

B.SC. (I. T.) SEM. - III (CBCS - 2015 COURSE) : SUMMER - 2018

SUBJECT: OPERATING SYSTEM

Day: **Monday**
Date: **21/05/2018**

S-2018-0950

Time: **02.30 PM TO 05.30 PM**
Max Marks: 60

N.B:

- 1) Answer any **SIX** questions.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

Q.1 Explain different types of operating system with examples. **(10)**

Q.2 Find out which algorithm among FCFS, SJF, and Round Robin with quantum 10, would give the minimum average time for a given workload. Shown below is the workload for five jobs arriving at time zero in the order given below: **(10)**

Job	Burst Time
1	10
2	29
3	03
4	07
5	12

Q.3 What is page fault? Explain the different steps in handling a page fault. **(10)**

Q.4 Consider the following reference string: **(10)**
1, 3, 3, 2, 5, 4, 5, 4, 1, 4, 2, 2, 5
Number of page frame is 3.
Calculate the page fault using optimal replacement algorithm.

Q.5 What is Inter-process communication? Explain any two inter-process communication in detail. **(10)**

Q.6 When does a page fault occur? Explain various page replacement strategies or algorithms. **(10)**

Q.7 What is a deadlock? Describe the four necessary conditions for a deadlock to occur. **(10)**

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