

C.U.SHAH UNIVERSITY

Summer-2015

Subject Code: 2TE03OSC1

Subject Name: Operating Systems

Course Name: DIPLOMA (CE)

Date: 7/5/2015

Semester: III

Marks: 70

Time: 02:30 TO 05:30

Instructions:

- 1) Attempt all Questions of both sections in same answer book/Supplementary.
- 2) Use of Programmable calculator & any other electronic instrument prohibited.
- 3) Instructions written on main answer book are strictly to be obeyed.
- 4) Draw neat diagrams & figures (if necessary) at right places.
- 5) Assume suitable & perfect data if needed.

Q.1 Attempt Following.**14**

1. Define Operating System.
2. Define Thread.
3. Define Semaphore.
4. Define Race condition.
5. Define External Fragmentation.
6. Every computer must need an operating system to work. Is it True or False?
7. An advantage of an acyclic-graph directory is to allow file-sharing without duplication. Is it True or False?
8. Define Response Time.
9. Explain chmod command of UNIX.
10. Explain pwd command of UNIX.
11. ROM is a volatile memory. Is it True or False?
12. Define File.
13. FCFS is a non preemptive algorithm. Is it True or False?
14. Define Scheduler.

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

Q.2

14

- A) List types of operating system. Explain any two in detail.
- B) List process scheduling algorithm. Explain any one in detail.

Q.3

14

- A) What is PCB? Explain Information content of PCB.
- B) Explain various file operations in detail.

Q.4

14

- A) Explain Semaphore in brief.
- B) What is deadlock? Explain deadlock detection and deadlock recovery.

Q.5

14

- A) Explain paging with example.
- B) Explain memory Relocation & Protection with suitable diagram



- Q.6 14
A) List and explain all algorithms to select free partition of memory
B) List and explain file access methods.
- Q.7 14
A) Explain features of UNIX.
B) Write a shell script to find the largest number among entered three numbers.
- Q.8 14
A) Explain following.
1. Firewall
2. Spyware
B) Explain memory-mapped I/O



pÄ/ È. nlcena p/Äo na jvab Aapo.

Èì

- É. Operating System nl VyaQya Aapo.
- Ê. Thread nl VyaQya Aapo.
- Ë. Semaphore nl VyaQya Aapo.
- Ì. Race Condition nl VyaQya Aapo.
- Í. External Fragmentaion nl VyaQya Aapo.
- Î. drek koMPyu3rma> Aopre3l>g sIS3m hoyj 0e. qru ke qo3u.
- Ï. Acyclic graph directory no faydo Ae 0e ke DuPllkexn vgr fa[l Share krl xkay 0e. qru ke qo3u.
- Ð. Response Time nl VyaQya Aapo.
- Ñ. yunIKs no chmod kma>D smjavo.
- ÉÉ. yunIKs no pwd kma>D smjavo.
- ÊÊ. rom vole3a[l memrl 0e. qru ke qo3u.
- ËË. Fa[l nl VyaQya Aapo.
- ÊÊ. FCFS non p/lyeMp3lv Algorl6m 0e. qru ke qo3u.
- Èì. Scheduler nl VyaQya Aapo.

nlcena ma>4l ko[p` ì p/Äo na jvab Aapo.

pÄ/ È.

Èì

- AÝ Aopre3l>g sIS3m na p/karo lqo. Ko[p` be p/Karo sm=vo.
- bÝ p/oses sIDyull>g Algorl6m na p/karo lql koe[p` Aek Algorl6m sm=vo.

pÄ/ È.

Èì

- AÝ PCB xu 0e? PCB vIStar4l sm=vo.
- bÝ Fa[l na iviv6 Aoprexn vIStar4l sm=vo.

pÄ/ Ì.

Èì

- AÝ semafor vIStar4l sm=vo.
- bÝ DeDlok nl VyaQya Aapo. DeDlok DI3eKxn t4a DeDlok rllkvrl sm=vo.

pÄ/ Í.

Èì

- AÝ pe+>g]dahr` sa4e sm=vo.
- bÝ memrl rlllokexn t4a memrl p/o3eKxn AakuRtl dorl sm=vo.

pÄ/ Î.

Èì

- AÝ memrlna F/l pa3lRxn ne slleK3 krva ma3e na Algorl6m lql ne sm=vo.
- bÝ Fa[l AeKses krvanl iviv6 p^6tlAo sm=vo.

pÄ/ Ï.

Èì

- AÝ yunIKs nl la9` lktaAo sm=vo.
- bÝ Aapel È nMbr ma>4l mo3o nMbr xo6va ma3enl sel Sk/IP3 lqo.

pÄ/ Ð.

Èì

- AÝ 3ukno>6 lqo.
 - É.Firewall
 - Ê.Spyware
- bÝ Memory Mapped I/O sm=vo.

