**D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY**

**Q. Paper Code:**

**22SYAIML2014211**

**KASABA BAWADA KOLHAPUR-416006**

**(An Autonomous Institute)**

S. Y. B. Tech-AIML, Sem-IV

**END SEMESTER EXAMINATION, JULY. – 2021-22**

**Course Name:** Operating System **Course Code:** - 201AIMLL211

Seat No:

**Day and Date:** Thursday, 16/06/2022

**Time:** 9.30 A.M to 1:15 P.M  **Max. Marks- 100**

***Instructions:***

1. *Question No. 1 is compulsory.*
2. *Figure to the right indicate full marks.*

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| --- | --- | --- | --- | --- |
| **BT** | **CO’s** | **Q. No.** |  | **Marks** |
|  |  | **Q.1** | **Attempt the following** | **40** |
| **2** | **1** | **a** | 1. **Explain Distributed Operating System with example?**      1. **Explain** Round Robin Scheduling Algorithm? | **4**  **6** |
| **2** | **2** | **b** | 1. Explain volatile and nonvolatile memory with example.      1. Explain the thread concept.      1. Explain the different mechanisms for process synchronization. | **3**  **3**  **4** |
| **2**  **4** | **2**  **2** | **c** | 1. Explain Process State Transition diagram in detail? 2. Compare long term, short term and medium-term scheduler? | **5**  **5** |
| **5**  **5** | **3**  **3** | **d** | 1. Consider the following table. Find out average waiting time using FCFS.      1. Find out average turnaround time using **Priority based preemptive** scheduling. (Use time quantum of 1 unit and consider higher the number, higher the priority). | **5**  **5** |
|  | | | | |
|  |  | **Q.2** | **Attempt the following** | **20** |
| **2** | **3** | **a** | Explain different memory management schemes.  **OR**  Explain different level of memory hierarchy from fastest to slowest. | **6** |
| **2** | **3** | **b** | Explain the virtual memory in detail | **7** |
| **2** | **3** | **c** | Explain the concept of paging with suitable diagram. | **7** |
|  | | | | |
|  |  | **Q.3** | **Attempt the following (any four questions)** | **20** |
| **2** | **3** | **a** | Explain the content of File Control Block | **5** |
| **1** | **3** | **b** | Write a note on IO management | **5** |
| **3** | **3** | **c** | What are different file access methods | **5** |
| **1** | **3** | **d** | Write a short note on file system | **5** |
| **1** | **3** | **e** | List & explain different file operations | **5** |
|  | | | | |
|  |  | **Q.4** | **Attempt the following** | **20** |
| **2** | **4** | **a** | Explain the feature of Unix?  **OR**  Explain the difference between Unix and Linux operating system | **4** |
| **2** | **4** | **b** | Explain responsibilities of shell | **4** |
| **2** | **4** | **c** | What are some common shells and what are their indicators?  **OR**  Explain the working of Unix Kernel | **6** |
| **3** | **4** | **d** | Write a short note on system call | **6** |

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