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TNPSC ACF

**Previous Year Paper
(Computer Science) 2018**



ACFCS

Register No.

2018

COMPUTER SCIENCE

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.



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COMPUTER SCIENCE

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. What do you mean by acceptance of string by PDA?
2. What is the value of $a * (a \oplus b)$?
3. What is meant by "Volatile memory"?
4. What is "guard bits"?
5. Why is data bus bidirectional?
6. What is the difference between main memory and auxiliary memory?
7. Differentiate address space and Physical address.
8. Differentiate between break and continue statement.
9. How are the elements of an array stored in memory?

10. Distinguish between a tree and a binary tree.
11. Why an array is called a derived data type?
12. What do you mean by loader?
13. What is Linker? Give its responsibilities?
14. What is the use of Lexical analysis in compiler?
15. What are the elements of Transport Protocols?
16. What is Lossy-decomposition?
17. List out any three types of Armstrong's axioms.
18. What is the use of Data Dictionary?
19. What is the use of COUNT() function in SQL?
20. What is meant by "Demodulation"?
21. What is meant by Congestion?
22. What is "Multicast routing"?

23. What is meant by Address Resolution Protocol?
24. What are the elements of design model?
25. What are the different types of cohesion?
26. What are the objectives of testing?
27. Distinguish between alpha and beta testing.
28. What is the purpose of display processor?
29. What do you mean by scan conversion?
30. What do you mean by clip window?
31. Define class in Java.
32. What is function prototype?
33. How to read data from file in Java?
34. What are HTML Tags?
35. Define the structure of E-mail.

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. Write a Context Free Grammar for the language $L(G) = \{a^n b a^n / n \geq 1\}$.
37. What is a tristate logic? Why it is needed in microprocessor system?
38. Explain how DMA is initiated.
39. Explain the Read and Write operation of associative memory.
40. Describe the Heap sort with an example.
41. What are the operation performed on two dimensional arrays? Explain.
42. Write a brief note on :
- (a) Multi programming system
 - (b) Time-sharing systems.

43. Briefly discuss on Hardware and control structures required for implementing Virtual Memory.
44. Explain the structure of a B⁺ Tree.
45. What are table spaces? Explain the characteristics of Tables spaces?
46. Compare the virtual circuit and datagram subnet.
47. Explain various types of MODEMS and specify need of scrambler in the same.
48. Explain system engineering process Life cycle.
49. Explain in detail about the design concepts.
50. Explain the Graphical input functions.
51. Explain the 2D transformations.
52. Explain the concept of operator overloading with an example.
53. Explain Navigation tools and its applications.

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. Explain the different mapping techniques in Cache memory.
55. Explain the Bubble sort and its procedure with algorithm.
56. Explain the types (Any Four) of Software Testing.
57. What is the need for normalisation? Explain the different types of normal form.
58. Explain the different layers in the OSI model.
59. Explain the multimedia used in Animation, Video and Digital Movie tools.
60. Explain Cohen–Sutherland line clipping algorithm.
61. Explain the concept of virtual functions in C++ with example.
62. Explain the Architectural overview of World Wide Web (WWW).