

THE HONG KONG POLYTECHNIC UNIVERSITY  
HONG KONG COMMUNITY COLLEGE

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**Subject Title** : Operating Systems

**Subject Code** : CCN2273

**Session** : Semester Two, 2015/16

**Numerical Answers**

**Question C2**

- (a)(i) Average turnaround time = 25.8 ms  
Average normalized turnaround time = 4.07
- (a)(ii) Average turnaround time = 32.6 ms  
Average normalized turnaround time = 4.46
- (c) Under FIFO:  
Total distance = 3303  
Average seek length = 471.9  
Under C-SCAN:  
Total distance = 2105  
Average seek length = 300.7

**Question C3**

- (c) 31 bits
- (d) Number of bits for page displacement = 13 bits  
Number of bits for frame number = 18 bits
- (e) 14 bits for page number, 13 bits for displacement
- (f)  $2^{14}$  page table entries