

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

**B.C.A. (Semester - II) Examination, April 2017**  
**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. (1 mk x 5 = 5 mks)
- Main Memory is also referred as Primary Memory.
  - Operating System is a Resource Allocator.
  - Resident Monitor is software always in Memory.
  - A pair of base and limit registers does not define the logical address space.
  - Access Matrix design does not separate mechanism from policy.
2. Answer the following. (1 mk x 5 = 5 mks)
- What is Instruction Execution ?
  - What is a Deadlock ?
  - What is Kernel thread ?
  - What is Virtual Memory ?
  - What is External Fragmentation ?
- II. 1. Explain the Synchronization in Distributed Systems. (2 mks)
2. Explain the Segmentation with an example. (3 mks)
3. Explain the Process Control Block with the diagram. (5 mks)
- III. 1. Explain the major functions of an Operating System. (2 mks)
2. Explain Acyclic-Graph Directories. (3 mks)
3. Explain the Readers-Writers Problem. (5 mks)
- IV. 1. Explain the System and Network Threats. (2 mks)
2. Explain the Design issues of Distributed Operating System. (3 mks)
3. Explain the Circular-SCAN Scheduling with an example. (5 mks)
- V. 1. Explain the Asymmetric Encryption. (2 mks)
2. Explain the advantages of Web based Operating System. (3 mks)
3. Explain the Optimal Page Replacement with an example. (5 mks)

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