

MCQS

CS601 midterm preparation file

ZB

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of God , Most
Gracious, Most merciful



CS601

MCQS

1. What is the primary function of an operating system?

- A) Manage hardware resources
- B) Provide an environment for application software to run
- C) Both A and B
- D) None of the above

Answer: C) Both A and B

2. Which of the following is NOT a type of system software?

- A) Operating system
- B) Utility programs
- C) Word processors
- D) Device drivers

Answer: C) Word processors

3. What is a process in the context of operating systems?

- A) A program that is executed
- B) A memory module
- C) A type of file system
- D) A type of CPU

Answer: A) A program that is executed

4. Which scheduling algorithm is non-preemptive?

- A) Round Robin
- B) First-Come, First-Served (FCFS)
- C) Shortest Job First (SJF)
- D) Priority Scheduling

Answer: B) First-Come, First-Served (FCFS)

5. What is context switching?

- A) Changing the CPU speed
- B) Changing the memory location of a program
- C) The process of saving and restoring a process's state
- D) Moving data between RAM and disk

Answer: C) The process of saving and restoring a process's state

6. What is the critical section problem?

- A) A memory overflow issue
- B) A synchronization problem when multiple processes access shared resources
- C) An issue with CPU scheduling
- D) A security vulnerability

Answer: B) A synchronization problem when multiple processes access shared resources

7. Which semaphore is used to solve the producer-consumer problem?

- A) Counting semaphore
- B) Binary semaphore
- C) Mutex
- D) Shared semaphore

Answer: B) Binary semaphore

8. What does deadlock mean in an operating system?

- A) A process is waiting for a resource that is held by another process
- B) A process is running indefinitely
- C) Processes are executed in parallel without waiting
- D) A process has completed execution

Answer: A) A process is waiting for a resource that is held by another process

9. What is thrashing in an operating system?

- A) A process executes in a loop without halting
- B) Excessive paging in and out of memory
- C) Data corruption due to power failure
- D) Improper scheduling of processes

Answer: B) Excessive paging in and out of memory

10. Which of the following is not a memory allocation method?

- A) Paging
- B) Segmentation
- C) Contiguous memory allocation
- D) File allocation table

Answer: D) File allocation table

11. What is the purpose of Virtual Memory?

- A) To extend physical memory using hard disk space
- B) To manage CPU resources efficiently
- C) To increase the speed of process execution
- D) To improve the file system performance

Answer: A) To extend physical memory using hard disk space

12. What is the main difference between logical address and physical address?

- A) Logical address refers to memory allocation, while physical address refers to disk allocation
- B) Logical address refers to the position in memory, while physical address refers to the position on the disk
- C) Logical address refers to the position in the program, while physical address refers to the actual location in memory
- D) There is no difference

Answer: C) Logical address refers to the position in the program, while physical address refers to the actual location in memory

13. Which page replacement algorithm is based on reference bit?

- A) FIFO**
- B) Optimal**
- C) LRU**
- D) Clock**

Answer: D) Clock

14. What is a deadlock condition that can occur?

- A) Mutual exclusion**
- B) Hold and Wait**
- C) No Preemption**
- D) All of the above**

Answer: D) All of the above

15. Which scheduling algorithm gives priority to I/O-bound processes over CPU-bound processes?

- A) First-Come, First-Served**
- B) Shortest Job First (SJF)**
- C) Round Robin**
- D) None of the above**

Answer: B) Shortest Job First (SJF)

16. What is the purpose of file allocation table (FAT)?

- A) To manage the file system by storing file metadata**
- B) To ensure data consistency in the system**
- C) To control the disk access speed**
- D) To manage system memory**

Answer: A) To manage the file system by storing file metadata

17. What is an inode?

- A) A file type**
- B) A disk allocation method**
- C) A data structure storing information about a file**
- D) A program that allocates system resources**

Answer: C) A data structure storing information about a file

18. What is the significance of a distributed system?

- A) It provides better resource sharing and reliability**
- B) It is easier to set up and maintain**
- C) It reduces the need for network security**
- D) It simplifies data storage**

Answer: A) It provides better resource sharing and reliability

19. In which network topology are nodes connected in a circular manner?

- A) Star topology**
- B) Bus topology**
- C) Ring topology**
- D) Mesh topology**

Answer: C) Ring topology

20. What is congestion control in networking?

- A) Managing data flow to prevent network congestion
- B) Increasing the speed of data transmission
- C) Decreasing the number of packets in the network
- D) Preventing data encryption

Answer: A) Managing data flow to prevent network congestion

21. What is a DNS query type that maps domain names to IP addresses?

- A) AAAA record
- B) A record
- C) MX record
- D) PTR record

Answer: B) A record

22. Which transport layer protocol is connection-oriented?

- A) UDP
- B) TCP
- C) IP
- D) ICMP

Answer: B) TCP

23. What is the main purpose of the OSI model?

- A) To standardize network protocols
- B) To prevent network attacks
- C) To manage application layers
- D) To increase network speed

Answer: A) To standardize network protocols

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24. Which routing algorithm is used in mobile ad-hoc networks?

- A) Dijkstra's algorithm
- B) AODV (Ad hoc On-Demand Distance Vector)
- C) Bellman-Ford algorithm
- D) OSPF

Answer: B) AODV (Ad hoc On-Demand Distance Vector)

25. What is flow control in networking?

- A) It regulates the speed of data transmission
- B) It defines the path for data transmission
- C) It increases the bandwidth of the network
- D) It ensures data packets are correctly routed

Answer: A) It regulates the speed of data transmission

26. Which TCP/IP model layer is responsible for reliable data transfer?

- A) Application layer
- B) Transport layer
- C) Network layer
- D) Data Link layer

Answer: B) Transport layer

27. What does HTTP stand for?

- A) Hypertext Transfer Protocol
- B) Hyperlink Transport Protocol
- C) Hypertext Terminal Protocol
- D) Hyper Transfer Protocol

Answer: A) Hypertext Transfer Protocol

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28. What is meant by encapsulation in networking?

- A) Wrapping data with necessary protocol information**
- B) Encrypting data for secure transmission**
- C) Storing data in memory**
- D) Sending data to multiple devices**

Answer: A) Wrapping data with necessary protocol information

29. What is an error message that indicates a failed TCP connection?

- A) TCP ACK**
- B) TCP FIN**
- C) TCP RST**
- D) TCP SYN**

Answer: C) TCP RST

30. Which protocol is used for secure data transfer on the web?

- A) FTP**
- B) HTTP**
- C) HTTPS**
- D) Telnet**

Answer: C) HTTPS

31. What is the primary role of routers in networking?

- A) To route data packets between networks**
- B) To protect networks from unauthorized access**
- C) To encrypt data**
- D) To manage application data**

Answer: A) To route data packets between networks

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32. What is the purpose of the SSL/TLS protocol?

- A) To provide secure communication over the internet
- B) To prevent IP spoofing
- C) To increase the data transfer rate
- D) To route network packets efficiently

Answer: A) To provide secure communication over the internet

33. What is the main function of DNS (Domain Name System)?

- A) To store email messages
- B) To resolve domain names to IP addresses
- C) To manage routing protocols
- D) To encrypt web traffic

Answer: B) To resolve domain names to IP addresses

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34. What is the maximum transmission unit (MTU)?

- A) The largest data packet size that can be transmitted over a network**
- B) The smallest data packet size that can be transmitted over a network**
- C) The maximum number of routers a packet can pass through**
- D) The maximum number of nodes in a network**

Answer: A) The largest data packet size that can be transmitted over a network

35. What does the term "router" refer to in networking?

- A) A device that forwards data packets between computer networks**
- B) A device that manages local area networks**
- C) A device that stores data**
- D) A device used for wireless communication**

Answer: A) A device that forwards data packets between computer networks

36. What is the function of the ARP (Address Resolution Protocol)?

- A) To find the MAC address corresponding to an IP address**
- B) To assign IP addresses to devices**
- C) To check the status of network devices**
- D) To route packets between networks**

Answer: A) To find the MAC address corresponding to an IP address

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37. In the OSI model, which layer is responsible for error detection and correction?

- A) Application layer
- B) Transport layer
- C) Data Link layer
- D) Network layer

Answer: C) Data Link layer

38. Which of the following is a connectionless protocol?

- A) TCP
- B) UDP
- C) ICMP
- D) FTP

Answer: B) UDP

39. What is a firewall in networking?

- A) A device used to block unauthorized access to a network
- B) A device used to route data packets between networks
- C) A device used to increase network speed
- D) A software application for encrypting data

Answer: A) A device used to block unauthorized access to a network

40. Which protocol is used for transferring files over the internet securely?

- A) FTP
- B) SFTP
- C) HTTP
- D) SMTP

Answer: B) SFTP

41. What does NAT (Network Address Translation) do?

- A) It translates domain names to IP addresses
- B) It translates private IP addresses to public IP addresses
- C) It routes data packets between networks
- D) It encrypts data for secure transmission

Answer: B) It translates private IP addresses to public IP addresses

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WhatsApp:

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channel on WhatsApp:

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YouTube:

<https://youtu.be/-AMj4iNz0UE?si=hg29pJZ1kujzg57J>

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Passing criteria of this course

Letter Grade	Grade Points	Equivalent Percentage
A+	4.00	90-100
A	4.00	85-89
A-	3.66 - 3.99	80-84
B+	3.33 - 3.65	75-79
B	3.00 - 3.32	71-74
B-	2.66 - 2.99	68-70
C	2.00 - 2.65	61-67
D	1.00 - 1.99	50-60
F	0.00	00-49

Passing Criteria for a Course:

The passing criteria is defined in such a way that it ensures the student shall be consistent in his studies throughout the semester.

Therefore, for passing a course/subject, student shall fulfill the following:

- a) Secure minimum **20%** score in Formative Assessments/Mid terms
- b) Secure minimum **20%** score in Final Term Examinations.
- c) Secure at least **40%** marks in aggregate while fulfilling the above requirements

Course Selection and Credit Hours

Q: How do I select courses when the course selection is open?

A: Follow these steps:

- 1. Check the credit hours allowed by your university (e.g., 21, 18, or 15 credit hours).**
- 2. Each subject typically has 3 credit hours.**
- 3. Divide the total allowed credit hours by 3 to determine how many subjects you can select.**

Examples:

21 credit hours = 7 subjects

15 credit hours = 5 subjects

Remember, the university may allow different credit hours for each student, so check your specific allowance.

By following these steps, you can make informed decisions during course selection and manage your credit hours effectively.

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Advice

Hmaesha relax ho ke parha kryn panic mat hua kryn apky parents ky bohat khawab hoty hn wo pura krny ki puri koshish kea kryn kbi b ksi pe depend na kea kryn apko bs ak insan success kr saqta ha or wo insan ap khud hn apky elawa koi nahe ap bs koshish kryn Allah pak pe strong yakeen rakha kryn or mehnat krke sb Allah ke hawaly kr dea kryn everything is possible be brave be strong stay blessed

Hum insan hamesha moat se darty or bhagty hn or moat se bachny ki koshish krty hn jabke moat ny ana hi ana ha hum

moat se nahe bach saqty humy jahanam se bachny ki koshish
krni chaheay hum jahanam se bach saqty hn
Insan ko 3 chezo se dar lagta ha Moat Risk/Dolat Ezat Shohrat
Fame

Moat

**Humy pta hona chaheay Moat tab ani ha jab Allah
chahy us se pehly puri dunya bi ak taraf ho ke apko
marna chahy to apka kuch nahe beggar saqti**

Risk/Dolat

**Risk Dolat sb Allah pak ke hath m ha puri dunya ak
taraf b ho jay na apsy apka risk cheen saqti ha na de
saqti ha Ye sirf ALLAH pak ky hath m ha**

Izat Zilat shohrat Fame

**Izat Zilat Sirf Allah de saqty hn puri dunya mel ke b
apko zra brabr b damage nahe kr saqti Agr ALLAH**

**Apko izat dena chahay to puri dunya ak taraf ho ke
b apko 1% b nuksan nahe pohancha saqti**

Phr Dar ks bat ka ??????????????????

**Be brave be strong Just put your trust To ALLAH
Hamesha Confident or himat se raho kbi ksi k samne
mat jhuko puri dunya mel k b apka kuch b nahe
beggar saqti**

ZB
MY REQUEST FROM ALL OF YOU

ZB Request from All of you My family

Mjy ap sbki help or support ki zarort ha or wo ye k hum sb Mel kr Allah ka Quran ki Urdu translation logo tak pohanchy or Quran ko samjna asaaan kryn dosro k leay sb tak Allah ka Quran pohanchy it's my campaign hum log 70+ age k ho jaty hn phr b hmy namaz tak ki translation nahe pta hoti k hum Allah pak se

Kya Dua kr rhy hn so hum youngster's ko Mel kr puri takat or energy ke sath Allah ka Quran spread krna ha

Hum puri Koshish kr rhy hn k hum sb Mel k Quran ki translation or most important topics ko maximum share kry with translation hmara maksad Quran ko spread krna ha be a part of us

m apni pocket se ye sb kr rha ho Allah ka Quran spread krny k leay apne or mene sbny Marna ha ak din to q na Allah k leay Kuch kryn apni energies apni power ko bajay negative use krny k Allah k leay invest kryn khud ko be a part of us

Agr m 23 ki age m apny sare sources use kr rha ho pocket se heavy amounts give away kr rha ho Quran spread krny k leay to ap just share to kr saqty hn itna e kr dyn

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Agr ap mujsy contact na kr sky too b ap jo b hn jaha bi hn waha Allah ka quran pheelay zada se zada with urdu translation jitni himat ha utna share kryn

..... **MY Family**

Just Relax and focus! Exams are not difficult. Put in your 100% effort and trust in Allah.

..... **AL-Quran**

**"And indeed, with hardship comes ease." (Quran 94:5)
Remember, I'm here to support you! Stay brave and strong!"**

May Allah bless you