

S.D.E.

**B.B.A. (2006 COURSE) SEM-VI : WINTER - 2017**  
**SUBJECT: ELECTIVE – III : e) OPERATING SYSTEMS ( SYSTEMS)**

Day: **Saturday**  
Date: **16/12/2017**

Time: **02.00 PM TO 05.00 PM**  
Max Marks. 80

**W-2017-4141**

**N.B.**

- 1) Attempt any **FIVE** questions from Section – I and attempt any **TWO** questions from Section – II.
- 2) Answer to both the **SECTION** should be written in **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION – I**

- Q.1** What is ‘Operating system’? Explain importance and functions of operating systems. (10)
- Q.2** What is the need of scheduler? Explain various types of schedulers with the help of suitable diagram. (10)
- Q.3** Discuss the ‘Shortest remaining time next’ algorithm with suitable example. (10)
- Q.4** Describe the concept of memory management with segmentation. (10)
- Q.5** Explain Direct memory access in detail. (10)
- Q.6** Differentiate between (10)
- a) Online operating system Vs Real time operating system.
  - b) Multiprogramming operating system Vs Multiprocessing operating system.
- Q.7** Write short notes on (**Any TWO**) : (10)
- a) Device drivers
  - b) Semaphore
  - c) Virtual memory

**SECTION - II**

- Q.8** What is deadlock? Give the conditions for the occurrence of the same. How to avoid deadlocks? (15)
- Q.9** Explain the concept of file systems and its implementation in detail. (15)
- Q.10** Consider the following scenario. (15)
- | Process | Run – time (Minutes) |
|---------|----------------------|
| P1      | 2                    |
| P2      | 3                    |
| P3      | 1                    |
| P4      | 2                    |
- Calculate average turn - around time and waiting time in case of:
- i) First come first served
  - ii) Shortest job first

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