

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION MO2022)

CLASS: MCA
BRANCH: MCA

SEMESTER : I
SESSION : MO/2022

SUBJECT: CA411 MODERN OPERATING SYSTEMS

TIME: 03 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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- Q.1(a) Explain the need of protection in computer system? What are the different kinds of protection? [5]
Q.1(b) What is the purpose of system call? Explain the different types of system call? How system call can be implemented? [5]
- Q.2(a) Define a process. Present the process state diagram and explain. [5]
Q.2(b) What is Multi Tasking, Multi Programming, Multi Threading? [5]
- Q.3(a) How can you handle a page fault in demand paging? Explain FIFO Page replacement and Optimal Page replacement algorithms in detail. [5]
Q.3(b) Why are segmentation and paging sometimes combined into one scheme? Explain Segmented paging. [5]
- Q.4(a) Explain the advantages and disadvantages of contiguous file allocation scheme. Compare index file allocation to noncontiguous file allocation. [5]
Q.4(b) State and explain the necessary conditions to occur a deadlock. [5]
- Q.5(a) How can you protect your system from different types of attacks? [5]
Q.5(b) With a diagram explain Symmetric and Asymmetric cryptography [5]

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