

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)  
BSc DEGREE EXAMINATION MAY 2017  
(Third Semester)

Branch - COMPUTER TECHNOLOGY

OPERATING SYSTEMS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10x2 = 20)

- 1 What are the file management activities that are responsible by operating system?
- 2 Name any two circumstances at which the CPU scheduling decisions may take place.
- 3 What do you mean by safe state?
- 4 Mention the starvation issue of resource preemption.
- 5 Define segmentation.
- 6 Name any two causes of Thrashing.
- 7 Specify the operations of the DMA controller.
- 8 What is the working principle of C.SCAN scheduling?
- 9 Define Location Transparency.
- 10 List out the disadvantages of Linked allocation method.

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Briefly explain about operating system services.  
OR  
b Describe about the working principles of priority scheduling.
- 12 a Write short notes on circular wait.  
OR  
b Discuss about process Termination.
- 13 a Illustrate the segmentation with paging concept by any one of different architectures.  
OR  
b How to prevent Thrashing? Explain.
- 14 a Write short notes on Block and character devices.  
OR  
b Compare FCFS and SSTF scheduling.
- 15 a Discuss about the mounting of File-system.  
OR  
b Give notes on linked list and grouping approaches of free space management.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Describe in detail about schedulers.
- 17 Write in detail about Resource Allocation Graph Algorithm.
- 18 Discuss about Dynamic partitioning.
- 19 What are the significance of Disk Formatting? Explain.
- 20 Write in detail about the general organization of file system.