PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION MAY 2024
(First Semester)

Branch – **NETWORKING & MOBILE APPLICATION**

OPERATING SYSTEM CONCEPTS

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1. The _____ provides a variety of facilities and services, such as editors and debuggers, to assist the programmer in creating programs.
   (i) Operating System (ii) Hardware
   (iii) Packages (iv) Application Software

2. In OS_____ means, only one process may use a resource at a time.
   (i) Hold and Wait (ii) No Preemption
   (iii) Mutual exclusion. (iv) Circular Wait

3. A user program can be subdivided using _____, in which the program and its associated data are divided into a number of segments.
   (i) Segmentation (ii) Paging
   (iii) Semaphores (iv) Monitors

4. In OS _____ is the time required to move the disk arm to the required track.
   (i) Transfer Time (ii) Seek time
   (iii) Priority Time (iv) Rotational Delay

5. In _____all records are of the same length, consisting of the same number of fixed-length fields in a particular order
   (i) The Sequential File (ii) Indexed sequential file
   (iii) Pile (iv) Indexed file

SECTION - B (15 Marks)

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

6 a What is A Process? Explain in detail.
OR
b Narrate in detail about Simple Batch Systems.

7 a Explain in detail about Deadlock Prevention.
OR
b State in detail about Deadlock Detection algorithm.

8 a Describe in detail about Segmentation.
OR
b Explain in detail about Fixed Partitioning in Memory Management.

9 a Narrate in detail about Direct Memory Access (DMA) in I/O.
OR
b Describe in detail about I/O Devices.

10 a Explain in detail about B-Trees.
OR
b Describe in detail about File Sharing in OS.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

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

11	a	Discuss in detail about operating system Objectives and Functions.
		OR
	b	Enumerate in detail about Five-State Process Model.
12	a	Summarize in detail about Deadlock Avoidance.
		OR
	b	Discuss in detail about the Principles of Deadlock.
13	a	Summarize in detail about The Memory Management Requirements.
		OR
	b	Discuss in detail about Paging in Memory Management.
14	a	Discuss in detail about the I/O Buffering.
		OR
	b	Outline in detail about RAID.
15	a	Discuss in detail about File Organization and Access.
		OR
	b	Elucidate in detail about the Secondary Storage Management in File Management.

Z-Z-Z END