**STES**

**SMT. KASHIBAI NAVALE COLLEGE OF ENGINEERING PUNE-41**

**ELECTRONICS AND TELECOMMUNICATION ENGG. DEPT.**

**PRELIM / 2017-18 / SEM-II / T.E. (E&TC) (A, B, C, D &E)**

**Subject : System Programming and Operating System Marks : 30**

**Day & Date : 21/04/18 (9:30 to 10.30) Duration : 1 hour**

Q 1 a. What is demand paging? Explain with example. 7

b. Consider following page reference string and find page faults using LRU method.

Frame size : 3

2 3 2 1 5 2 4 5 3 2 5 2

Calculate hit ratio. 8

**OR**

Q2 a. Explain segmentation in detail and list advantages of it over paging. 7

b. Consider memory partitions as 100 k 500k 200k 300k 600k. How would each of First Fit, Best Fit, Worst Fit algorithms place processes of 212k , 417k, 112k, 426k to be allocated in order. Calculate memory efficiency. 8

Q3 a. Explain Linux file system. 7

b. Calculate average seek length for the requested track sequence.

55, 68, 30, 18, 90, 180, 150, 38, 184

Consider current head location at track no 72. 8

**OR**

Q4 a. Write a short note on RAID 7

b. Explain memory mapped I/O and direct memory access. 8