

**UNIVERSITY EXAMINATIONS:**  
**ASSIGNMENT ONE.**  
**COMPUTER ORG & ARCHITECTURE**

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**Time: 2 Weeks**

**INSTRUCTIONS:**

- *Attempt All Questions and present your work observing intellectual property guidelines.*
- *Research in the reference Books provided in our course outline and any other resource material available for you to answer the following research topics.*
- *Duration **2 Weeks***
- *Submission Type – **Hand written in clean full scups with Cover Page 5Pages & above.***
- *Total Marks a ward **(20 Marks)***

**Question One:**

**( Read on Threads & multiprocessing and debate on the following topics)**

- a) THREADS and its benefits in operating systems. [5 Marks]
- b) Dining philosophers' problems. [5 Marks]
- c) Concurrency, Mutual exclusion & synchronization in operating systems. [15 Marks]

**Research Materials:**

**Textbooks**

Andrew S. Tanenbaum(2007), Modern Operating Systems (3rd Edition),Prentice Hall; 3 edition, ISBN-10: 0136006639, ISBN-13: 978-0136006633

Abraham Silberschatz(2008), Peter B. Galvin and Greg Gagne, Operating System Concepts, Wiley; 8 edition, ISBN-10: 0470128720, ISBN-13: 978-0470128725

**Books and materials for further reading**

Gary B. Shelly , Steven M. Freund , Misty E. Vermaat(2010) , Introduction to Computers , Course Technology; 8 edition,ISBN-10: 143908131X, ISBN-13: 978-1439081310

Rohit Khurana(2011), Operating Systems, Vikas Publishing House Pvt Ltd, ISBN-10: 8125942424, ISBN-13: 978-8125942429

Journal of operating systems

Internet resources. [http://en.wikipedia.org/wiki/Dining\\_philosophers\\_problem](http://en.wikipedia.org/wiki/Dining_philosophers_problem)

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*Good Luck & Blessings By Chris Alukwe*