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GF—05—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2023

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-201

(Operating System)

(Thursday, 20-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

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

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Explain Single Processor System.

(*b*) Explain System view in detail.

(*c*) Explain CLI mode in detail.

(*d*) Explain context switch in brief.

(*e*) Explain Information maintenance in brief.

(*f*) What is operating system with organization of Operating System ?

(*g*) Explain scheduler in detail.

P.T.O.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain Operating System Structure in detail.

(*b*) Explain process control and file management system calls in operating system.

(*c*) Explain Process control Block in detail.

(*d*) Explain segmentation in detail.

(*e*) Explain user interfaces in operating system.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain concept of scheduling queue in detail.

(*b*) Explain shortest job first algorithm with example.

(*c*) Explain working of operating system resource manager.

(*d*) Explain computer system architecture in detail.

(*e*) Explain priority scheduling algorithm in detail.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain concept of system call in detail.

(*b*) Explain Round Robin scheduling algorithm.

(*c*) What is paging ? Explain hardware support for paging concept.

(*d*) Explain few operating system services.

(*e*) What is fragmentation ? Explain in detail.

5. Write short notes of any *three* of the following (**5** marks each) : 15

(*a*) Extended machine

(*b*) Process states

(*c*) System boot

(*d*) Dispatch and ready queue

(*e*) Communication.