

Computer Science: Paper I - Advanced Operating Systems.

Time : 2½ Hours

Total marks : 60

N.B.

- (1) All questions are compulsory.
- (2) Figures to the right indicate full marks.
- (3) Assume additional data if necessary but state the same clearly.
- (4) Symbols have their usual meanings and tables have their usual standard design unless stated otherwise.
- (5) Use of calculators and statistical tables are allowed.

Q1	Attempt Any two of the following.	12
a	What is the difference between kernel mode and user mode? Why is the difference important to an Operating System?	6
b	Explain any two scheduling algorithm in details.	6
c	Explain in details GRUB Boot Process.	6
d	Explain in Details Inter Processes communication.	6
Q2	Attempt Any two of the following.	12
a	Write a short note on Linux Memory Management.	6
b	What is difference between physical address and virtual address?	6
c	Explain the concept of segmentation and state its characteristics.	6
d	Discuss on optimal page replacement algorithm.	6
Q3	Attempt Any two of the following.	12
a	Explain what DMA is and why it is used?	6
b	Write a short note on File System Implementation.	6
c	Write a short note on RAM Disks.	6
d	Explain how deadlock can be avoided in operating system.	6

Q4	Attempt Any two of the following.	12
a	Write a short note Android libraries	6
b	Write a short note on SQLite.	6
c	Write a short note on Location Manager.	6
d	Explain Android Activity Lifecycle	6
 Q5	 Attempt Any two of the following.	 12
a	Explain the Application Framework	6
b	What is multiprogramming?	6
c	Explain Page Replacement algorithm.	6
d	Write a short note on content provider.	6
