**19DAU14**

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

**BSc DEGREE EXAMINATION DECEMBER 2022**
(Third Semester)

Branch – **COMPUTER SCIENCE WITH DATA ANALYTICS**

**OPERATING SYSTEM**

Time: Three Hours Maximum: 50 Marks

**SECTION-A (5 Marks)**
Answer **ALL** questions
**ALL** questions carry **EQUAL** marks (5 x 1 = 5)

1 The small piece of code stored in ROM is
(i) Boot Strap (ii) Device Drivers
(iii)Net Sim (iv) Boot Map

2 Storing the context or state of a process so that it can be reloaded when required and execution can be resumed is known as
(i) Context switching (ii) Swapping
(iii) Thrashing (iv) Overlays

3 Mutual Exclusion is
(i) Deadlock Avoidance (ii) Deadlock Occurrence
(iii)Deadlock Prevention (iv) Deadlock Detection

4 The strategy which allocates smallest hole
(i) Best fit (ii) First fit
(iii) Worst fit (iv) Last fit

5 Page Fault increase as the number of allocated frame increases
(i) Belady's Anomaly (ii) Swapping
(iii) Thrashing (iv) Coalescing

**SECTION - B (15 Marks)**
Answer **ALL** Questions
**ALL** Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a Describe User Interface in detail.
OR
b Show the System Calls are implemented with example.

7 a Explain in detail the concept of Buffering.
OR
b Differentiate Preemptive and Non Preemptive Scheduling.

8 a Classify the various methods for handling deadlock.
OR
b Sketch the Resource allocation graph algorithm for Deadlock Avoidance.

**Cont...**

9 a State Optimal Page Replacement algorithms in detail.

OR

b Analyze briefly the concept of Thrashing.

10 a Classify various File system Interface.

OR

b Explain in brief File System structure.

## SECTION -C (30 Marks)

Answer **ALL** questions

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

11 a Enumerate Linkers and Loaders in detail.

OR

b Classify Types of Operating systems.

12 a Elucidate the concept of process Scheduling Criteria.

OR

b Explain Inter process communication in shared memory system.

13 a Bring out the concept to prevent Deadlock.

OR

b Discuss Bankers Algorithm for Deadlock Avoidance.

14 a Explain in detail Multiple Partition Algorithm.

OR

b Outline in detail the concept of Demand Paging.

15 a Classify various File system Operations in detail.

OR

b Explain how to implement Directories in file.

Z-Z-Z

END