2	**4**
3	Discuss about the File System Implementation.	5	2	**4**
4	Discuss the File System Organization and File System Mounting	5	2	**4**
5	Explain about various Allocation Methods.?	5	4	**4**
6	Explain the different file access methods in detail?	5	4	**4**
7	Describe Hard Disk Structure with neat Sketch ?	5	2	**4**
8	Describe any SCAN and C-SCAN disk scheduling algorithms with 98, 183,37,122, 14,124,65,67 suitable illustrations?	5	2	**4**

MODULE - V

S No	Question	Marks	Blooms Taxonomy Level	Co
1	Explain **Linux System -** Design Principles ?	5	4	**5**
2	Explain Linux System - Kernel Modules ?	5	4	**5**
3	Discuss Linux System - Process Management ?	5	2	**5**
4	Discuss the Linux System – Scheduling ?	5	2	**5**
5	Explain Linux System - Memory Management ?	5	2	**5**
6	Explain Linux System - Input-Output Management ?	5	2	**5**
7	Discuss **Mobile OS – iOS and Android –** Architecture and SDK	5	2	**5**
8	Discuss **Mobile OS** Media Layer?	5	2	**5**

Signature of HOD **Signature of Faculty**

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II B.TECH - II Semester (MR20) II MID EXAMNATIONS

Subject**: Operating Systems** Branch: **CSE**

Objective question Bank

S No	Question	
1	MFT stands for a) Multiprocessing with fixed number of tasks b)Multiprogramming with fixed number of tasks c)Multiuser with fixed number of tasks d) Multiuser with frequent number of tasks	B
2	Dynamic linking uses _____ a)Stubs b)Files c)Objects d)None	A
3	Dynamic linking uses _____ a)Stubs b)Files c)Objects d)None	A
4	MFT and MVT are used in a)Non Contiguous Memory Allocation b)Virtual Memory c)Contiguous Memory Allocation d)Paging	C
5	In Load time binding compiler generates _____ code a) Relative code b)Absolute code c)Machine code d)Relocatable code	D
6	Which of the following algorithms are used for contiguous memory allocation a)Best Fit b)First Fit c)Worst Fit d)All	D
7	Wastage of memory after allocation of process in a block is called as _____ a)External Fragmentation b)Internal Fragmentation c)Compaction d)Paging	B
8	Wastage of memory after allocation of process in a block is called as _____ a)External Fragmentation b)Internal Fragmentation c)Compaction d)Paging	B
9	_____ is the solution for External Fragmentation a)Linking b)Loading c)Compaction d)Compiling	
10	Which of the following is example of non contiguous allocation a)Paging b)Segmentation c)MFT d)MVT	C
11	In paging technique _____ is the data structure used to calculate physical address a)Symbol table b)Page Table c)Segment Table d)Inode Table	B
12	Page table address is stored in which register a)MTBR b)BSA c)PC d)PTBR	D
13	In _____ paging all processes will have single page table a))Hashed paging b)Inverted Paging c)Multilevel Paging d)None	B

14	Logical Address consists of page number and _____ a)Frame Number b)Page Table Number c)Offset d)Block number	C
15	Physical Address consists of _____ and offset a)Frame Number b)Page Table Number c)Offset d)Block number	A
16	Paging also suffers from _____ a)External fragmentation b)Internal Fragmentation c)Compaction d)None	B
17	Paging also suffers from _____ a)External fragmentation b)Internal Fragmentation c)Compaction d)None	B
18	_____ allows to store data greater than the size of main memory a)Paging b)Segmentation c)MFT d)Virtual Memory	D
19	._____ is the technique to implement Virtual Memory a)MFT b)MVT c)Demand Paging d)Segmentation	C
20	When ever requested page is not available in memory _____ has to be performed a)Paging b)Demand Paging c)Page Replacement d)None	C
21	In which algorithm first arrived page will be selected for replacement a)FIFO b)LRU c)MFU d)Optimal	A
22	In which algorithm page which will not be referred in future for long time will be replaced a)FIFO b)LRU c)MFU d)Optimal	D
23	Increase in number of frames will increase number of page faults refers to a)Demand Paging b)Virtual memory c)Belady's Anomaly d)Segment fault	C
24	Which algorithm/s face Belady's Anomaly a)LRU b)FIFO c)MFU d)MRU	B
25	_____ is the example of counting algorithm a)LRU b)FIFO c)Optimal d)MFU	D
26	A process is said to _____ if it is spending most of the time in doing a paging a)Fragmentation b)Segmentation c)Thrashing d)Replicating	C
	MODULE 4	
1	In a disk every track is a collection of _____ a)Cylinders b)Sectors c)Spindle d)Stack	B
2	Time taken to move read write head from one track to another is called as a) Rotational delay b)Access Time c)Transfer Time d)Seek Time	D

3	Time taken to move read write head from one track to another is called as a) Rotational delay b)Access Time c)Transfer Time d)Seek Time	D
4	Time taken to move to desired sector is called as a)Rotational delay b)Access Time c)Transfer Time d)Seek Time	A
5	Time taken to move to desired sector is called as a)Rotational delay b)Access Time c)Transfer Time d)Seek Time	A
6	Identical tracks together are called as [ ] a)Sectors b)Stacks c)Cylinders d)Spindles	C
7	To access the block from disk the address consists of surface number, cylinder number and _____ [ ] a) Sector number b) Track number c) Block number d) None	A
8	Pre-fetching the instructions that execute in future refers to a)DMA b)Interrupt C)Locality of reference d)ALL	C
9	Bootstrap is stored on _____ block a) Partition block b) Boot Block c) Bad Block d)Inode Block	B
10	Disk which has boot block is called as a)System Disk b)Master Disk c)Virtual Disk d)Bootable disk	A
11	SCAN algorithm is also called as a)SSTF b)Magnifier c)Elevator d)Read	C
12	In which algorithm cylinder with shortest seek is selected a)FCFS b)SCAN c)SSTF d)C-SCAN	C
13	In _____ technique address of corrupted sector is mapped to free block a)Sector Slipping b)Sector forwarding c)Sector Addressing d)Sector Moving	B
14	In paging technique how much of swap space is required a)Equal to Segment size b)Equal to Process size c)Equal to page size d)None	C
15	Storing individual part of file on each disk refers to [ ] a)Mirroring b)RAID C)Stripping d)All	C
16	Every block on secondary storage has its corresponding error codes in a) Header b) Trailer c) ECC d) All	C
17	The data structure of every block on a disk has a) Header b) Trailer c) ECC d) ALL	D
18	Input data for a device is stored in which register a) Data Out b) Data In c) Status d) Control	B
19	_____ interrupt is of high priority a)Non Maskable b) Maskable c) Both d) None	A

20	Processor will sense the interrupt through a) Interrupt Handler b) Interrupt Service c) Interrupt Request Line d) None	C
21	DMA stands for a) Dual Memory Access b) Dynamic Memory Access c) Direct Management Access d) Direct Memory Access	C
22	Fastest means of access is a) Register b) RAM c) ROM d) DISK	A
23	Initial bootstrap is stored on a) RAM b) ROM c) BOOT BLOCK d) Register	B
24	Some part of main memory is always reserved for a) User b) DMA c) OS d) Interrupt	C
25	_____ is a unique tag, usually a number, identifies the file within the file system. a) File identifier b) File name c) File type d) none of the mentioned	A
26	To create a file a) allocate the space in file system b) make an entry for new file in directory c) both (a) and (b) d) none of the mentioned	C
27	File type can be represented by a) file name b) file extension c) file identifier d) none of the mentione	B
28	Which file is a sequence of bytes organized into blocks understandable by the system's linker? a) object file b) source file c) executable file d) text file	A
29	What is the mounting of file system a) crating of a file system b) deleting a file system c) attaching portion of the file system into a directory structure d) removing portion of the file system into a directory structure	C
30	Which one of the following explains the sequential file access method? a) random access according to the given byte number b) read bytes one at a time, in order c) read/write sequentially by record d) read/write randomly by record	B
31	Management of metadata information is done by a) file-organization module b) logical file system c) basic file system d) application programs	B
32	A file control block contains the information about a) file ownership b) file permissions c) location of file contents d) all of the mentioned	D
33	To create a new file application program call a) basic file system b) logical file system c) file-organization module d) none of the mentioned	B
34	What is raw disk? a) Disk without file system b) empty disk c) disk lacking logical file system d) Disk having file system	A
35	The data structure used for file directory is called a) Mount table b) hash table c) file table d) process table	B

36	The operating system keeps a small table containing information about all open files called a) system table b) open-file table c) file table d) directory table	B
37	In the sequential access method, information in the file is processed a) one disk after the other, record access doesn't matterb) one text document after the other c) one record after the other d) None of these	C
38	The direct access method is based on a _____ model of a file, as _____ allow random access to any file block a) magnetic tape, magnetic tapes b) tape, tapes c) disk, disks d) All of these	C
39	The index contains a) names of all contents of fileb) pointers to each pagec) pointers to the various blocks d) All of these	C
40	In the single level directory a) All files are contained in different directories all at the same level b) All files are contained in the same directory c) Depends on the operating system d) None of these	B
41	An absolute path name begins at the a) Leaf b) Stem c) current directory d) Root	D
42	A relative path name begins at the a) Leaf b) Stem c) current directory d) Root	C
43	When two users keep a subdirectory in their own directories, the structure being referred to is a) tree structure b) General graph directory structure c) two level directory structure d) Acyclic graph directory structure	D
44	When keeping a list of all the links/references to a file, and the list is empty, implies that a) the file has no copies b) the file is deleted c) the file is hidden d) None of these	B
45	The series of accesses between the open and close operations is a a) transaction b) procedure c) program d) file session	D
46	The machine containing the files is the _____, and the machine wanting to access the files is the _____. a) master, slave b) memory, user c) server, client d) None of these	C
47	In distributed file system, _____ directories are visible from the local machine a) Protected b) Local c) Private d) Remote	D
48	A mount point is a) an empty directory at which the mounted file system will be attached	A
49	Reliability of files can be increased by a) keeping the files safely in the memory b) making a different partition for the files c) by keeping them in external storage d) by keeping duplicate copies of the file	D
50	Universe consists of a) all users that aren't included in the group or ownersb) all users that are not owners c) all users in the system d) None of these	D

MODULE 5		
1	Linux began developing in a)1991 B) 1950 C)1960 D) 1970	A
2	Linux Kernel 2.2 includes a)TCP/IP b)Udp c)Arpa d)Insta	A
3	the linux kernel is distributed under a)GNU b)PNU c)CPU a)Memory	A
4	PID for process is a)Unique b) common c) same d) many	A
5	pid are used to specify a)processes b)memory c) io devices d)printer	A
6	linux 1.2 release on a)1994 b) 1995 c)1996 d)1997	B
7	command used to create a process in unix a)fork b) call c) null d)poniter	A
8	the standard on disk file system in unix is a) ext2fs b) boot c) rom d) FAT32	A
9	unix file system was restricted to how many characters file name a) 1 b) 2 c) 4 d) 14	D
10	file system maximum size in linux a)64 b) 2 c) 4 d) 14	A
11	linux 2.2 release on a)1994 b) 1995 c)1996 d)1999	D
12	minutes to create threads using ___ System call a) ext2fs b) boot c) rom d) clone	D
13	_____protocols used in linux system a)IPX b) boot c) rom d) clone	D
14	virtual memory in linux is operated by a) ext2fs b) boot c) rom d)Kernel	A
15	file system information is shared by a)clone_fs b)clone_VM c)clone _SIGHAND d)clone_FILES	A
16	the same memory space is shared by a)clone_fs b)clone_VM c)clone _SIGHAND d)clone_FILES	B

17	signal handlers are shared by a)clone_fs b)clone_VM c)clone _SIGHAND d)clone_FILES	C
18	the set of open files is shared by a)clone_fs b)clone_VM c)clone _SIGHAND d)clone_FILES	D
19	_____ is the popular feature in the linux file system a)journaling b)clone_VM c)clone _SIGHAND d)clone	A
20	set operations performed on a specific task is called ___ a)journaling b)clone_VM c)clone d) Transaction	D
21	_____ object represents an individual file a) file object b) Inode c)superblock d)denty object	B
22	a _____ represents an open file a)file object b) Inode c)superblock d)denty object	A
23	a _____ object represents an entire file system a)file object b) Inode c)superblock d)denty object	C
24	A _____ represents an individual directory entry a)file object b) Inode c)superblock d)denty object	D
25	the Linux process file system is known as ___ a)file object b) Inode c)superblock d) Proc	D
26	in Linux all objects in the slab are marked as used is denoted by a)empty b) full c)partial d) super	B
27	in Linux all objects in the slab are markesd free is denoted by a)empty b) full c)partial d) super	A
28	in Linux all objects in the slab are markes used and free is denoted by a)empty b) full c)partial d) super	C
29	the object assigned from the cache is marked as a)empty b) full c)partial d)used	D
30	_____ is a kernal the main cache a)empty b) full c)partial d) a page cache	D
31	a region backed by nothing is called___ a)file object b) Inode c)superblock d) demanded Zero	D
32	virtual memory region is also defined by it's reaction to ___ a)either private or shared b)Private c)Shared d)writes	D
33	the mapping of a region into the process address space can be ___ a)either private or shared b)Private c)share d)proc	A

34	the kernel will create a new virtual address space into ___ situations a) Two b) Inode c)superblock d)Zero	A
35	virtual memory system manages the contents of each___ virtual address space a) processes b) Inode c)1 d)Zero	A
36	the Linux___ is responsible for maintaining the address space visible to each process a)virtual memory system b) Inode c)superblock d) demanded Zero	A
37	the first view of an address space is the _____ in linux is a) processes b) Inode c)1 d)logical view	D
38	in vitual memory of linux the ___ consists of a set of nonoverlapping regions a)address space b)Private c)Shared d)writes	A
A39	the___entry statement the exact current location of each page of virtual memory a) Two b) Inode c)superblock d) page-table	D
40	_____decides which pages to write out to disk a) Two b) Inode c)superblock d)the policy algorithm	D
41	___ carries out the transfer and pages data back into physical memory when they are needed again a) processes b) Inode c)1 d)the paging mechanism	A
42	Linux's page out policy uses of modified version of the ____ a) standard clock algorithm b) Inode c)superblock d) page-table	A
43	the allocator use a____ to keep track of the available physical pages a) buddy system b) Inode c)superblock d) page-table	A
44	the primary physical Memory Manager in the Linux Kernel is the ____ a) page allocator b) Inode c)superblock d) page-table	A
45	_____ is used for allocating memory for kernel data structures a) a slab b)Private c)Shared d)writes	A
46	a cache consists of one or more _____ a) page allocator b) Inode c)superblock d) slabs	D
47	____ representing semaphores stores instances of semaphore objects a) Cache b)RAM c)memory d)Disc	A
48	the pages of the binary file are mapped into regions of ___a) virtual memory b)RAM c)memory d)Disc	A
49	It is the responsibility of the kernels ___to setup the initial memory mapping a) virtual memory b)RAM c)memoryd)binary loader	D
50	Linux implements dynamic linking in user mode through a special ___ a)linker library b)RAM c)memoryd)binary loader	A