

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2020

Subject Name: Operating Systems

Subject Code: 2TE03OSC1

Branch: Diploma (CE)

Semester : 3

Date : 03/03/2020

Time : 02:30 To 05:30

Marks :70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1

Attempt the following questions:

(14)

1. Which of the Following are types of Operating Systems?
a) Batch Operating Systems b) Network Operating Systems
c) Multithreading Operating Systems d) All of Above
2. Which one of the following are not types of Scheduling Algorithm?
a) FCFS b) SRTN c) SJF d) Ostrich Algorithm
3. What is Full Form of ROM?
a) Read only Memory b) Random only Memory
c) Both A and B d) Read Organized Memory
4. Which of the following is not a process state?
a) Ready b) Running c) New d) Request
5. What is the full form of FCFS?
a) First Come Fast Serve b) Fast Come First Serve
c) First Come First Serve d) Fast Come Fast Serve
6. Wastage of memory within the partition is known as _____.
a) Internal fragmentation b) External fragmentation
c) Segmentation d) Paging
7. Which of the following memory is fastest to access data?
a) Hard Disk b) RAM c) Cache Memory d) All of the above
8. Which of the Following are Attributes of File?
a) Name b) Type c) Size d) All of the above
9. Bringing a page into memory only when it is needed is known as _____.
a) Deadlock b) Page Fault c) Demand Paging d) Swapping
10. What is Full Form of IPC?
a) Intel Process Clock b) Inter Process Communication
c) Inter Program Communication d) None of the above
11. When a logic bomb is activated by a time-related event, it is known as a:
a) Virus b) Time Bomb c) Trap Door d) Trojan Horse
12. A Page fault occurs when
a) The deadlock occurs b) The segmentation starts



c) The page is found in memory d) The page is not found in memory
13. Which among the following is not an Operating System?

- a) Windows 7 b) Windows 10 c) LINUX d) MS WORD
14. What is the full form of RAID?
a) Repeated Array of Independent Disks
b) Redundant Array of Independent Disks
c) Redundant Array of Individual Disks
d) Repeated Array of Individual Disks

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions**
- a) List types of operating system. Explain any two in detail. (07)
b) With the help of process state diagram explain different states of process. (07)
- Q-3 Attempt all questions**
- a) What is Deadlock? List & Explain various conditions for deadlock. (07)
b) Write short note on semaphore. (07)
- Q-4 Attempt all questions**
- a) Explain SJF (Shortest Job First) scheduling in detail. (05)
b) Explain Round Robin Scheduling in detail. (05)
c) Write short note on firewall. (04)
- Q-5 Attempt all questions**
- a) Write a short note on : Memory Relocation & Protection (07)
b) Explain Paging in detail with figure (07)
- Q-6 Attempt all questions**
- a) Explain Virtual memory in detail. (05)
b) Write a shell script to check if the given number is prime or not. (05)
c) Write shell script to reverse a given number (04)
- Q-7 Attempt all questions**
- a) List and Explain all algorithms to select free partition of memory (07)
b) Explain features of UNIX. (07)
- Q-8 Attempt all questions**
- a) Write short note on firewall. (05)
b) Write short note on Spyware (05)
c) Explain 'pwd' and 'wc' command used in UNIX. (04)



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- É. નીચે આપેલ માથી કયો/કયા Operating Systems ના પ્રકાર છે ?
- b) Batch Operating Systems b) Network Operating Systems
c) Multithreading Operating Systems d) All of Above
- È. નીચે આપેલ માથી કયો Scheduling Algorithm નથી ?
- a) FCFS b) SRTN c) SJF d) Ostrich Algorithm
- Ë. ROM નુ પુરુ નામ શું છે ?
- a) Read only Memory b) Random only Memory
c) Both A and B d) Read Organized Memory
- Ì. નીચે આપેલ માથી કયો process state નથી?
- a) Ready b) Running c) New d) Request
- Í. FCFS નુ પુરુ નામ શું છે?
- b) First Come Fast Serve b) Fast Come First Serve
c) First Come First Serve d) Fast Come Fast Serve
- Î. પાર્ટીશન ની અંદર થતા મેમરી ના બગાડને _____ કહેવામા આવે છે.
- a) Internal fragmentation b) External fragmentation
c) Segmentation d) Paging
- Ï. નીચે આપેલમાથી કઈ મેમરી જડપી એક્સેસ થાય છે ?
- a) Hard Disk b) RAM c) Cache Memory d) All of the above
- Ð. નીચે આપેલમાથી કયા ફાઈલ ના એટ્રીબ્યુટ છે ?
- a) Name b) Type c) Size d) All of the above
- Ñ. પેજ ને મેમરીમાં જ્યારે જરૂર હોય ત્યારે લઈ આવવાની પધ્ધતી ને _____ કહેવામાં આવે છે.
- a) Deadlock B) Page Fault C) Demand Paging D) Swapping
- ÉÈ. IPC નુ પુરુ નામ શું છે?
- a) Intel Process Clock b) Inter Process Communication
c) Inter Program Communication d) None of the above
- ÉÉ. જ્યારે લોજીક બોમ્બ ને ટાઈમ રીલેટેડ ઈવેંટ સાથે એક્ઝીવેટ કરવામા આવે છે ત્યારે તેને _____ કહેવામાં આવે છે



- a) Virus B) Time Bomb C) Trap Door D) Trojan Horse

ÉÉ. Page fault ત્યારે થાય છે જ્યારે

- a) The deadlock occurs b) The segmentation starts
c) The page is found in memory d) The page is not found in memory

ÉÈ. નીચે આપેલમાંથી કઈ Operating System નથી ?

- a) Windows 7 b) Windows 10 c) LINUX d) MS WORD

ÉÌ. RAID નું પુરું નામ શું છે?

- a) Repeated Array of Independent Disks
b) Redundant Array of Independent Disks
c) Redundant Array of Individual Disks
d) Repeated Array of Individual Disks

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AÝ Operating system ના પ્રકારો લખો. કોઈ પણ 2 પ્રકારો વિસ્તારથી સમજાવો. (İ)

bÝ આકૃતિ ની મદદથી process ના વિવિધ state સમજાવો. (İ)

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AÝ Deadlock શું છે? Deadlock થવા માટે ની વિવિધ condition સમજાવો. (İ)

bÝ Semaphore વિસ્તારથી સમજાવો. (İ)

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AÝ SJF (Shortest Job First) અલ્ગોરીધમ ઉદાહરણ આપી સમજાવો. (İ)

bÝ રાઉંડ રોબીન અલ્ગોરીધમ ઉદાહરણ આપી સમજાવો. (İ)

k) Firewall પર ટુકનોંધ લખો. (İ)

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AÝ Memory Relocation તથા Protection પર ટુકનોંધ લખો. (İ)

bÝ આકૃતિની મદદથી Paging વિસ્તારથી સમજાવો. (İ)

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AÝ Virtual Memory વિસ્તારથી સમજાવો. (İ)



bÝ આપેલ નમ્બર પ્રાઈમ છે કે કેમ તે ચકાસવા માટે shell script લખો (1)

k) આપેલ નમ્બર ને રિવર્સ કરવા માટે shell script લખો (1)

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AÝ મેમરી મા ફી પાર્ટીશન શોધવામાટે ના બધા અલગોરિધમ લખો અને વિસ્તારથી સમજાવો. (1)

bÝ UNIX ના ફાયદાઓ વર્ણવો. (1)

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AÝ Firewall પર ટુકનોંધ લખો. (1)

bÝ Spyware પર ટુકનોંધ લખો. (1)

k) UNIX માટેના 'pwd' તથા 'wc' કમાન્ડ સમજાવો. (1)

