**DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY**

**GANGURU: VIJAYAWADA – 521 139**

**Question Quality Analysis-Pre-Examination-PHASE\_ I**

Name of the Program : B.Tech in Computer Science & Engineering Year &Semester: II-I Academic Year: 2023-2024

Name of the Course: Operating Systems Course Code: R20C203 Name of the Faculty: Mr. K. SRIKANTH

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| **SNO** | **CO NO** | **Assessment question** | **BTL**  **of CO** | **CO Related to** | | **BTL of Question** | **Question related to** | | **Quality**  **of Question**  **YES/NO** | **Remarks** |
| **POs** | **PSOs** | **POs** | **PSOs** |
| 1 | R20C203.1 | With a neat sketch, Explain in detail about the interrelation between various services provided by the operating system | Understanding (L2) | 1 | 1 | BTL 2 Understanding | 1 | 1 |  |  |
| 2 | List out and discuss the Operating system structure with neat diagrams. | BTL 2 Understanding | 1 | 1 |  |  |
| 3 | Explain about Storage management with neat diagram? | BTL 2 Understanding | 1 | 1 |  |  |
| 4 | Define system call and list out different system calls. | BTL 2 Understanding | 1 | 1 |  |  |
| 5 | Explain about Open source operating systems in detail?. | BTL 2 Understanding | 1 | 1 |  |  |
| 6 | Explain about any 3 computing Environments in detail? | BTL 2 Understanding | 1 | 1 |  |  |
|  | Explain about Open source operating systems in detail?. | BTL 2 Understanding | 1 | 1 |  |  |
| 7 | R20C203.2 | Define Process State & Explain in detail about the Proces States? | Understanding (L2) | 1 | 1,2 | BTL 2 Understanding | 1 | 1,2 |  |  |
| 8 | Explain about the Importance of process Scheduling Algorithms? | BTL 2 Understanding | 1 | 1,2 |  |  |
| 9 | Describe different Operations on Process in detail? | BTL 2 Understanding | 1 | 1,2 |  |  |
| 10 | Explain about Inter process Communication with an example? | BTL 2 Understanding | 1 | 1,2 |  |  |
| 11 | Explain about Multi threaded Environment and mention the Advantages? | BTL 2 Understanding | 1 | 1,2 |  |  |
| 12 | Explain about Producer - Consumer Problem using Semaphores? | BTL 2 Understanding | 1 | 1,2 |  |  |
| 13 | What is critical section problem? Write and explain Peterson’s solution for it? |
| 14 | Explain about Reader -Writer Problem ? |
| 15 | R20C203.3 | Exlpain about paging and Segmentation with an Example? | Applying(L3) | 1 | 1,2 | BTL 3  Applying | 1 | 1,2 |  |  |
| 16 | Define Contiguous memory allocation ? | BTL 3  Applying | 1 | 1,2 |  |  |
| 17 | Explain about Swapping ? | BTL 3  Applying | 1 | 1,2 |  |  |
| 18 | List out the various methods for free-space management and explain them. | BTL 3  Applying | 1 | 1,2 |  |  |
| 19 | Give a brief note on Disk scheduling algorithms. | BTL 3  Applying | 1 | 1,2 |  |  |

Signature of course coordinator Assessment committee coordinator HOD

Date Date

**DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY**

**GANGURU: VIJAYAWADA – 521 139**

**Question Quality Analysis-Pre-Examination-PHASE\_II**

Name of the Program : B. Tech in Computer Science & Engineering Year &Semester: II-I Academic Year: 2023-24

Name of the Course: Operating Systems Course Code: R20C203 Name of the Faculty: Mr. K. SRIKANTH

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| **SNO** | **CO NO** | **Assessment question** | **BTL**  **of CO** | **CO Related to** | | **BTL of Question** | **Question related to** | | **Quality**  **of Question**  **YES/NO** | **Remarks** |
| **POs** | **PSOs** | **POs** | **PSOs** |
| 1 | R20C203.3 | Explain about Page Replacement Algorithms? | Applying(L3) | 1 | 1,2 | BTL 3  Applying | 1 | 1,2 |  |  |
| 2 | Explain in detail about Thrashing ? | BTL 3  Applying | 1 | 1,2 |  |  |
| 3 | Explain the process of converting virtual addresses to physical addresses with a neat diagram. | BTL 3  Applying | 1 | 1,2 |  |  |
| 4 | Consider the following page reference string 2,3,4,5,3,2,6,7,3,2,3,4,1,7,  1,4,3,2,3,4,7. Calculate the number of page faults with LRU, FIFO and optimal  page replacement algorithms with frame size of 3. | BTL 3  Applying | 1 | 1,2 |  |  |
| 5 | Discuss in detail the file allocation techniques: Sequential, Indexed and Linked | BTL 3  Applying | 1 | 1,2 |  |  |
| 6 | R20C203.4 | Explain the following deadlock avoidance algorithms:  i) Banker’s algorithm ii) Safety algorithm. | Applying(L4) | 1 | 1,2 | BTL 4  Applying | 1 | 1,2 |  |  |
| 7 | Explain different File Attributes and File Operations | BTL 4  Applying | 1 | 1,2 |  |  |
| 8 | Explain and compare the FCFS and SSTF disk scheduling algorithms. | BTL 4  Applying | 1 | 1,2 |  |  |
| 9 | In detail explain the structure of disk with a neat diagram. How to attach to the existing memory resources? | BTL 4  Applying | 1 | 1,2 |  |  |
| 10 | Explain about various issues involved in selecting appropriate disk scheduling algorithm?. | BTL 4  Applying | 1 | 1,2 |  |  |
| 11 | What is a deadlock? Explain the necessary condition for deadlock. | BTL 4  Applying | 1 | 1,2 |  |  |
| 12 | Discuss different RAID structures. | BTL 4  Applying | 1 | 1,2 |  |  |
| 13 | R20C203.5 | What are the advantages and disadvantages of recording the name of the  creating program with the file's attributes? Explain in detail. | Analyzing (L5) | 2 | 1,2 | BTL 5  Analyzing | 2 | 1,2 |  |  |
| 14 | Define Access Matrix and Explain Implementation of Access Matrix? | BTL 5  Analyzing | 2 | 1,2 |  |  |
| 15 | Explain about System Security Threats and attacks in detail? | BTL 5  Analyzing | 2 | 1,2 |  |  |
| 16 | Explain about use of Cryptography in Computing? | BTL 5  Analyzing | 2 | 1,2 |  |  |
| 17 | Describe Various Counter measures to Security attacks? | BTL 5  Analyzing | 2 | 1,2 |  |  |
| 18 | Explain about the firewalls with an Example? | BTL 5  Analyzing | 2 | 1,2 |  |  |
| 19 | Explain about the key Components of a LINUX system. | BTL 5  Analyzing | 2 | 1,2 |  |  |

Signature of course coordinator Assessment committee coordinator HOD

Date Date Date