

10
Good

Course Code: CS 2006
Total Marks:10
RollNo:

Assume that there are 3 page frames which are initially empty. If the page reference string is 1, 2, 3, 4, 2, 1, 5, 3, 2, 4, 6, the number of page faults using the optimal replacement policy is _____.

- | | 1 | 2 | 3 | 4 | 2 | 1 | 5 | 3 | 2 | 4 | 6 |
|----|---|---|---|---|---|---|---|---|---|---|---|
| F1 | 1 | 1 | 1 | 1 | | | 5 | 3 | | | 3 |
| F2 | | 2 | 2 | 2 | | | 2 | 2 | | | 2 |
| F3 | | | 3 | 4 | | | 4 | 4 | | | 6 |
- ↓ HIT
↓ HIT
↓ HIT
↓ HIT

A system uses 3 page frames for storing process pages in main memory. It uses the Least Recently Used (LRU) page replacement policy. Assume that all the page frames are initially empty. What is the total number of page faults that will occur while processing the page reference string given below-? Show complete working 6, 7, 8, 9, 6, 7, 1, 6, 7, 8, 9, 1, 7, 9, 6

	6	7	8	9	6	7	1	6	7	8	9	1	7	9	6
F1	6	6	6	9	9	9	1			8	8	8	7		7
F2		7	7	7	6	6	6			6	9	9	9		9
F3			8	8	8	7	7			7	7	1	1		6

↓
↓
↓
 HIT HIT HIT

No. of Faults = 12