AA—62—2019

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (Second Year) (Fourth Semester) EXAMINATION

OCTOBER/NOVEMBER, 2019

(Revised Pattern)

COMPUTER SCIENCE

(S4.1)

(System Programming and Operating System—II)

(Tuesday, 19-11-2019)	Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours *Maximum Marks*—80

N.B. :— (i) *All* questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) From Question Nos. **2** to **4** solve either '*a*' and '*b*' **OR** '*c*' and '*d*'.

1. Attempt the following : 20

(a) What is Operating System ? Explain.

(b) What are Operating System Services ?

(c) What is Process ? Explain.

(d) What is Deadlock ? Explain.

2. (a) Explain in detail Computer System Architecture. 8

(b) Explain the concept of distributed systems. 7

Or

(c) What is system calls ? Explain its types. 8

(d) Describe in brief Process Scheduling. 7

3. (a) Explain in detail Multithreading models. 8

(b) Describe in brief Round-robin scheduling. 7

P.T.O.

Or

(*c*) Explain the concept of semaphores. 8

(*d*) Explain resource allocation graph algorithm. 7

4. (*a*) Explain the concept of Address binding in memory management. 8

(*b*) What is Paging ? Explain. 7

Or

(*c*) What is Directory ? Explain single level directory. 8

(*d*) Describe in brief contiguous allocation method. 7

5. Write short notes on (any *three*) : 15

(*a*) Process Management.

(*b*) GUI

(*c*) CPU Scheduler

(*d*) The bounded buffer problem.

(*e*) Segmentation.