

Total No. of Question : [4]

Registration No. : 

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**Programme Name : Computer Science & Engineering(DS)**  
**Regular S.Y.B.Tech.Sem.IV ESE May / June 2023**  
**IV SEMESTER ( 2021 BATCH)**  
**201DSL211-Operating Systems**

Duration : 2 Hours

Marks : 50

Instructions :

(Q1) All Questions are compulsory [20.0]

(1.1) Differentiate between Multiprogrammed systems & Uniprogrammed systems. Explain multiprogrammed systems? [6.0]

CO :- 1

Blooms Taxonomy :- Understand

(1.2) Define Race Condition .Explain Race Condition with example ? [7.0]

CO :- 2

Blooms Taxonomy :- Remember

(1.3) Assume the following workload in a system: [7.0]

Process Number	Arrival Time	Burst Time
P1	0.0	7
P2	2.0	4
P3	4.0	1
P4	5.0	4

Draw a Gantt chart illustrating the execution of these jobs using shortest job first scheduling algorithm [Preemptive and Non-preemptive] and also calculate average waiting time.

CO :- 4

Blooms Taxonomy :- Analyze

(Q2) All Questions are compulsory [10.0]

(2.1) Write a difference between external & internal fragmentation? [4.0]

CO :- 3

Blooms Taxonomy :- Understand

(2.2) What is page fault? Explain the steps involved in handling a page fault with a neat sketch ? [6.0]

CO :- 3

Blooms Taxonomy :- Understand

**OR [ 2.2 / 2.3 ]**

(2.3) Explain Segmentation in detail. OR What is segmentation? Draw and Explain the basic segmentation method? [6.0]

**CO :- 3**

**Blooms Taxonomy :- Understand**

**(Q3) All Questions are compulsory** [10.0]

(3.1) Explain different operations on the file ? [3.0]

**CO :- 3, 4**

**Blooms Taxonomy :- Understand, Analyze**

(3.2) Explain various file access methods with suitable example? [7.0]

**CO :- 3, 4**

**Blooms Taxonomy :- Understand, Analyze**

**OR [ 3.2 / 3.3 ]**

(3.3) List & briefly explain 5 file organization? [7.0]

**CO :- 3, 4**

**Blooms Taxonomy :- Understand, Analyze**

**(Q4) Attempt any two out of three questions** [10.0]

(4.1) Discuss Building Block Primitives? [5.0]

**CO :- 1**

**Blooms Taxonomy :- Understand**

(4.2) With neat sketch explain Block diagram of the system Kernel? [5.0]

**CO :- 1**

**Blooms Taxonomy :- Understand**

(4.3) Explain Architecture of Unix operating system? [5.0]

**CO :- 1**

**Blooms Taxonomy :- Understand**

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