

# SYLLABUS: PGT Informatics Practices/ Computer Science in NDMC

1. The computer system; computer components, computer functions, interconnection structures, computer memory system overview, semi-conductor main memory cache memory, advanced DRAM organisation, external devices, I/o modules, programmed I/o, interrupt driven I/o, direct memory access.
2. The central processing unit; computer arithmetic, instructions sets, assembly language.
3. Operating systems; introduction, operating system organization, device management, process management, scheduling mechanism, synchronization principles, deadlocks, memory management, file management.
4. Digital electronics; fundamental concepts, number system and codes.
5. Combinational logic design; multiplexers, flick-flops, sequential logic design.
6. Programming fundamentals; basic computer organisation, problem solving approaches.
7. Programming tool; visual basic.
8. Introduction to programming- modular programming, object oriented programming, event driven programming
9. Data structure
10. Programming in C++, Constructor and destructor, Data file handling, Pointers
11. Relational data base management system
12. Business computing
13. Web development
14. Web scripting
15. Multi media and authoring tools
16. Image formats
17. Concept of frame
18. Communication and network concept
19. Design and analyses of algorithms
20. Artificial Intelligence
21. Information security
22. Data base systems and implementations
23. Electronic commerce
24. Cryptography
25. Distributed computing
26. Modelling and simulation
27. Special topics in soft computing/ computer networks
28. Advanced operating systems
29. Data mining
30. Advanced computer networking
31. Numerical computing
32. Computational linguistic
33. Digital image processing and multi media

*Topics of syllabus-Teaching Education and Methodology:-*

1. Learning & Teaching
2. Language across the curriculum
3. Understanding discipline and subject
4. Gender school and Society
5. Pedagogy of a school subject
6. Knowledge and curriculum
7. Assessment for learning
8. Creating an inclusive school
9. Childhood and growing up
10. Drama and Art in Education