



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours/Programme 3rd Semester Examination, 2021-22

**CMSHGEC03T/CMSGCOR03T-COMPUTER SCIENCE (GE3/DSC3)**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.  
All symbols are of usual significance.*

**GROUP-A**

1. Answer any **four** questions from the following: 2×4 = 8
- (a) What is kernel?
  - (b) What do you mean by thrashing?
  - (c) Write the difference between segmentation and paging.
  - (d) What is thread?
  - (e) What is system call?
  - (f) What do you mean by process and light weight process?
  - (g) What is internal fragmentation?

**GROUP-B**

**Answer any four questions from the following**

8×4 = 32

2. Write a short note on deadlock. Explain Banker's algorithm. 4+4
3. For the reference string 4 3 2 1 4 3 5 2 4 2 1 5, compare the number of page faults with FIFO and LRU page replacement algorithm with three frames. 4+4
4. Describe Belady's anomaly. When do page fault occurs? Describe inverted paging concept in memory management of operating system. 3+2+3
5. What do you mean by external fragmentation? Write a short note on compaction. 4+4
6. (a) What is process control block (PCB)? What are its content? (3+2)+3  
(b) Write short note on context switching.

7. (a) What is critical section problem? Explain with example.  
(b) What are the operations of Semaphore?

5+3

**N.B. :** *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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