15180

B. Tech 5th Semester Examination

Operating Systems (NS)

CS-311

Time : 3 Hours   **Max. Marks : 100**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all. Select one question from Section A, B, C and D. Section E is compulsory (Question No. 9).

SECTION - A

1. Write the differences between multitasking, multiprogramming, and multi processing of an operating system. Also support your answer by giving some examples.   (20)

2. Write the differences between system software and application software. Also describe the various categories of operating system.   (20)

SECTION - B

3. Write the various methods used for concurrency control in an operating system? How we can differentiate between Avoidance and Prevention?   (20)

4. What do you understand by Context switching ? How a process is interacted with a Linux operating system?   (20)

SECTION - C

5. Discuss the Various advantages of swapping and paging in a operating system.   (20)

[P.T.O.]

6. Explain the differences between Hardware clock and software clock. Also discuss their advantages.   (20)

SECTION - D

7. Describe the structure of LINUX operating system? Discuss one application of an Android operating system.   (20)

8. Describe the various file allocation methods. Also discuss the advantages of a linear list in an operating system.   (20)

SECTION - E

9. Define the following: (Any Ten)

   (a)   What are the differences between Multithreading and Multiprocessing ?

   (b)   What is Buffering?

   (c)   Deadlock.

   (d)   What is Data Recovery?

   (e)   What is page replacement in virtual memory?

   (f)   Local and Global Memory.

   (g)   What is ANDROID?

   (h)   What are the advantages of One-time passwords?

   (i)   How LINUX is different from Windows operating system?

   (j)   What do you understand by Disk reliability?

   (k)   Write the advantages of Directory Systems.

   (l)   Define Protection and Security.   (2×10=20)