

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

**BVoc DEGREE EXAMINATION DECEMBER 2024
(Second Semester)**

Branch – NETWORKING AND MOBILE APPLICATIONS

OPERATING SYSTEM CONCEPTS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Question No.	Question	K Level	CO
1	Recall that scheduling is a problem in ----- processing a) Serial b). Multiprogrammed c.) Time-sharing d.) parallel	K1	CO1
2	Show that a process is in main memory and awaiting an event means it is in ---- state a) Ready b) Blocked c) suspend d)Exit	K2	CO2
3	Match from the following that refers to the ability of OS to support concurrent paths of execution within a single process a)Multithreading b) Multiprocessing c) symmetric d) parallel	K1	CO1
4	Show the first state in thread lifecycle a) Spawn b).block c.) Unblock d.) finish	K2	CO2
5	Recall that a fixed-length block of main memory is called as ----- a) Segment b). Page c.) Frame d.) program	K1	CO1
6	Relate the following that refers to the interval of time between the submission of a process and its completion a) Turnaround Time b). Response time c.) Throughput d.) Deadline	K2	CO2
7	Label from the following that takes over control of system bus for transferring data to and from memory a) Programmed I/O b). DMA c.) Interrupt – driven I/O d.) I/O devices	K1	CO1
8	Show that RAID scheme consists of ----- levels a) 4 b). 10 c.) 7 d.) 2	K2	CO2
9	Which of the following refers to collection of related fields a) field b). Record c.) file d.) database	K1	CO1
10	Interpret the file allocation method that chooses unused group that is of sufficient size a) First fit b). Best fit c.) Nearest fit d.) worst fit	K2	CO2

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

Question No.	Question	K Level	CO
11.a.	Compare Multiprogrammed batch system and Time sharing system.	K2	CO2
(OR)			
11.b.	Summarize on process and process control block.		

Cont...

12.a.	Identify the types of threads.	K3	CO3
(OR)			
12.b.	Make use of the principles of Deadlock.		
13.a.	Apply paging technique for memory management.	K3	CO3
(OR)			
13.b.	Utilize the three types of processor scheduling.		
14.a.	Categorize the techniques used for performing I/O.	K4	CO4
(OR)			
14.b.	Examine the need of Disk Cache.		
15.a.	Analyze the issues involved in file sharing.	K4	CO4
(OR)			
15.b.	List and explain commonly used file allocation methods.		

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Question No.	Question	K Level	CO
16	Classify different states of a process.	K4	CO5
17	Inspect the ways of performing Deadlock Avoidance and Deadlock Detection.	K4	CO5
18	Analyze Round Robin and shortest process next scheduling algorithms.	K4	CO5
19	Examine the disk scheduling policies.	K4	CO5
20	Discover the ways of file organization and access.	K4	CO5

Z-Z-Z

END