001. In FIFO page replacement algorithm, when a page must be replaced _____ **A**

A oldest page is chosen B newest page is chosen
C random page is chosen D not in use

002. Which algorithm chooses the page that has not been used for the longest period of time whenever the page required to be replaced? **C**

A first in first out algorithm B additional reference bit algorithm
C least recently used algorithm D counting based page replacement algorithm

003. Effective access time is directly proportional to _____ **A**

A page-fault rate B hit ratio
C memory access time D page replacement

004. Because of virtual memory, the memory can be shared among _____ **A**

A Processes B thread
C instructions D users

005. _____ is the concept in which a process is copied into the main memory from the secondary memory according to the requirement. **B**

A Paging B Demand paging
C Segmentation D Swapping

006. Swap space exists in _____ **B**

A primary memory B secondary memory
C Cpu D ROM

007. When a program tries to access a page that is mapped in address space but not loaded in physical memory, then _____ **C**

A segmentation fault occurs B fatal error occurs
C page fault occurs D no error occurs

008. Virtual memory is normally implemented by _____ **A**

A demand paging B buses
C virtualization D compaction

009. The valid - invalid bit, in this case, when valid indicates? **C**

A the page is not legal B the page is illegal
C the page is in memory D the page is not in memory

010. In virtual memory the programmer _____ of overlays. **B**

A has to take care B does not have to take care
C all of the mentioned D none of the mentioned

011. A process is thrashing if _____ **A**

A it is spending more time paging than executing B it is spending less time paging than executing
C page fault occurs D swapping can not take place

012. Working set model for page replacement is based on the assumption of _____ **B**

A modularity B locality
C globalization D random access

013. Virtual memory allows _____ **A**

A execution of a process that may not be completely in memory B a program to be smaller than the physical memory
C a program to be larger than the secondary storage D execution of a process without being in physical memory

014. The instruction being executed, must be in _____ **A**

A physical memory B logical memory
C physical & logical memory D network

015. If no frames are free, _____ page transfer(s) is/are required. **B**

A one B two
C three D four

016. When a page is selected for replacement, and its modify bit is set _____ **D**

A the page is clean B the page has been modified since it

was read in from the disk

C the page is dirty

D the page has been modified since it was read in from the disk & page is dirty

017. A process refers to 5 pages, A, B, C, D, E in the order : A, B, C, D, A, B, E, A, B, C, D, E. If the page replacement algorithm is FIFO, the number of page transfers with an empty internal store of 3 frames is? **C**

A 8 B 10

C 9 D 7

018. A page fault occurs when? **B**

A a page gives inconsistent data B a page cannot be accessed due to its absence from memory

C a page is invisible D a page is deleted

019. When a page fault occurs, the state of the interrupted process is _____ **C**

A disrupted B invalid

C saved D deleted

020. When the page fault rate is low _____ **C**

A the turnaround time increases B the effective access time increases

C the effective access time decreases D turnaround time & effective access time increases

021. Locality of reference implies that the page reference being made by a process _____ **B**

A will always be to the page used in the previous page reference B is likely to be one of the pages used in the last few page references

C will always be one of the pages existing in memory D will always lead to page faults

022. The circular wait condition can be prevented by _____ **A**

A defining a linear ordering of resource types B using thread

C using pipes D using multiple processors

023. Which one of the following is the deadlock avoidance algorithm? **A**

A bankers algorithm B round-robin algorithm

C elevator algorithm D karns algorithm

024. What is a reusable resource? **A**

A that can be used by one process at a time and is not depleted by that use B that can be used by more than one process at a time

C that can be shared between various threads D that can be shared between various users

025. The aim of creating page replacement algorithms is to _____ **C**

A replace pages faster B increase the page fault rate

C decrease the page fault rate D to allocate multiple pages to processes

026. Optimal page replacement algorithm is difficult to implement, because _____ **B**

A it requires a lot of information B it requires future knowledge of the reference string

C it is too complex D it is extremely expensive

027. What are the two methods of the LRU page replacement policy that can be implemented in hardware? **C**

A Counters B RAM & Registers

C Stack & Counters D Registers

028. The essential content(s) in each entry of a page table is/are _____ **B**

A Virtual page number B Page frame number

C Both virtual page number and page frame number D Access right information

029. For non sharable resources like a printer, mutual exclusion _____ **A**

A must exist
B must not exist
C may exist
D depends on case

030. To ensure no preemption, if a process is holding some resources and requests another resource that cannot be immediately allocated to it _____ **D**

A then the process waits for the resources be allocated to it
B the process keeps sending requests until the resource is allocated to it
C the process resumes execution without the resource being allocated to it
D then all resources currently being held are preempted

031. Deadlock prevention is a set of methods _____ **A**

A to ensure that at least one of the necessary conditions cannot hold
B to ensure that all of the necessary conditions do not hold
C to decide if the requested resources for a process have to be given or not
D to recover from a deadlock

032. A problem encountered in multitasking when a process is perpetually denied necessary resources is called _____ **B**

A deadlock
B starvation
C inversion
D aging

033. To avoid deadlock _____ **A**

A there must be a fixed number of resources to allocate
B resource allocation must be done only once
C all deadlocked processes must be aborted
D inversion technique can be used

034. The number of resources requested by a process _____ **C**

A must always be less than the total number of resources available in the system
B must always be equal to the total number of resources available in the system
C must not exceed the total number of resources available in the system
D must exceed the total number of resources available in the system

035. The request and release of resources are _____ **C**

A command line statements
B interrupts
C system calls
D special programs

036. All unsafe states are _____ **B**

A deadlocks
B not deadlocks
C fatal
D some are deadlocks

037. A system has 12 magnetic tape drives and 3 processes : P0, P1, and P2. Process P0 requires 10 tape drives, P1 requires 4 and P2 requires 9 tape drives. ProcessP0P1P2 Maximum needs (process-wise: P0 through P2 top to bottom)1049Currently allocated (process-wise) 5 2 2 Which of the following sequence is a safe sequence? **D**

A P0, P1, P2
B P1, P2, P0
C P2, P0, P1
D P1, P0, P2

038. A system is in a safe state only if there exists a _____ **C**

A safe allocation
B safe resource
C safe sequence
D safe process

039. Each request requires that the system consider the _____ to decide whether the current request can be satisfied or must wait to avoid a future possible deadlock. **A**

A resources currently available
B processes that have previously been in the system
C resources currently allocated to each process
D future requests and releases of each process

040. Given a priori information about the _____ number of resources of each type that maybe requested for each process, it is possible to construct an algorithm that ensures that the system will never enter a deadlock state. **C**

A minimum B average
C maximum D approximate

041. A deadlock avoidance algorithm dynamically examines the _____ to ensure that a circular wait condition can never exist. **A**

A resource allocation state B system storage state
C operating system D resources

042. _____ is a unique tag, usually a number identifies the file within the file system. **A**

A File identifier B File name
C File type D size of the file

043. Which file is a sequence of bytes organized into blocks understandable by the systems linker? **A**

A object file B source file
C executable file D text file

044. A computer system has 6 tape drives, with n processes competing for them. Each process may need 3 tape drives. The maximum value of n for which the system is guaranteed to be deadlock free is? **A**

A 2 B 3
C 4 D 1

045. The content of the matrix Need is _____ **C**

A Allocation - Available B Max - Available
C Max - Allocation D Allocation - Max

046. An edge from process Pi to Pj in a wait for graph indicates that _____ **C**

A Pi is waiting for Pj to release a resource that Pi needs B Pj is waiting for Pi to release a resource that Pj needs
C Pi is waiting for Pj to leave the system D Pj is waiting for Pi to leave the system

047. If the wait for graph contains a cycle _____ **B**

A then a deadlock does not exist B then a deadlock exists
C then the system is in a safe state D either deadlock exists or system is in a safe state

048. When will file system fragmentation occur? **A**

A unused space or single file are not contiguous B used space is not contiguous
C unused space is non-contiguous D multiple files are non-contiguous

049. The data structure used for file directory is called _____ **B**

A mount table B hash table
C file table D process table

050. Which one of the following explains the sequential file access method? **B**

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

051. What is the mounting of file system? **C**

A crating of a file system B deleting a file system
C attaching portion of the file system into a directory structure D removing the portion of the file system into a directory structure

052. Mapping of file is managed by _____ **A**

A file metadata B page table
C virtual memory D file system

053. Mapping of network file system protocol to local file system is done by _____ **A**

A network file system B local file system
C volume manager D remote mirror

054. The time taken to move the disk arm to the desired cylinder is called the _____ **C**

A positioning time B random access time
C seek time D rotational latency

055. The time taken for the desired sector to rotate to the disk head is called _____ **D**

A positioning time B random access time
C seek time D rotational latency

056. The set of tracks that are at one arm position make up a _____ **D**

A magnetic disks B electrical disks
C assemblies D cylinders

057. In which type of allocation method each file occupy a set of contiguous block on the disk? **A**

A contiguous allocation B dynamic-storage allocation
C linked allocation D indexed allocation

058. Which of the following are the two parts of the file name? **C**

A name & identifier B identifier & type
C extension & name D type & extension

059. In _____ information is recorded magnetically on platters. **A**

A magnetic disks B electrical disks
C assemblies D cylinders

060. In the _____ algorithm, the disk arm starts at one end of the disk and moves toward the other end, servicing requests till the other end of the disk. At the other end, the direction is reversed and servicing continues. **B**

A LOOK B SCAN
C C-SCAN D C-LOOK

061. The process of dividing a disk into sectors that the disk controller can read and write, before a disk can store data is known as _____ **C**

A partitioning B swap space creation
C low-level formatting D none of the mentioned

062. SSTF algorithm, like SJF _____ of some requests. **A**

A may cause starvation B will cause starvation
C does not cause starvation D causes aging

063. _____ controller sends the command placed into it, via messages to the _____ controller **C**

A host, host B disk, disk
C host, disk D disk, host

064. Consider a disk queue with requests for I/O to blocks on cylinders. 98 183 37 122 14 124 65 67 Considering FCFS (first cum first served) scheduling, the total number of head movements is, if the disk head is initially at 53 is? **D**

A 600 B 620
C 630 D 640

065. Random access in magnetic tapes is _____ compared to magnetic disks. **D**

A fast B very fast
C slow D very slow

066. RAID level 5 is also known as _____ **C**

A bit-interleaved parity organization B block-interleaved parity organization
C block-interleaved distributed parity D memory-style ECC organization

067. RAID level ____ spreads parity and data among all N+1 disks rather than storing data in N disks and parity in 1. **C**

A 3 B 4
C 5 D 6

068. In RAID level 4, one block read, accesses _____ **A**

A only one disk B all disks simultaneously
C all disks sequentially D only two disks

069. The header and trailer of a sector contain information used by the disk controller such as _____ and _____ **B**

A main section & disk identifier B error correcting codes (ECC) & sector number

C sector number & main section D disk identifier & sector number

070. The two steps the operating system takes to use a disk to hold its files are _____ and _____ **A**

A partitioning & logical formatting B swap space creation & caching
C caching & logical formatting D logical formatting & swap space creation

071. RAID level _____ is also known as block interleaved parity organisation and uses block level striping and keeps a parity block on a separate disk. **D**

A 1 B 2
C 3 D 4

072. Which principle states that programs, users and even the systems be given just enough privileges to perform their task? **B**

A principle of operating system B principle of least privilege
C principle of process scheduling D principle of application software

073. _____ is an approach to restricting system access to authorized users. **A**

A Role-based access control B Process-based access control
C Job-based access control D platform-based access control

074. RAID level _____ is also known as bit interleaved parity organisation. **D**

A 0 B 1
C 2 D 3

075. If a disk fails in RAID level _____ rebuilding lost data is easiest. **A**

A 1 B 2
C 3 D 4

076. RAID stands for _____ **D**

A Redundant Allocation of Inexpensive Disks B Redundant Array of Important Disks
C Redundant Allocation of Independent Disks D Redundant Array of Independent Disks

077. The technique of duplicating every disk is known as _____ **A**

A mirroring B shadowing
C redundancy D striping

078. Global table implementation of the matrix table contains _____ **D**

A domain B object
C right-set D domain, object and right-set

079. In domain structure what is Access-right equal to? **A**

A Access-right = object-name, rights-set B Access-right = read-name, write-set
C Access-right = read-name, execute-set D Access-right = object-name, execute-set

080. Access matrix model for user authentication contains _____ **A**

A a list of objects, a list of domains and a function which returns an objects type B a list of objects only
C a list of domains only D aa function which returns an objects type only

081. For system protection, a process should access _____ **B**

A all the resources B only those resources for which it has authorization
C few resources but authorization is not required D only hardware

082. The protection domain of a process contains _____ **C**

A object name B rights-set
C both object name and rights-set D none of the mentioned

083. If the set of resources available to the process is fixed throughout the processs lifetime then its domain is _____ **A**

A static B dynamic
C neither static nor dynamic D either static or dynamic

084. Which of the following is a good practice? **C**
A Give full permission for remote transferring B Grant read only permission
C Grant limited permission to specified account D Give both read and write permission but not execute

085. What is not a good practice for user administration? **D**
A Isolating a system after a compromise B Perform random auditing procedures
C Granting privileges on a per host basis D Using telnet and FTP for remote access

086. From the following, which is not a common file permission? **C**
A Write B Execute
C Stop D Read

087. What does the access matrix represent? **A**
A Rows-Domains, Columns-Objects B Rows-Objects, Columns-Domains
C Rows-Access List, Columns-Domains D Rows-Domains, Columns-Access list

088. Who can add new rights and remove some rights? **D**
A copy B transfer
C limited copy D owner

089. What are the common security threats? **B**
A File Shredding B File sharing and permission
C File corrupting D File integrity

090. What forces the user to change password at first login? **D**
A Default behavior of OS B Part of AES encryption practice
C Devices being accessed forces the user D Account administrator

091. What is not a best practice for password policy? **D**
A Deciding maximum age of password B Restriction on password reuse and history
C Password encryption D Having change password every 2 years

092. What does Light Directory Access Protocol (LDAP) doesnt store? **B**
A Users B Address
C Passwords D Security Keys

093. Which of the following is the least secure method of authentication? **D**
A Key card B fingerprint
C retina pattern D Password

094. Which of the following is a strong password? **C**
A 19thAugust88 B Delhi88
C P@assw0rd D laugustdelhi

095. Why is one time password safe? **C**
A It is easy to generated B It cannot be shared
C It is different for every access D It is a complex encrypted password

096. What is trap door? **B**
A It is trap door in War Games B It is a hole in software left by designer
C It is a Trojan horse D It is a virus which traps and locks user terminal

097. What is the preferred way of encryption? **C**
A pre shared secret key B using key distribution center (KDC)
C public key-encryption D symmetric key

098. What is Trojan horse? **C**
A It is a useful way to encrypt password B It is a user which steals valuable information

C It is a rogue program which tricks users
D Its a brute force attack algorithm

099. What is the breach of integrity? **B**

A This type of violation involves unauthorized reading of data
B This violation involves unauthorized modification of data
C This violation involves unauthorized destruction of data
D This violation involves unauthorized use of resources

100. What is breach of confidentiality? **A**

A This type of violation involves unauthorized reading of data
B This violation involves unauthorized modification of data
C This violation involves unauthorized destruction of data
D This violation involves unauthorized use of resources

101. What is theft of service? **D**

A This type of violation involves unauthorized reading of data
B This violation involves unauthorized modification of data
C This violation involves unauthorized destruction of data
D This violation involves unauthorized use of resources

102. MD5 produces _____ bits hash data. **A**

A 128
B 150
C 160
D 112

103. Which two of the following are authentication algorithms? **A**

A MAC
B AES
C DAS
D Digital-signature

104. Which of the following is not a stream cipher? **D**

A Two fish
B RC5
C RC4
D TBONE

105. What is not a role of encryption? **D**

A It is used to protect data from unauthorized access during transmission
B It is used to ensure user authentication
C It is used to ensure data integrity
D It is used to ensure data corruption doesnt happens

106. What is cipher-block chaining? **C**

A Data is logically ANDed with previous block
B Data is logically ORed with previous block
C Data is logically XORed with previous block
D Data is logically XORed and ANDed with previous block

107. What is not an encryption standard? **B**

A AES
B TES
C Triple DES
D DES

108. A firewall protects which of the following attacks? **C**

A Phishing
B Dumpster diving
C Denial of Service (DoS)
D Shoulder surfing

109. Packet filtering firewalls are deployed on _____ **A**

A routers
B switches
C hubs
D repeaters

110. Firewall examines each _____ that are entering or leaving the internal network. **D**

A emails users
B updates
C connections
D data packets

111. Firewalls can be of _____ kinds. **C**

A 1
B 2
C 3
D 4

112. _____ is the kind of firewall is connected between the device and the **A**

network connecting to internet.

A Hardware Firewall B Software Firewall
C Stateful Inspection Firewall D Microsoft Firewall

113. Which of the following is not a software firewall? **D**

A Windows Firewall B Outpost Firewall Pro
C Endian Firewall D Linksys Firewall

114. _____ is one of the most secured Linux OS that provides anonymity and an incognito option for securing its user data. **B**

A Fedora B Tails
C Ubuntu D OpenSUSE

115. Which of the following OS does not comes under a secured Linux OS list? **D**

A Qubes OS B Tails
C Tin Hat D Ubuntu

116. One advantage of Packet Filtering firewall is _____ **C**

A more efficient B less complex
C less costly D very fast

117. In the _____ layer of OSI model, packet filtering firewalls are implemented. **D**

A Application layer B Session layer
C Presentation layer D Network layer

118. The _____ defines the packet filtering firewall rules. **A**

A Access Control List B Protocols
C Policies D Ports

119. ACL stands for _____ **D**

A Access Condition List B Anti-Control List
C Access Control Logs D Access Control List

120. The _____ is a security app by Microsoft which is a built-in one into Windows OS that is designed to filter network data from your Windows system & block harmful communications or the programs which are initiating them. **B**

A Windows Security Essentials B Windows Firewall
C Windows app blocker D Windows 10

121. _____ are essential because they frequently comprises of critical patches to security holes. **D**

A System software B Utility Software
C Software executables D Software updates

122. As a backup for securing your device, it is necessary to create a _____ **D**

A backup point B copy of files in separate drives
C copy of files in the same drives D restore point

123. _____ is a Debian-Linux based OS that has 2 VMs (Virtual Machines) that help in preserving users data private **C**

A Fedora B Ubuntu
C Whonix D Kubuntu

124. Which of the following comes under secured Linux based OS? **D**

A Ubuntu B Fedora
C Kubuntu D Tails

125. _____ passwords are next level of security. **A**

A BIOS B CMOS
C SMOS D BOIS