APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST SEMESTER M. TECH DEGREE EXAMINATION

Computer Science and Engineering
(Computer Science & Systems Engineering)
04CS6413 – Computer Systems Engineering

Max. Marks : 60   **Duration: 3 Hours**
PART A
Answer All Questions
Each question carries 3 marks

1. Explain waterbed effect.
2. How does RPC design handle no-response failure case?
3. Describe the various congestion control strategies in networks
4. Correlate between Availability and Mean Time to Failure.
5. What do you mean by atomicity? What are the different types of atomicity?
6. What are the three common logging configurations in all or nothing atomicity?
7. Compare Write through and non-write through cache.
8. What are the safety net principles to enforce security

PART B
Each question carries 6 marks

9. Differentiate between Software Engineering and Software Systems Engineering. What are the phases of Software systems Engineering

OR

10. Categorize the common problems of Systems in various fields with a note on each category.

11. Illustrate the entire operation of DNS when the client computer ginger.cse.pedantic.edu tries to resolve the domain name ginger.Scholarly.edu.(Use appropriate type NS/AP in the table or in the response)

OR

12. What are the different methods of coping with complexity

13. Explain various page replacement algorithms.

OR

14. How address Translation is done using page map.

15. What are the issues involved while connecting an Ethernet to a packet forwarding network.

OR

16. Give an overview of the fault-tolerance design process.

17. Discuss the methods for achieving All or Nothing Atomicity

OR

18. Compare and Contrast All-or-nothing and Before-or-after atomicity.

19. Describe Cache Coherence.

OR

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