

Total No. of Questions :10]

SEAT No. :

**P3530**

**[5560]-182**

[Total No. of Pages : 2

**T.E. (Computer Engineering)**  
**OPERATING SYSTEMS DESIGN**  
**(2012 Course) (310242)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Figures to the right indicate full marks.*
- 3) *Assume suitable data, if necessary*

**Q1) a)** Explain Monolithic, Micro and Exokernel in detail. **[5]**

b) Explain different system calls for file system. **[5]**

OR

**Q2) a)** Explain Bankers Algorithm. **[5]**

b) Explain Linux thread management in detail. **[5]**

**Q3) a)** Explain init() process. **[2]**

b) Why is TLB used by virtual memory scheme? Describe how TLB works with the help of neat diagram. **[8]**

OR

**Q4) a)** Write a short note on Android Memory Management. **[5]**

b) Explain demand paging with suitable diagram. **[5]**

**Q5) a)** Explain advantages and disadvantages of process tracing in detail. **[8]**

b) What is IPC? Explain various models with the help of suitable diagram. **[8]**

OR

**P.T.O.**

- Q6)** a) Explain Pipes and Sockets with the help of suitable examples. [8]  
b) Write a short note on [8]  
i) Tunis system  
ii) Semaphores

- Q7)** a) Explain : [8]  
i) make  
ii) nmake  
iii) cmake  
iv) egrep  
b) Explain in detail Fedora 19 EFI files. [8]

OR

- Q8)** a) What do you mean by secure boot. Explain differences between BIOS and UEFI. [8]  
b) Explain AWK tools in detail. [8]  
**Q9)** a) Explain different classes of real time scheduling algorithms [9]  
b) Explain Embedded System architecture with suitable diagram. [9]

OR

- Q10)** Write note on following. [18]  
a) UNIX free BSD scheduling  
b) Microsoft Windows CE  
c) Palm OS

