R-16

Code: 5304E1/R

Faculty of Science

B. Sc (Computer Science) III-Year, CBCS-V Semester

Regular Examinations, Dec/Jan 2019-20

ELECTIVE PAPER-I: OPERATING SYSTEMS

Time: 3 hours

Max Marks: 60

Section-A

I. Answer any **Three** of the following questions (3x5=15 Marks)

1. Explain the functions of an Operating System.
2. Write about System Calls in Operating System.
3. Write about Virtual Memory.
4. Write about File Attributes and File Operations.
5. Explain Direct Memory Access (DMA).
6. Write about Program Threats and System Threats.

Section-B

II. Answer the following questions (3x15=45 Marks)

7. (a) Explain the Two state and the Five State Process model.

   (OR)

   (b) Explain any three Process Scheduling algorithms implemented by an OS.

8. (a) What is Thrashing? Explain any two Page Replacement algorithms and trace them on a sample Memory reference string.

   (OR)

   (b) Explain various File System implementation methods.

9. (a) What are the conditions for Deadlock to occur? Explain Banker's Algorithm for Deadlock Avoidance.

   (OR)

   (b) Explain various Authentication Mechanisms used by an Operating Systems.

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