Code No: **R42045**   **R10**   **Set No. 1**

IV B.Tech II Semester Supplementary Examinations, April/May - 2017
OPERATING SYSTEMS
(Electronics and communication Engineering)

Time: 3 hours   Max. Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1 a) What are the different I/O communication techniques? Explain briefly?   [8]
   b) Explain briefly about the services of the operating system that are provided to the user's program?   [7]

2 a) What is the main difficulty that a programmer must overcome in writing an operating system for a real time environment? Explain in detail?   [5]
   b) What are the five major activities of an operating system in regard to process management? Write in detail?   [10]

3 a) Draw the flowchart and explain the banker's algorithm in detail.   [8]
   b) Describe the differences between short term, medium term, ling term scheduling.   [7]

4   Write short notes on the following:
      (i) deadlock avoidance   (ii) resource ranking   (iii) deadlock resolution.   [15]

5 a) Explain about the memory allocation model for a process?   [7]
   b) What are the techniques used to perform memory allocation? Explain them briefly?   [8]

6 a) Explain about the typical DMA block diagram and its configurations?   [7]
   b) Explain briefly about the shortest job first scheduling algorithm?   [8]

7   Write a short notes on the following:
      (i) access methods   (ii) file system organization   (iii) files types   [15]

8 a) Explain about the nature, structure and types of viruses?   [8]
   b) Write in detail about the password selection strategies?   [7]