APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST SEMESTER M. TECH DEGREE EXAMINATION
Computer Science and Engineering
(Computer Science and Systems Engineering)
04CS6413 – Computer Systems Engineering

Max. Marks : 60   Duration: 3 Hours

PART A
Answer All Questions
Each question carries 3 marks

1. How does modularity help in reducing complexity?
2. Why is the study of Systems Engineering relevant in Computer Science Engineering?
3. What is the need for Atomicity?
4. Write a short note on Virtual memory.
5. Distinguish between MTTF and MTTR.
6. What do you mean by All -or -nothing atomicity?
7. Define the term reconcilation.
8. What is the need for key exchange protocols?

PART B
Each question carries 6 marks

9. Explain about Software Capability Maturity Model.

OR

10. Write a paragraph explaining what is meant by the statement " Systems engineering focused on the system as a whole." State what characteristics of a system you think this statement implies, and how they apply to systems engineering.

11. When modularity between a client and a service is enforced, there is no way for errors in the implementation of the service to propagate to its clients. True or false? Explain.

OR

12. How do you enforcing modularity with Virtualization?

13. Illustrate Page replacement algorithms with suitable examples.

OR

14. What do you meant by error masking? And also explain about Software fault and Hardware fault.

15. Give a brief note on fault tolerance mechanism in Memory systems.

OR

16. Explain the relevance of redundancy in fault tolerance.

17. Explain about atomicity enforcement for threads.

OR

18. With a neat sketch explain in detail about Replicated state machine.

19. Explain in detail about various authenticating principals used in Information security.

OR

20. Explain Diffie -Hellman Key exchange protocol with an example.