K- 19/2111

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Note : (i) Attempt two questions each from Section A and Section B. Each question carry 10.5 marks.

(ii) Attempt all parts from Section C. Each part carries 4 marks

Section A

1. List in detail the services provided by an operating system.
2. Differentiate between long term schedulers and short term schedulers. Explain the working of Round Robin Scheduling Algorithm.
3. What are the necessary and sufficient conditions for deadlock to occur?
4. Write a note on various file allocation methods.

Section B

5. Diagrammatically show and explain the features of muti-partition memory allocation with fixed number and variable number of tasks.
6. What is virtual memory? How it is implemented?
7. What are various goals of protection? How they are achieved?
8. What is cryptography? Explain in detail.

Section C

9. Attempt all parts
   (i) What is real time operating system?
   (ii) Differentiate between page and segment.
   (iii) What is logical address space?
   (iv) What is thrashing?
   (v) What are different program and system threats?
   (vi) Differentiate between process and thread.
   (vii) Give importance of user authentication.