| Quiz 6 – Paging | | (a2) | (b1) | (b2) | Total |
|-------------------|--|------|------|------|-------|
| | | (2) | (3) | (2) | (10) |
| L3: Student Name: | | | | | |

Q1) Memory pressure forces the OS to start paging out pages to make room for actively used pages. Deciding which page to evict is encapsulated within the OS's replacement policy. Let us assume that a process requests the following pages while 'running': {0, 1, 2, 0, 1, 3, 0, 3, 1, 2, 1}.

For the process request above, fill in the tables below to show step-by-step the states using the following:

- a) Optimal policy.
- b) Least Recently Used policy.

For each policy, also determine its 'Hit rate'.

| Optimal Policy | | | | | | |
|----------------|----------|-------|-------------|--|--|--|
| Access | Hit/Miss | Evict | Cache State | | | |
| 0 | | | | | | |
| 1 | | | | | | |
| 2 | | | | | | |
| 0 | | | | | | |
| 1 | | | | | | |
| 3 | | | | | | |
| 0 | | | | | | |
| 3 | | | | | | |
| 1 | | | | | | |
| 2 | | | | | | |
| 1 | | | | | | |

| LRU | | | | | | | |
|--------|----------|-------|-------------|--|--|--|--|
| Access | Hit/Miss | Evict | Cache State | | | | |
| 0 | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 0 | | | | | | | |
| 1 | | | | | | | |
| 3 | | | | | | | |
| 0 | | | | | | | |
| 3 | | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 1 | | | | | | | |

Hit Rate: Hit Rate: