

# BANDODKAR COLLEGE OF SCIENCE, THANE

S.Y.B.SC. (INFORMATION TECHNOLOGY) SEMESTER – III EXAMINATION; OCTOBER  
2014

COURSE CODE– USIT305

**Duration: 2½ Hrs**

**Marks: 75**

**Total**

**N.B. 1. All questions are compulsory.**

- |             |   |           |
|-------------|---|-----------|
| <b>Q. 1</b> | <b>Answer any two out of following</b>  | <b>10</b> |
|             | a What is Operating System? Why is it needed?   |           |
|             | b Write note on Real Time operating system  |           |
|             | c Write note on : Assemblers, Compilers and Interpreters                                |           |
|             | d Write note on Handheld systems.   |           |
| <b>Q. 2</b> | <b>Answer any two out of following</b>  | <b>10</b> |
|             | a Discuss various services Operating system performs.                                   |           |
|             | b Write note in Virtual Machines  |           |
|             | c Discuss the structure of operating system.  |           |
|             | d Discuss different types of System calls   |           |
| <b>Q. 3</b> | <b>Answer any two out of following</b>  | <b>10</b> |
|             | a Differentiate between process and threads.  |           |
|             | b Write note on Semaphores.   |           |
|             | c With an example, explain interprocess communication.                                  |           |
|             | d What is process scheduling? Why is it required? Explain any one scheduling algorithm. |           |
| <b>Q. 4</b> | <b>Answer any two out of following</b>  | <b>10</b> |
|             | a What is memory management? Explain Virtual memory. Why is it needed?                  |           |
|             | b Write note on Paging  |           |
|             | c Write note on Segmentation  |           |
|             | d Explain in detail Page replacement algorithm  |           |
| <b>Q. 5</b> | <b>Answer any two out of following</b>  | <b>10</b> |
|             | a Explain the file concept. Explain the terms File system mounting and File sharing.    |           |
|             | b Discuss sequential access method in detail.   |           |
|             | c Write note on Disk Management   |           |
|             | d What is deadlock? Explain deadlock recovery in detail.                                |           |
| <b>Q. 6</b> | <b>Answer any two out of following</b>  | <b>10</b> |
|             | a Write note on I/O Hardware.   |           |
|             | b Discuss in detail Interrupt.  |           |
|             | c Explain Polling in detail.  |           |
|             | d Write note on Direct Memory Access (DMA)  |           |

**Q.7**      **Answer *any three* out of following**

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- a** Write note on Linkers
- b** Write note on System Boot
- c** Write note on Threads
- d** Explain the swapping technique in memory management
- e** Explain RAID structure.
- f** Write note on STREAMS

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