

NOV 15

Total No. of Questions : 10]

SEAT No. :

P1340

[Total No. of Pages : 2

[4858] - 1084

T.E. (Computer Engineering)

OPERATING SYSTEMS DESIGN

(2012 Pattern) (Semester - I) (End Sem.)

Time : 2 1/2 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicate full marks.*

- Q1)** a) Explain in short - BIOS, MBR and init() process. [6]
b) Explain Kernel Structure. With neat diagram. [4]

OR

- Q2)** a) Explain with neat diagram process states and transition. [5]
b) What is disk inode? State the difference between disk inode and in-core inode. [5]

- Q3)** a) Why is the principle of locality crucial to the use of virtual memory? Explain with example. [4]
b) Give the details of U-area field. [6]

OR

- Q4)** a) Explain the race condition in assigning inodes. [4]
b) Compare and contrast paging vs segmentation. [6]

- Q5)** a) What is ptrace system call? Explain Process tracing in detail. [8]
b) Explain the term signal and elaborate the various circumstances under which signals of the various classes are used. [8]

OR

P.T.O.

- Q6)** a) Write short notes on: [8]
i) Tunis System.
ii) Shared memory.
b) What is deadlock? Explain necessary conditions to occur the deadlock? [8]

- Q7)** a) What is make utility? Explain it with example. Consider your own makefile. [8]
b) Explain with example Linux utilities - grep, egrep, fgrep and sort. [8]

OR

- Q8)** a) Write a short note on: [8]
i) Mork Manager.
ii) Shim Manager.
b) Explain in detail how to make USB bootable with any open source tool/utility? [8]

- Q9)** a) Write a short note on: [12]
i) Multiprocessor scheduling.
ii) Real time scheduling.
iii) Linux scheduling.
b) Write short notes on: [6]
Fail soft operation.

OR

- Q10)** a) Write a short note on: [12]
i) Palm OS.
ii) Google Android.
iii) Windows Mobile.
b) Write a short notes on: [6]
Frame of reference.

