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Question Paper Code : 90415

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

Fourth/Fifth Semester

Computer Science and Engineering

CS 8493 — OPERATING SYSTEMS

(Common to : Electronics and Communication Engineering/Computer Science and Business Systems/Information Technology)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are Interrupts?
2. How does the OS generation Evolve?
3. List the activities of operating system.
4. Give Deadlock prevention in OS?
5. What is a virtual memory?
6. When to apply swapping during Storage?
7. Define spooling.
8. Brief on File System Mounting.
9. Distinguish between iOS and Android.
10. Why scheduling plays an important role in OS?

PART B — (5 × 13 = 65 marks)

11. (a) Explain DMA with Mode of Operation.

Or

- (b) Define System calls with its major Categories.

12. (a) Explain how the producer-consumer problem is solved by classic synchronization.

Or

- (b) Explain semaphore with implementation.

13. (a) Describe the major limitations of single level paging and discuss about segmented paging with neat diagram?

Or

- (b) Brief on page replacement algorithm? Justify the need for page replacement algorithm with its types.

14. (a) List out the various directory structures. Explain Acyclic Graph Directory in detail.

Or

- (b) Explain File Allocation Table and discuss how file allocation is done for disk blocks 217, 618 and 339.

15. (a) List and Explain Memory Management Techniques.

Or

- (b) Discuss in detail the Recovery system with Consistency Checking.

PART C — (1 × 15 = 15 marks)

16. (a) Narrate the setting up of Linux Multifunction server in step by step manner.

Or

- (b) Write a short note on critical section problem and with types of embedded OS.