**BCSL211**

(An Autonomous Institution)

**2020-2021 ODD TERM**

**CAE-2 EXAMINATION FOR SPLIT-II COURSES WINTER-2020 (ONLINE MODE)**

**Third Semester B.Tech(Artificial Intelligence)**

**Operating System**

**Time: 1 hr.] [Max. Marks : 15**

1) [CO1/CO2/CO…] indicates the question related to specific course outcome.

2) All questions carry marks as indicated

3) Assume suitable data wherever necessary.

4) Due credit will be given to neatness and adequate dimensions.

5) Illustrate your answer wherever necessary with the help of neat sketches.

6) Use of non-programmable calculator is permitted.

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| C03 | Q1 | What is the producer consumer problem? Explain a Solution for the producer consumer problem. | 5 |
| C04 | Q2 | Consider the following snapshot of a system   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | Allocation | | | |  |  | Max | | | | |  | A | B | C | D |  |  | A | B | C | D | | PO | 2 | 1 | 1 | 1 |  | PO | 4 | 2 | 1 | 2 | | P1 | 3 | 1 | 2 | 1 |  | P1 | 5 | 2 | 5 | 2 | | P2 | 2 | 1 | 2 | 3 |  | P2 | 2 | 3 | 1 | 6 | | P3 | 1 | 3 | 1 | 2 |  | P3 | 1 | 4 | 2 | 4 | | P4 | 1 | 4 | 3 | 2 |  | P4 | 3 | 6 | 6 | 5 | | 5 |
| Available  A B C D  3 3 2 1  State bankers algorithms. Using bankers algorithm find out whether the above system is in a safe state, and demonstrate an order in which the processes can complete. |
| C05 | Q3 | Consider the following page reference string:  5,2,3,7,2,5,3,4,6,7,5,4,7,3,2,7,4,1,0,5,4,6,1,0,3  Assume demand paging, how many page faults would occur for the following replacement algorithms (Consider 4 frames)  a)FIFO replacement  b) Optimal Replacement | 5 |

**\*\*\*\*\*\*\*\*\*\*\*\* Stay Home Stay Safe \*\*\*\*\*\*\*\*\*\*\*\*\*\***