

ACFCSE

Register No.

2018

COMPUTER/ COMPUTER SCIENCE ENGINEERING

Duration : 3 Hours

Max. Marks : 300

General Instructions to the Applicants :

- i) This Question Paper is descriptive type in Degree Standard.
- ii) There is no reservation of marks for neatness of execution and correctness of spelling in respect of this paper.

TNPSC SPECIMEN

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PART — A

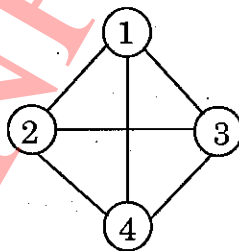
Note : i) Answer not exceeding 50 words each.

ii) Each question carries three marks.

iii) Answer any thirty questions only out of thirty five Questions.

(30 × 3 = 90)

1. Give the syntax of declaring a function pointer and give the meaning of (int(*func) (int a, float b) :
2. Write statement to allocate contiguous space for n blocks each size of elements size bytes.
3. Does the C language Permit comparison of one structure variable with another structure variable. Comment
4. How does binary Search tree be differ from binary tree.
5. When and whom introduced AVL tree and what is special?
6. Give the adjacency Matrix of the following Graph.



7. What is a direct mapping cache organization?

8. What is meant by Overlapped Register Windows?
9. What are the differences that exist between the Central computer and each peripheral?
10. List the operations performed by the Semaphore as a integer variable.
11. State the characteristics of a monitor.
12. What is rendezvous?
13. Give the reasons for Bucket overflow.
14. Compare and contrast between BCNF and 3NF.
15. Give the two phases of locking protocol.
16. Define delay spread.
17. What is meant by Inter Symbol Interference (ISI)?
18. What is multiplexing?
19. What are the programming languages used in PaaS?

20. Compare homogeneous cloud and heterogeneous cloud.
21. What is Vulnerability? Give its causes.
22. What is an interrupt?
23. List out the special features of Embedded C programming.
24. Differentiate between cross compiler and cross assembler.
25. Find the hamming distance for the following values
- (a) d(000, 011)
 - (b) d(10101, 11110)
 - (c) d(1111, 1111)
26. Write the maximum length coverage and medium used for each of the listed Ethernet Implementation.
- (a) 10 Base 5
 - (b) 10 Base T
 - (c) 10 Base F
27. Define fragmentation.
28. What is the purpose of Conducting Audit trails?
29. What is regression testing?

30. What is Smoke testing?
31. Is it Permissible to pass unions to functions, passing pointers to Unions – Justify.
32. List out graph traversal methods.
33. Give any three advantages of DMA transfer.
34. Define Consumable resources. Give few examples for it.
35. What is Query Optimization?

PART — B

Note : i) Answer not exceeding 100 words each.

ii) Each question carries eight marks.

iii) Answer any fifteen questions only out of eighteen Questions.

(15 × 8 = 120)

36. List out the user requirements needed for a system.
37. Illustrate state transition diagram of TCP.
38. Explain the use of Architecture Description Languages [ADL].
39. List out and explain the limitations of Cloud Computing.
40. What are the three fundamental propagation behaviors of radio waves depending on their frequency?

41. Explain about Three Tier Client Server architecture for Web applications.
42. Illustrate single threaded and multi threaded process Model.
43. Explain how a T-flipflop can be obtained from JK flipflop and D-flipflop.
44. Sort the following set of numbers using Quick sort and analyse it.
(26, 5, 37, 1, 61, 11, 59, 15, 48, 19)
45. Write a program to transpose a 3×3 matrix.
46. Write a program to find the length of a string.
47. Explain in detail about Software Reengineering.
48. Give the program to Evaluate $X = (A - B) * (-D)$ on a RISC machine.
49. Define Non preemptive Scheduling. List any two preemptive Scheduling. With the help of Gantt chart explain the scheduling.
50. Describe about Three Schema architecture of database system with suitable diagram.
51. Explain Space, frequency and time division multiplexing.
52. Explain the characteristics of Virtualized environment in Cloud.
53. Describe the classification of embedded Systems.

PART — C

- Note :**
- i) Answer not exceeding 200 words each.
 - ii) Each question carries fifteen marks.
 - iii) Answer any six questions only out of nine questions.

(6 × 15 = 90)

54. Write a program to overload + and <= for performing string operations.
+ for adding two strings.
<= for comparing two strings.
55. List out and explain the various rotations used in AVL tree.
56. Simplify the Boolean function
 $F(w, x, y, z) = \sum(0, 1, 2, 4, 5, 6, 8, 9, 12, 13, 14)$ using K-map method.
57. Discuss various security issues to be considered while designing operating system.
58. Describe in detail about the real time applications of Databases.
59. Explain about Spiral model with suitable illustrations.
60. Elaborate OSI reference Model.
61. Discuss the steps involved in Embedded System Design Process.
62. Explain Cloud Computing reference model.