**Total No. of Question : [4]**

**Registration No. :**

**Programme Name : Bachelor of Computer Science Engineering**
**Regular S.Y.B.Tech.Sem.IV ESE May / June 2023**
**IV SEMESTER ( 2021 BATCH)**
**201CSL211-Operating Systems**

**Duration : 2 Hours**                                                              **Marks : 50**
**Instructions :**

(Q1) **All Questions are compulsory**                                                     [20.0]

    (1.1) List the types of Operating System. Explain any 3 types of Operating System.          [6.0]

    (1.2) Describe the different models used for inter-process communication. Suggest which     [7.0]
    model is better and why?

    (1.3) What is deadlock? Explain Banker?s Algorithm.                                         [7.0]

(Q2) **All Questions are compulsory (**internal sub question permitted for optional questions either 2.2 [10.0]
or 2.3)

    (2.1) What is Segmentation? Explain the basic segmentation method.                          [4.0]

    (2.2) Draw and Explain schematic view of Swapping**.**                                      [6.0]

### OR [ 2.2 / 2.3 ]

    (2.3) Discuss the procedure for page fault in demand paging with the help of a schematic    [6.0]
    diagram.

(Q3) **All Questions are compulsory (**internal sub question permitted for optional questions either 3.2 [10.0]
or 3.3)

    (3.1) Write short note on the following terms Direct File Access method                     [4.0]

    (3.2) Draw and Explain the interrupt ? driven I/O cycle with Polling and Interrupt concepts.  [6.0]

### OR [ 3.2 / 3.3 ]

    (3.3) What are file attributes and Explain the minimal set of requirements needed for the file [6.0]
    operations.

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

    (4.1) With a neat diagram explain Architecture of the UNIX operating system               [5.0]

    (4.2) Write a note on Network based Operating Systems                                      [5.0]

    (4.3) Explain System calls for the file system in Unix?                                    [5.0]

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