

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019  
(Fifth Semester)

Branch – INFORMATION TECHNOLOGY

**OPERATING SYSTEM**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A (20 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

- 1 What is the solution to the problem of indefinite blockage of low-priority processes?
- 2 Mention two options for breaking a deadlock.
- 3 Define hit ratio.
- 4 How effective access time is computed is demand paging?
- 5 Define constant angular velocity.
- 6 List out the information find in file-control block.
- 7 What is a Shell? Mention the different types of shells available in Linux System.
- 8 List out the environment variables used in shell programming.
- 9 What are the two different uses of exec command?
- 10 What is the use of getenv and putenv functions?

**SECTION - B (25 Marks)**

Answer ALL Questions

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

- 11 a Describe Round-Robin Scheduling in detail.  
OR  
b What are the necessary conditions for a deadlock to arise? Explain.
- 12 a Comment on the basic method of implementing segmentation.  
OR  
b Give a brief account on FIFO page replacement algorithm.
- 13 a Discuss how SSTF scheduling algorithm works.  
OR  
b What is a file? Explain its attributes and operations in brief.
- 14 a How inputs and outputs of Linux programs can be redirected? Explain.  
OR  
b Write a short note on control structures in shell programming.
- 15 a Explain in detail about time and Date.  
OR  
b With a block diagram, explain the hardware model of terminal interface in detail.

**SECTION - C (30 Marks)**

Answer any THREE Questions

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

- 16 How deadlock is detected? Explain it briefly.
- 17 Elucidate the Demand Paging in DETAIL.
- 18 Discuss the different methods used for allocating disk space.
- 19 Give a brief account on Low-level file access.