Roll No. ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚   **Total No. of Pages : 02**

Total No. of Questions : 07

B.Sc.(IT) (Sem.–3rd)
OPERATING SYSTEM
Subject Code : BS-203
Paper ID : [B0410]

Time : 3 Hrs.   **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students has to attempt any FOUR questions.**

SECTION-A

l. **Write briefly :**

a) Write at least two functions of Operating System.

b) Write two disadvantages of Layered approach of OS.

c) Differentiate between Long Term and Short Term scheduler.

d) Explain the term compaction in memory management.

e) Explain the term device drivers in brief.

f) Define swapping. Why we need swapping?

g) Explain the meaning of process synchronization.

h) Write at least two disadvantages of linked Allocation.

i) Explain the term RAID Structure.

j) Explain the term security in brief.

SECTION-B

2. Explain various OS Components in detail. (10)

3. Explain at least four CPU scheduling algorithm in detail. (10)

4. Explain in detail the Paging scheme of memory management. Also compare it with segmentation scheme of memory management. (10)

5. Define the term 'Deadlock'. What are the necessary Conditions for a deadlock to occur? Also explain the deadlock prevention scheme of handling deadlocks. (10)

6. Write note on the following :

   (a) Interrupts (5)

   (b) DMA (5)

7. (a) A major security problems for operating systems is authentication. Explain. (5)

   (b) Write note on Program Threats. (5)