

**INFORMATION TECHNOLOGY**  
**BACHELOR OF TECHNOLOGY (CBCS - 2023)**  
**B. Tech. Sem-III IT : WINTER : 2024**  
**SUBJECT: OPERATING SYSTEM**

Day : Wednesday  
Date : 11/12/2024

W-29245-2024

Time : 10:00 AM-01:00 PM  
Max. Marks : 60

**N.B.**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data **WHEREVER** necessary.
- 4) Draw neat diagrams **WHEREVER** necessary.

Q.1 Enlist and explain different types of operating system with an example. (10)

OR

Q.1 Describe operating system according to user's view and system's view in detail with reference to suitable example. (10)

Q.2 What are the advantages are of interposes communication. Explain various implementations of inter-process communication with an example. (10)

OR

Q.2 What is process? Explain about various fields of process control block. (10)

Q.3 Enlist and explain types of scheduling. Describe the difference between preemptive and non-preemptive scheduling in detail. (10)

OR

Q.3 Enlist and describe scheduling criteria with an example. Also explain CPU and I/O burst cycle. (10)

Q.4 Given five memory partitions of 100 KB, 500 KB, 200 KB, 300K B and 600 KB in order. How would each of the first fit, best fit and worst fit algorithms place processes of 212 KB, 417 KB, 112 KB and 426 KB (in order)? Which algorithm makes the most efficient use of memory? (10)

OR

Q.4 Describe with reference to suitable example LRU page replacement algorithm. (10)

Q.5 Explain different allocation method for allocating disk space in detail. (10)

OR

Q.5 Describe disk scheduling and management in detail with reference to suitable example. (10)

Q.6 What are the different types of virtualization? Explain in detail. (10)

OR

Q.6 Describe paravirtualization in detail with suitable example. (10)

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