

11TH STANDARD NEW SYLLABUS
LIST OF 2 MARKS & 3 MARKS QUESTIONS
UNIT - I FUNDAMENTALS OF COMPUTER AND WORKING WITH
TYPICAL OPERATING SYSTEMS
CHAPTER - 1 INTRODUCTION TO COMPUTERS

1. What is Computer?
2. Who is Charles Babbage?
3. Define Vacuum Tube.
4. List the Merits and Demerits of Transistors?
5. What is ENIAC?
6. Define Data and Information.
7. What is Data Processing?
8. Define Hardware and Software.
9. Define IPO Cycle.
10. What is Input Unit?
11. What is CPU?
12. Define ALU?
13. What is Control Unit?
14. Define Output Unit.
15. What are the types of Memory?
16. What is Memory Unit?
17. Define Keyboard.
18. Define Mouse.
19. What are the different types of mouse?
20. Differentiate Optical and Laser Mouse?
21. What are the Mouse actions?
22. Define Scanner
23. What is meant by Track Ball?
24. What is Finger Print Scanner?
25. What is Retinal Scanner?
26. What is Light Pen?
27. What is meant by OCR?
28. What is Bar Code Reader?
29. What is QR Code Reader?
30. What is meant by Microphone?
31. What is Digital Camera?
32. What is Touch Screen?
33. Define Keyers.
34. What is Monitor?
35. Define Plotter.



36. Define Printer. What are the types of Printer?
37. What is Impact Printer?
38. What is Non – Impact Printer?
39. What is Dot – Matrix Printer?
40. What is meant by Line Printer?
41. What is Laser Printer?
42. What is Inkjet Printer?
43. Define Speaker
44. What is Multimedia Projector?
45. What are the types of Booting?
46. Define Cold Booting
47. Define Warm Booting
48. What is NLP?
49. What is Robot?
50. What is High – level Language?
51. Define Assembly Language
52. What is Punched Card?
53. What is Bio – Engineering?
54. Define Nanotechnology

CHAPTER – 2 NUMBER SYSTEMS

55. What is Data?
56. What is meant by Bit?
57. What is Nibble?
58. What is Word Length?
59. What is called Byte?
60. Define Computer Memory
61. How the Memory is represented in the Computer?
62. What are the different Number systems?
63. What is Base or Radix in the Number System?
64. What is Decimal Number System?
65. What is Binary Number System?
66. What is Octal Number System?
67. What is Hexa - Decimal Number System?
68. What are the Methods to Convert Decimal Number to Binary?
69. Write the steps to convert the fractional Decimal to Binary?
70. Write the steps to convert the Binary to Decimal?
71. Write the steps to convert the Binary to Octal?
72. Write the steps to convert the Binary to Hexa - Decimal?
73. Write the steps to convert the fractional Binary to Decimal?
74. Write the steps to convert the Octal to Binary?



T. THIRUMALAI, M.SC(CS), B.ED.,
Cell: 9750827717, 7010154722
thirumalaibca.46@gmail.com

75. Write the steps to convert the Hexa - Decimal to Decimal?
76. What is called as Signed Magnitude?
77. Write the steps to be followed to find 1's complement of a number?
78. Write the steps to be followed to find 2's complement of a number?
79. List the several encoding schemes used in the computer?
80. Write a note on BCD?
81. Write a note on ASCII?
82. Write a note on EBCDIC?
83. Write a note on ISCII?
84. Write a note on Unicode?

PART - II BOOLEAN ALGEBRA

85. Define Boolean algebra
86. What are the Logical Operations in Boolean algebra?
87. What is meant by Truth Table?
88. Define AND Operator
89. Define OR Operator
90. Define NOT Operator
91. Define NAND Operator
92. Define NOR Operator
93. Define Gate
94. What are Fundamental Gates?
95. What are Derived or Universal Gates?
96. Define AND Gate
97. Define OR Gate
98. Define NOT Gate
99. Define NAND Gate
100. Define NOR Gate
101. Define Bubbled AND Gate
102. Define Bubbled OR Gate
103. What is XOR Gate?
104. What is XNOR Gate?



T. THIRUMALAI, M.SC(CS), B.ED.,
Cell: 9750827717, 7010154722
thirumalaibca.46@gmail.com

CHAPTER - 3 COMPUTER ORGANIZATION

105. What is Microprocessor?
106. What are the Components of Microprocessor?
107. What are the Characteristics of Microprocessor?
108. Define Hertz
109. What is Clock Speed?
110. What is Instruction Set?

111. What are the types of Operations carried in Instruction Set?
112. What is Word Size?
113. What is Program Counter?
114. What is MDR?
115. What is MAR?
116. What is meant by Bus?
117. What are the different types of Bus?
118. What is Read/Write Operation?
119. What is the Classification of Microprocessors based on data width?
120. Define RISC
121. What are the examples of RISC?
122. Define CISC
123. What are the examples of CISC?
124. How many types of accessing methods to access the memory?
125. Define RAM
126. What are the types of RAM?
127. Define ROM
128. Define PROM
129. Define EPROM
130. Define EEPROM
131. What is Cache Memory?
132. What is Access Time?
133. What is called Backup Storage?
134. What is Hard Disk?
135. What is Compact Disk?
136. What is DVD?
137. What is Flash Memory?
138. What are the various types of Port?
139. What is Blu- Ray disc?
140. Define HDMI



T. THIRUMALAI, M.SC(CS), B.ED.,
Cell: 9750827717, 7010154722
thirumalaibca.46@gmail.com

CHAPTER - 4 THEORETICAL CONCEPTS OF OPERATING SYSTEM

141. What are the types of Software?
142. Define Application Software
143. Define System Software
144. Define OS
145. What are the Functions of an Operating System?
146. List some of the Operating Systems?
147. What is the need of an Operating System?
148. What are the main uses of Operating System?
149. What are the types of Operating System?

150. Define Single Operating System
151. Define Multi-user Operating System
152. What is meant by User Interface?
153. What is GUI?
154. What are the following points are considered when User Interface is designed for an application?
155. What is Memory Management?
156. What are the objectives of Memory Management?
157. What are the categories of Process Management?
158. Define FIFO
159. What is SJF?
160. What is Round Robin?
161. Define Based on Priority
162. What are the levels of Security?
163. Define FAT
164. What is parallel processing?
165. What is Time – Sharing?
166. What is Distributed Operating System?
167. What are the Advantages of Distributed Operating System?
168. What is UNIX?
169. What is Linux?
170. What are the few distributions of Linux?
171. What is Microsoft Windows?
172. What is Android?
173. What is iOS?

CHAPTER – 5 WORKING WITH TYPICAL OPERATING SYSTEM
WORKING WITH WINDOWS

174. What are the Functions of Operating System?
175. What are the most popular Operating Systems?
176. Define Multitasking
177. What are the Functions of Windows Operating System?
178. What are the various versions of Windows?
179. Mention the special features of windows 2000?
180. Mention the special features of windows 2010?
181. Mention the special features of windows 8?
182. Mention the special features of windows 7?
183. What are the Mouse actions?
184. Define Desktop
185. Define Icon
186. What are called Standard Icons?



T. THIRUMALAI, M.SC(CS), B.ED.,
Cell: 9750827717, 7010154722
thirumalaibca.46@gmail.com

187. What are the standard icons available in the computer?
188. What is called as Shortcut icon?
189. Define Disk Drives
190. What is meant by Window?
191. What is meant by Application Window?
192. What is meant by Document Window?
193. What are the elements of a window?
194. Define Menu Bar
195. Define Taskbar
196. How to start and close the application?
197. Define Word pad
198. Differentiate the Cut and Copy in files and folders?
199. How to delete the file and folder?
200. Define Recycle bin
201. How to create the shortcuts on the Desktop?
202. How will you Shutdown the Computer?
203. Define Log Off and Restart

UNIT – II CHAPTER – 6 SPECIFICATION AND ABSTRACTION

204. Define Algorithm
205. Difference between Algorithm and a Process?
206. What is meant by Data?
207. Define Variables
208. What is Control Flow?
209. Define Sequential Control Flow
210. Define Alternative Control Flow
211. Define Iterative Control Flow
212. Define Functions
213. What is meant by Specification?
214. What is meant by Abstraction?
215. What is Composition?
216. What is Decomposition?
217. What is Input – Output relation?
218. Define Double Dash.
219. Write the parts of the Specification format?
220. Write the specification of an algorithm to compute the quotient and remainder after dividing an integer A by another integer B?
221. Write the specification of the algorithm to find the square root of the number?
222. Write the specification of the algorithm to find the minimum of two numbers?
223. Write the specification of the algorithm to find the addition of three numbers?
224. What is meant by State?



T. THIRUMALAI, M.SC(CS), B.ED.,
Cell: 9750827717, 7010154722
thirumalaibca.46@gmail.com

- 225. What is Assignment Statement?
- 226. Difference between Assignment Operator and Equality Operator?
- 227. How state is represented in algorithms?

CHAPTER – 7 COMPOSITION AND DECOMPOSITION

- 228. What is Programming Language?
- 229. Define Pseudo code
- 230. What is meant by Flowchart?
- 231. What are the Symbols in Flowchart?
- 232. What are the Disadvantages of Flowchart?
- 233. What is Conditional Statement?
- 234. What is Refinement?
- 235. Define Compound Statements
- 236. What is Decomposition?
- 237. Distinguish between a condition and a statement?
- 238. Draw a flowchart for conditional statement?
- 230. What is difference between algorithm and a program?
- 240. What is case analysis?



T. THIRUMALAI, M.SC(CS), B.ED.,
Cell: 9750827717, 7010154722
thirumalaibca.46@gmail.com

CHAPTER – 8 ITERATION AND RECURSION

- 241. What is Invariant?
- 242. What is Loop invariant?
- 243. What is Iteration?
- 244. Define Recursion
- 245. What is meant by Loop Invariant?
- 246. How to construct a loop?
- 247. What is meant by Recursive Problem Solving?
- 248. What is Invariant of the Assignment?
- 249. Define factorial of a natural number recursively

LIST OF 5 MARKS QUESTIONS

UNIT – I FUNDAMENTALS OF COMPUTER AND WORKING WITH TYPICAL OPERATING SYSTEMS (WINDOWS & LINUX)

CHAPTER – 1 INTRODUCTION TO COMPUTERS

- 1. Explain the basic components of a computer with a neat diagram?
- 2. Discuss the various generations of computers.
- 3. Explain the Various Input Devices?
- 4. Explain the Various Output Devices?

5. Describe the Impact and Non – Impact Printers?
6. Explain the different types of Mouse?



CHAPTER – 2 NUMBER SYSTEMS

7. a) Write the procedure to convert fractional Decimal to Binary
- b) Convert $(98.46)_{10}$ to Binary
8. Find 1's Complement and 2's Complement for the following Decimal number
a) -98 b) -135
9. a) Add $11010102 + 1011012$ b) Subtract $11010112 - 1110102$
10. Explain the different encoding systems used for computer?

PART – II BOOLEAN ALGEBRA

11. Explain the AND, OR, NOT Operator with Truth Table?
12. Explain the NAND and NOR Operator with Truth Table?
13. Explain the Fundamental Gates with Truth Table and Symbol?
14. Explain the Universal Gates with Truth Table and Symbol?
15. Explain the XOR and XNOR Gate with Truth Table and Symbol?
16. Explain the Bubbled OR and Bubbled AND Gate with Truth Table and Symbol?

CHAPTER – 3 COMPUTER ORGANIZATION

17. Explain the Characteristics of Microprocessor?
18. Explain the Types of Microprocessor?
19. Explain RAM and its types?
20. What are the different types of ROM?
21. Explain the Secondary Storage Devices?
22. Explain the Ports and Interfaces?
23. How the read and write operations are performed by a processor? Explain?

CHAPTER – 4 THEORETICAL CONCEPTS OF OPERATING SYSTEM

24. Explain the Need and Uses of Operating System?
25. Define User Interface and write the points to be considered when user interface is designed?
26. Explain the Algorithms that are used to allocate the Job?
27. Explain the concept of a Distributed Operating System
28. Explain the Prominent Operating Systems?

CHAPTER – 5 WORKING WITH TYPICAL OPERATING SYSTEM PART – I WORKING WITH WINDOWS

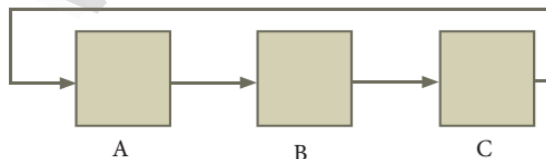
29. Describe the Various Versions of Windows?
30. What are the Elements of a Window? Explain it briefly?
31. What are the methods are there to create a New Folder?
32. What are the methods to Rename the Files or Folders?
33. Explain how to Copying Files and Folders to removable disk?
34. Explain methods to save and open a file in windows.

UNIT – II CHAPTER – 6 SPECIFICATION AND ABSTRACTION

35. Write the specification of an algorithm hypotenuse whose inputs are the lengths of the two shorter sides of a right angled triangle, and the output is the length of the third side.
36. Exchange the contents: Given two glasses marked A and B. Glass A is full of apple drink and glass B is full of grape drink. For exchanging the contents of glasses A and B, represent the state by suitable variables, and write the specification of the algorithm.
37. What are the Algorithm Design Techniques? Explain it?

CHAPTER – 7 COMPOSITION AND DECOMPOSITION

38. Explain the Sequential Statement?
39. Explain the Alternative Statement?
40. Explain the Iterative Statement?
41. Explain the Case Analysis?
42. Exchange the contents: Given two glasses marked A and B. Glass A is full of apple drink and glass B is full of grape drink. Write the specification for exchanging the contents of glasses A and B, and write a sequence of assignments to satisfy the specification.
43. Circulate the contents: Write the specification and construct an algorithm to circulate the contents of the variables A, B and C as shown below: The arrows indicate that B gets the value of A, C gets the value of B and A gets the value of C.



44. Decanting problem. You are given three bottles of capacities 5 ,8, and 3 litres. The 8L bottle is filled with oil, while the other two are empty. Divide the oil in 8L bottle into two equal quantities. Represent the state of the process by appropriate variables. What are the initial and final states of the process? Model

the decanting of oil from one bottle to another by assignment. Write a sequence of assignments to achieve the final state.

45. Trace the step-by-step execution of the algorithm for factorial(4).

factorial(n)

-- inputs : n is an integer , $n \geq 0$

-- outputs : $f = n!$, $i := 1$, 1

while $i \leq n$, $f := f \times i$, $i+1$

CHAPTER – 8 ITERATION AND RECURSION

46. There are 7 tumblers on a table, all standing upside down. You are allowed to turn any 2 tumblers simultaneously in one move. Is it possible to reach a situation when all the tumblers are right side up? (Hint: The parity of the number of upside down tumblers is invariant.)
47. A knockout tournament is a series of games. Two players compete in each game; the loser is knocked out (i.e. does not play any more), the winner carries on. The winner of the tournament is the player that is left after all other players have been knocked out. Suppose there are 1234 players in a tournament. How many games are played before the tournament winner is decided?
48. King Vikramaditya has two magic swords. With one, he can cut off 19 heads of a dragon, but after that the dragon grows 13 heads. With the other sword, he can cut off 7 heads, but 22 new heads grow. If all heads are cut off, the dragon dies. If the dragon has originally 1000 heads, can it ever die?
(Hint: The number of heads mod 3 is invariant.)
49. Assume an 8×8 chessboard with the usual coloring. "Recoloring" operation changes the color of all squares of a row or a column. You can recolor repeatedly. The goal is to attain just one black square. Show that you cannot achieve the goal. (Hint: If a row or column has b black squares, it changes by $(|8 - b) - b|$).
50. A single-square-covered board is a board of $2n \times 2n$ squares in which one square is covered with a single square tile. Show that it is possible to cover the this board with triominoes without overlap.

UNIT – III INTRODUCTION TO C++

CHAPTER – 9 C++

51. Write about the Binary Operators used in C++?
52. Explain the Bitwise Operators with example?
53. Describe the I/O Operator with Cascading?
54. What are the basic elements of the C++ program?
55. What are the main steps to create and execute the C++ program?
56. How to work with Dev C++?



T. THIRUMALAI, M.SC(CS), B.ED.,
 Cell: 9750827717, 7010154722
 thirumalaibca.46@gmail.com

57. What are the different types of Errors in Dev C++?
58. Assume a=15, b=20; What will be the result of the following operations?
a) a&b b) a|b c) a^b d) a>>3 e) (~b)
59. Write a C++ Program to find the Curved Surface Area of a cylinder (CSA)
(CSA = 2 pi r * h)?
60. Write a C++ Program to Calculate Net Salary?
61. Write a C++ program to find the perimeter and area of a quadrant.
62. Write a C++ program to find the area of triangle.
63. Write a C++ program to convert the temperature from Celsius to Fahrenheit.
64. Write a C++ to find the total and percentage of marks you secured from 10th Standard Public Exam. Display all the marks one-by-one along with total and percentage. Apply formatting functions.

CHAPTER - 10 FLOW OF CONTROL

65. Write the Syntax for i) If Nested inside if part, ii) If Nested inside else part, iii) If Nested inside both if and else part
66. Draw the Flowchart for i) If Nested inside if part, ii) If Nested inside else part, iii) If Nested inside both if and else part
67. Write the Syntax and Flowchart for if-else-if ladder?
68. Explain Switch Statement with an example?
69. Explain the Rules for Switch Statement?
70. Describe the Key Differences between if – else and switch?
71. Describe the Nested Switch with Syntax and Example?
72. What are the parts of the Loop in the Iteration Statement?
73. Explain the For Loop with Syntax and Example?
74. Explain the While Loop with Syntax and Example?
75. Explain the Do – While Loop with Syntax and Example?
76. Explain the Jump Statements with Syntax and Example?
77. Write a C++ Program to find the LCM and GDC of two numbers?
78. Write a C++ Program requires the user to enter two numbers and an operator. It then carries out the specified arithmetical operation: addition, subtraction, multiplication or division of the two numbers. Finally, it displays the result.
79. Write a C++ Program to print whether a given character is an uppercase or a lowercase character or a digit or any other character. use ASCII codes for it. The ASCII codes are as given below:
Characters ASCII Range '0' - '9' 48 - 57 'A' - 'Z' 65 - 90 'a' - 'z' 97 - 122 other characters 0-255 excluding the above mentioned codes.
80. Write a C++ Program to calculate the factorial of an integer.
81. Write a C++ Program that print 1 2 4 8 16 32 64 128.
82. Write a C++ Program to generate divisors of an integer.
83. Write a C++ Program to print Fibonacci series i.e., 0 1 1 2 3 5 8.....



T. THIRUMALAI, M.SC(CS)., B.ED.,
Cell: 9750827717, 7010154722
thirumalaibca.46@gmail.com

84. Write a C++ Program to get the following output

```
A
A B
A B C
A B C D
A B C D E
A B C D E F
```

85. Write a C++ Program to get the following output

```
5 4 3 2 1
5 4 3 2
5 4 3
5 4
5
```

86. Write a C++ Program to get the following output

```
#####
#####
###
#
```

87. Write a C++ Program to check whether square root of a number is prime or not.

88. Write a C++ Program to find sum of the series $S = 1 + x + x^2 + \dots + x^n$



T.THIRUMALAI, M.SC(CS),B.ED.,
Cell: 9750827717, 7010154722
thirumalaibca.46@gmail.com