

Total No. of Questions :6]

SEAT No. :

P292

[Total No. of Pages :2

Oct./BE/Insem. - 610

B.E. (Information Technology)

Multicore and Concurrent Systems (Elective - I)

(2015 Course) (Semester I) (414456 D)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Answer Question 1 or 2, 3 or 4, 5 or 6.*
- 2) *Neat Diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*

Q1) a) Discuss Limitations and challenges with respect to Intrusion detection system (IDS) **[5]**

b) Explain information security concepts and types of security attacks. **[5]**

OR

Q2) a) Explain different security architecture operation models **[5]**

b) Write short note on Security Threats and Vulnerabilities **[5]**

Q3) a) Explain pipeline decomposition pattern with example **[5]**

b) Explain Master-worker Program structure patterns **[5]**

OR

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- Q4)** a) Explain Map-reduce program structure patterns [5]
b) Explain Event-based coordination/decomposition with Example [5]

- Q5)** a) Explain the concept of thread, Semaphore, and Monitor [5]
b) Differentiate between Dynamic vs. Static thread management [5]

OR

- Q6)** a) Explain how semaphore is used to solve Readers Writers Problem. [5]
b) Explain how semaphore is used to solve Bounded Buffer (or Producer and Consumer) Problem [5]

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