**Question Paper Quality - CIE and SEE**

Rubrics: To assess Quality of Question Paper by BOE / Internal Quality Assessment Committee.

Rubrics with 3 points – Agree, Partially Agree, Disagree

Question Paper: Test1

Course Code/Name: Operating Systems, IS514

Course Faculty: Dr.MPA, SRS, SBL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No. | Description of Rubrics | Agree | Partially Agree | Disagree |
|  | Structural / Format |  |  |  |
| 1 | Question Paper – Header Information, Marks split,(2, NA, 0) |  |  |  |
| 2 | Questions are properly / professionally phrased, unambiguously / precisely (2, 1, 0) |  |  |  |
|  | Content based |  |  |  |
| 3 | Entire syllabus covered with proper weightage on each topic (4,2,0) |  |  |  |
| 4 | Various levels of Blooms Taxonomy incorporated (4, 2, 0) |  |  |  |
| 5 | Self-learning component included (4,2,0) |  |  |  |
| 6 | Designed to meet the desired Course Outcome (4,2,0) |  |  |  |
| 7 | Beyond the syllabus included (4,2,0) |  |  |  |
| Total | |  |  |  |

BOE Decision: Accepted / Modifications Required / Rejected

BOE Chairman

M S Ramaiah Institute of Technology

(Autonomous Institute, Affiliated to VTU)

**Department of Information Science & Engineering**

Term: 13h Aug to 16th Dec 2015 Subject: Operating system Sub Code: IS514

CIE Test No: I Semester: V Section: ‘A’,’B’, &’C’

U.G:B.E Max Marks: 30 Time Allotted: 1 hr

**Instructions to Candidates: Mobile phones are banned.**

**Answer any 2 questions.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SL No** |  | **Questions** | **Marks** | **Bloom’s Level** | **CO** |
| 1 | a | Consider the following set of processes, with length of the CPU burst time given in milliseconds.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Process | A | B | C | D | E | | Arrival Time | 0 | 0 | 3 | 5 | 10 | | Burst Time | 10 | 1 | 2 | 1 | 5 | | Priority | 3 | 1 | 5 | 4 | 2 |   Draw Gantt charts illustrating the execution of these processes using FCFS, Pre-emptive SJF, Priority and RR (Quantum = 2) scheduling algorithms. Determine the average waiting time and turnaround time of all algorithms. | 8 | A | CO1 |
| b | Explain the classic software based solution to the critical section problem by explaining the structure of process Pi. | 7 | U | CO2 |
| 2 | a | Discuss the various states of a process. Differentiate between the different kinds of schedulers. | 8 | R | CO1 |
| b | With the definition of TestandSet() and swap() instructions, explain how mutual exclusion is implemented for TestandSet() and swap() instructions. | 7 | A | CO2 |
| 3 | a | What is Inter-process communication? Why is it required? Explain how cooperating processes communicate by passing messages. | 8 | U | CO1 |
| b | Discuss the following terms:   1. Race Condition b. Critical Section Problem | 7 | U | CO2 |

**#R – Remember; U – Understand; A - Apply**