

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)

**BSc DEGREE EXAMINATION DECEMBER 2023**  
(Third Semester)

Branch – **COMPUTER SCIENCE**

**OPERATING SYSTEMS**

Time: Three Hours

Maximum: 50 Marks

**SECTION-A (5 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks

(5 x 1 = 5)

- 1 A Special software to create a job queue is called  
 (i) Spooler (ii) Drive  
 (iii) Interpreter (iv) Compiler
- 2 If the resources are always preempted from the same process \_\_\_\_\_ can occur.  
 (i) convoy effect (ii) Aging  
 (iii) Deadlock (iv) Starvation
- 3 Memory management technique in which system stores and retrieves data from secondary storage for use in main memory is called?  
 (i) Segmentation (ii) Paging  
 (iii) Fragmentation (iv) Mapping
- 4 In \_\_\_\_\_ information is recorded magnetically on platters.  
 (i) hard disk (ii) SSD  
 (iii) Magnetic disk (iv) Cylinder
- 5 \_\_\_\_\_ refers to computing technologies in which the hardware and software components are distributed across a network.  
 (i) peer to peer (ii) real time operating system  
 (iii) mobile computing (iv) client and server

**SECTION - B (15 Marks)**

Answer **ALL** Questions

**ALL** Questions Carry **EQUAL** Marks

(5 x 3 = 15)

- 6 a Discuss on computer system organization.  
 OR  
 b Explain about process state.
- 7 a Elucidate critical section problem.  
 OR  
 b What are the conditions for deadlock? Give example.
- 8 a Discuss about memory management of operating system.  
 OR  
 b Briefly enlighten Segmentation in operating system.

Cont...

- 9 a Explain about Disk Structure.  
OR  
b Define polling with explanation.
- 10 a Discuss on Client Server Computing.  
OR  
b Inscribe a note on Virtualization in computing environment.

**SECTION -C (30 Marks)**

Answer ALL questions  
ALL questions carry EQUAL Marks (5 x 6 = 30)

- 11 a Explain about operating system structures.  
OR  
b What is scheduling? What are the types of process scheduling? Explain in detail.
- 12 a Clarify about deadlock deduction algorithms.  
OR  
b How deadlock avoidance achieved in operating system? Explain.
- 13 a Define paging. Explain about paging with example.  
OR  
b Explain briefly about file concept & file access method.
- 14 a Discuss on DMA with clear explanation.  
OR  
b Describe about disk management & disk attachment.
- 15 a Why real time embedded system is important? Explain.  
OR  
b Discuss the features of Open Source Operating System Linux.

Z-Z-Z

END