

**Goa Vidyaprasarak Mandal's**  
**Gopal Govind Poy Raiturcar College of Commerce and Economics**  
**Farmagudi, Ponda-Goa.**

**B.C.A. (Semester - II) Examination – March/April 2014**

**OPERATING SYSTEM CONCEPTS**

**Duration : 2 hours**

**Marks : 50**

**Instructions :** A.) *All the questions are compulsory.*  
B.) *Draw neat diagrams with pencil wherever required.*

- I. 1. State whether the following statements are True or False. (1mk x 5 = 5 mks)
- a) A deadlock detection algorithm must be invoked to determine whether a deadlock has occurred.
  - b) The page number is used as an index into a page table.
  - c) If one site fails in distributed system, the remaining sites cannot continue operating.
  - d) The processors in distributed system must not vary in size and function.
  - e) A logical extension of computation migration is process migration.
2. Answer the following. (1mk x 5 = 5 mks)
- a) What is Kernel ?
  - b) What is Main memory ?
  - c) What is Synchronization ?
  - d) What is System bus ?
  - e) What is Operating system?
- II. 1. Explain the Demand Paging. (2 mks)
2. Explain the Contiguous Memory Allocation. (3 mks)
3. Explain the Process Control Block with the diagram. (5 mks)

III. 1. Explain the major services of the Operating System. (2 mks)

2. Explain the concepts of File System. (3 mks)

3. Explain the Critical-Section Problem. (5 mks)

IV. 1. Explain the Cryptography as a Security tool. (2 mks)

2. Explain the design issues in Distributed Operating System. (3 mks)

3. Explain the Segmentation with an example. (5 mks)

V. 1. Explain the Resource Management in Web based Operating System. (2 mks)

2. Explain the use of Access Matrix. (3 mks)

3. Explain the SSTF Scheduling with the diagram. (5 mks)

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