GRADE XI COMPUTER SCIENCE - QUESTION BANK 2019

SECTION – II [6 x2 = 12 Marks]

Unit - I

1. Draw the logical symbol of AND, OR gate*
2. What is software? What are the types of software?
3. Write about the mechanism of optical mouse.
4. Draw the truth table for NAND operator.*
5. Define Multitasking.
6. Write the significant features of monitor.
7. What are the various file access mode?
8. Give the specific features of Windows 2000.
9. Compare assembly language and machine language.
10. What do you mean by octal number system?*
11. Define data and information with an example.***
12. What is prominent operating system?**
13. Write the process of adding two numbers 2586 and 9237.
14. What are the parameters which influence the characteristics of a microprocessor?
15. Define Timesharing.
16. Draw the logical symbol of bubbled AND gate.
17. List some actions and reactions performed by the mouse.
18. What are the disadvantages of a distributed operating system?
19. Define signed magnitude.
20. Convert the following octal to binary number. i) 147_8 ii) 472_8
21. What are the main algorithms used to allocate the job?
22. What are the different types of coding scheme to represent character set?*
23. What are derived gates?
24. Define Backup storage.
25. What is fault tolerance?
26. Define parallel processing.
27. Draw the diagram to represent bus connectivity between cpu and memory.*
28. How will you rename a file or folder using a menu?
29. Define word size.
30. Write some functions of OS.
31. Write about session and network indicator.**
32. What is meant by Hard Disk?
33. Write the 1's and 2's complement form for the following -46_{10}*
34. Differentiate cut and copy options.
35. Write a short note on Trackball.
36. Write the size of the following i) Tera Bytes ii) Zetta Bytes
37. What is machine language?
38. List some input and output sockets present in the motherboard.
39. Convert $25f_{16}$ in to equivalent decimal number.
40. What is Boolean Algebra?
41. Why the computers are working with different speed?
42. Write a note on ReactOS.
43. What is word length?
44. Define Unix.

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45. How will you logoff from Ubuntu OS?
46. Write the functions of control unit.
47. What is the use of a file extension?
48. Write a note on Aero peak & Recycle Bin
49. What are the different types of Operating system.*
50. Define FAT and multitasking.
51. What is input device? Give examples.
52. Define network.
53. What is operating system?
54. Convert the following hexadecimal to binary i) $9BC8_{16}$ ii) BE_{16}
55. Differentiate Prom and EPROM
56. Mention the different server distribution in Linux OS
57. Write the important features of an operating system.
58. Distinguish primary and secondary memory.*
59. Convert 888_{10} into its equivalent octal number*
60. Differentiate Static and Dynamic Ram.**
61. What are the features of second generation computers?
62. Differentiate RISC and CISC processor.**
63. Differentiate input and output unit.
64. What do you mean by hibernate in laptops?
65. Write any four output devices.
66. Define instruction*
67. What is the purpose of retinal scanner?
68. What is a computer?
69. What is HDMI?
70. What do you mean by Artificial Intelligence (AI)?
71. What is the function of ALU?*
72. Write the merits and demerits of a third generation computers.
73. Define word length.
74. What is a program counter(PC)?
75. How will you insert audio and video in open office impress?

Unit - II

1. Why is function considered as abstraction?
2. Write the disadvantages of flowcharts.
3. How will you represent the specification in standard format?
4. Define iterative control flow.
5. How do we refine a statement?
6. Define algorithm how you will specify the algorithm.
7. How problems are solved using recursion?
8. What are the benefits of pseudo code?
9. Define sequential control flow statement.
10. Define Decomposition.*
11. If L is a loop variant, then where it is true in the algorithm/
12. Initially Farmer, Goat, Grass, Wolf = LLLL and the farmer crosses the river with goat, model the action with an assignment statement.**
13. Define iteration.
14. What are the steps to be followed when solving a Mathematical problem?

15. What happens when a control flow statement is executed?
16. Show that P-C is an invariant for the assignment p,c:=p+1, c+1
17. What is meant by specification?
18. What is meant by Loop invariant?
19. Specify a function to find the minimum of two numbers.

Unit - III

1. What is meant by output operator?
2. What is wrong with the following declaration?
3. What do you mean by implicit type conversion?***
4. What is dynamic initialization give example?*
5. What is the importance of void data type?*
6. What is the advantage of inline function?**
7. What will be the order of evaluation for the following expression.
   i) I + 3 >= j – 9 ii) a + 0 < P – 3 + 2q
8. What is variable? Why a variable is called a symbolic variable?
9. Write the difference between endl and '\n'?**
10. What is the output for the following program?

```
#include<iostream.h>
 void main()
 {
     int h=10,w=12;
     cout<<"Area of rectangle"<<h+w;
 }
```

11. Write a note on increment and decrement operators.
12. What is the use of references?
13. What is meant by pointer expression? Give example.
14. Differentiate Array and Structure.*
15. What is header file.
16. How will you calculate the surface area of a cylinder using functions?
17. What is the problem happened during explicit conversion?
   i) Double to Float ii) Float to int
18. What do you mean by empty loop? Give an example.
19. What are arithmetic operators in c++? Differentiate Unary and Binary Arithmetic operator?
20. How memory space allocated for an array can be calculated?
21. Define variable initialization and its types.
22. Define Numeric constants and its types.
23 List some rules while naming a variable.*
24. Write a note on getline() function.*
25. What are the fundamental data types in c++?
26. Write a note on comma operator.
27. What is the relationship between loop variant, loop condition and the input output recursively.
28. How the 2-D Array declared?
29. Write the following real constant in to exponent form i) 0.00007 ii) 32.179
30. What does the modulus (%) operator do?
31. What do you mean by non-inline member function? Write its syntax?**
32. Compare Structure and Class in c^{++} context.

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33. Define Array and its types.
34. What is the classification of c^{++} operands based on operator requirements?
35. List out some special characters and white spaces in c^{++} program.
36. Why we prefer prefix operator over postfix?
37. Write a while loop that display numbers 4,8,12,…40
38. List the drawback of an array.
39. Specify a function to find the minimum of two numbers.
40. What is meant by token? List few tokens available in c++
41. Write any 4 functions available in ctype.h.
42. Write about strcmp() function.
43. What is paradigm? Mention the different types of paradigm.
44. Define Setprecision() and setfill().
45. What is infinite and empty loop?
46. What is Assignment statement?
47. What is Escape sequences?
48. Define compound statement.
49. Define gets() and puts() functions
50. What is selection statement?
51. Write a note on i) isupper() ii) sqrt()

Unit - IV

1. What are the advantages of inheritance?
2. What are the advantages of declaring constructor and destructor under public accessibility?
3. Write a note on destructor.
4. What is the difference between public and private access specifier.
5. Define inheritance? Explain its types.
6. Write the syntax of operator overloading.*
7. What is mean by Nesting of member function? Give example.
8. Define Modularity.
9. What is the use of scope resolution operator?
10. Define object. How will you create an object?
11. Name the operators which cannot be overloaded.***
12. How many ways a constructor can be invoked?
13. In which way do Multi-level and multiple inheritances differ though both contain many base classes?
14. List the disadvantages of OOPS.**
15. Write the syntax for declaring the class.
16. Differentiate classes and objects
17. What do you mean function overriding?

Unit - V

1. Define Ethical issues
2. Name some familiar Tamil keyboard interfaces.
3. What is mean by e-library?**
4. What is digital signature?
5. List some tamil e-Library websites.
6. What are necessary steps to be followed in order to prevent cyber crime?
7. What is mean by search engine? Give example.
8. What is the function of ransom ware?

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9. What is digital certificate?
10. Draw the diagrammatic representation of Hacking?
11. Define spoofing?
12. Expand the following i) MITM ii) IRS
13. Draw the diagrammatic representation of working of proxy server.
14. Define harvesting in Computer Crime*.
15. What is cookie?
16. Write a short note on cracking.
17. Define encryption and decryption.****
18. List any four computer crimes.
19. What is TSCII?***
20. Write a short note on Tamil virtual academy.*
21. Compare hacking and cracking.
22. Compare phishing and pharming.*
23. Define computer ethics.
24. What is Thamizpori?*

Marks	Unit I	Unit II	Unit III	Unit IV	Unit V	No of Questions
1	4	2	4	3	2	15
2	2	1	3	2	1	9
3	2	2	2	2	1	9
5	3	1	3	2	1	10
Marks	**20**	**15**	**25**	**25**	**10**	**70**

SECTION - III [6x3=18]

Unit – I

1. Write a note on i) Transistor ii) vacuum Tubes
2. Write in brief about Virtual operating system.
3. Write in brief about Flash memory devices.
4. What is radix of a number system? Give example.
5. Write in brief about i) FIFO Scheduling ii) SJF Scheduling
6. Write a short note about Unicode.
7. Write in brief about i) Multi Processing ii) Time Sharing**
8. Explain the units of Microprocessor. **
9. Write a note on classification of microprocessor based on Instruction set?**
10. How will you creates files in wordpad?
11. Draw the logic circuit of i) Bubbled AND gate ii) Bubbled OR gate
12. Write a short note on EBCDIC
13. Write the laws to the following i) Commutative ii) Associative iii) Distributive**
14. Write about USB port.*
15. Write a short note on XNOR gate.
16. How will you differentiate flash memory, PROM, EPROM.
17. Explain the following terms. I) ReactOS ii) RaspbionOS
18. Explain briefly about Blue ray disc.
19. Write the truth table for fundamental gates.*

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20. Explain briefly about the classification of operating system based on availability.
21. Write a short note on Ubuntu software.*
22. Write the steps to convert a Binary number to decimal.
23. Write a note on Light pen.
24. Convert the following Binary to equivalent decimal, octal and hexadecimal. 101110101
25. Write a short note on Booting of computers.**
26. Write a note on AND operator.
27. Convert the following octal numbers to binary i) 472 ii) 645 iii) 6247
28. What are the advantages of distributed OS.
29. Write the Differences between Android and IOS.
30. Write in brief about i) Finger print scanner ii) Bar code scanner**
31. Write a short note on ASCII.
32. Write a short note on security management.
33. Write a short note on Optical Character Recognition.
34. Write the specific use of CORTANA.
35. Write the steps to be followed to find the compliment of a number.
36. Write a short note on Hexadecimal number system.
37. Write a short note on Text entry settings.
38. Convert the following decimal to binary i) 1920 ii) 123
39. Write a short note on Unicode.
40. Write down the interfaces and ports available in a computer.
41. Write any three uses of operating system.
42. What is GUI?
43. List the steps to be followed to find the 2's complement of a number.
44. Explain the following terms i) Network indicator ii) Message indicator iii) Session indicator
45. Define the following terms i) Firefox ii) Thunderbird iii) Ubuntu S/w icon
46. How will you create desktop shortcuts in windows?
47. What are the advantages and disadvantages of Time Sharing Features?
48. Write the characteristics of sixth generation computer.*
49. Write the 1's & 2's complement for the following numbers i) -22 ii) -13 iii) 65
50. Add *** a) $-22_{10} + 15_{10}$ b) $20_{10} + 25_{10}$
51. How will you differentiate flash memory and an EEPROM.
52. Write the features of windows 8*
53. Compare impact and non-impact printers.*
54. Write a short note on round robin.**
55. Compare optical and laser mouse
56. What do you mean by application software? Give any two examples.
57. Add i) $1000101_2 + 1011_2$ ii) $1001110_2 + 100010_2$
58. Differentiate CD and DVD
59. Write a short note on keyer.
60. Write a short note on Mechanical mouse.
61. Mention any six versions of operating system.***
62. Analyze why the drivers are segregated.

Unit – II

1. Write the i) Null statement ii) Identity Theorem iii) Compliment
2. Write in brief about the notation Algorithms in detail.*
3. Define factorial of a number recursively.
4. What are the benefits of pseudo code?

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5. Explain the outline of Recursive problem solving technique.**(Recursion)
6. Write the recursive algorithm for length of a sequence.
7. Define a function to double number into two different types. i) n + n ii) 2 x n
8. Explain the following terms. i) Iteration ii) Recursion
9. What is case analysis?
10. What are the advantages & disadvantages of a flowchart?**
11. Explain in brief about specification of an algorithm.**
12. Construct specification and write an iterative algorithm.
13. Write in brief about decomposition.*
14. Draw the flowchart for an if..else inside an if statement.*
15. If c is false in line 2,trace the control flow in this algorithm

    1 S1
    2 –C is False
    3 if C
    4 S2
    5 else
    6 S3
    7 S4
16. Explain the control flow statement algorithm in detail.
17. Consider two variables m and n under the assignment m,n:=m+3,n-1. Is the expression m+3n an invariant?
18. Draw the flowchart for alternative and iterative control flow.
19. 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 tumblers are right side up?
20. Explain in brief about specification of an algorithm to find the square root of a number.
21. 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.**
22. Draw the flowchart for nested if, inside else part.

Unit – III

1. Write about sqrt() and pow() functions.
2. What is variable? List their rules with example? Give the syntax for its declaration.
3. Write about some features of procedural programming.**
4. Write in brief about int data type.*
5. Write the differences between keyword and identifiers.
6. Differentiate Strcpy() and strcat() function with an example.
7. Write the difference between structure and functions.***
8. Write about the concept of datatypes.
9. How will you read a line of text as string in c++?
10. Write the syntax for defining a structure. Give example.
11. Explain the working of while loop.*
12. To store 100 integer numbers which of the following is good to use? Array or Structure state the reason.
13. What is modifier? List its impact in data type's.**
14. Write in brief about parts of a loop.*
15. Explain briefly about memory representation of a 2-D array.

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16. Explain i) using namespace std ii) int main()
17. What is the use of setprecision()?*
18. What are the important facts to be followed during the execution of constructor in inheritance.
19. How will you append strings?
20. Is the following snippet fully correct? If not, justify your answer.

```
struct sum 1{ int n1,n2;}s1;
struct sum 2 {int n1,n2;}s2;
 cin>>s1.n1>>s1.n2;      s2=s1;
```

21. What is called nested structure? Give example.*
22. Write a c++ program to calculate commission according to the grade using if…else statement.
23. What is Typecast. Mention its types with an example.**
24. Differentiate '=' and '==' operators.
25. Write a short note on lexical unit.
26. What is the purpose of number suffix in c^{++}.
27. Explain local scope with an example.**
28. Write about goto statement.
29. List out the benefits of c^{++}
30. Write the syntax of defining a structure? Give an example.**
31. What is called Anonymous structure? Give an example.
32. Write a note on function scope with an example.
33. Write a c^{++} to declare a reference variable.
34. Define inline function and its syntax.*
35. Check whether the following statements are valid or not

    i) a=(3,0xA) ii) a=(0xCAFE,0xG) iii)a=(5,0xCAFE)

36. Write the difference between isupper() and toupper() functions.
37. Write a c^{++} program to input 10 values and count the no. odd and even numbers.
38. Write a note on sin() and cos() and pow() functions.**
39. What is subscript? Explain the rules of subscript.
40. Differentiate break and continue.***
41. How will you pass a structure to a function?
42. How will you pass an array argument to a function?
43. Write a c++ program to print the series 1 4 7 10 ……
44. Write a c++ program to print the multiplication table of a number 8.
45. Write the syntax and purpose of switch statement.
46. Write a note on Array of strings.
47. Define conditional operator with an example.***
48. If a=4,b=3 find the value of c=a++ * 6 + ++b*5 +10;
    If a=12, b=8. Find the value of a*=++a / 6 + b++ % 3;
49. What are Row Major and Column Major order?
50. What will be the value of j= --k+2k, If k is 20 initially?
51. What is the error in the following structure definition

```
struct employee  {
int eno;
char enmae[20];
char dept;
}employee e1,e2;
```

52. Explain bitwise shift operator with an example.

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Unit – IV

1. Give a brief note about inheritance and access control.**
2. How does a compiler decide as to which functions should be involved when there are many functions?
3. Write a note on Information hiding.*
4. Write the disadvantages of OOPS.**
5. Discuss the benefit of Constructor overloading.*
6. Write the difference between function overloading and function overriding.*
7. Give some restrictions of operator overloading.
11. How are functions invoked in Function overloading with rules?***
12. Explain the significance of different visibility mode.**
13. Tabulate the differences between constructor and destructor.
14. What is the difference between polymorphism and inheritance?
15. Why is inheritance needed in OOPS?*
16. Write a note on redundancy.
17. How destructor gets executed in Inheritance?*
18. What is the order of constructor invocation? Give example.
19. What are the points to be noted while deriving a new class?**
20. When is a copy constructor called?**
21. List the advantages of Inheritance.*
22. List the characteristics of destructor.***

Unit – V

1. Write the difference between Firewall and proxy server.
2. Give a brief note about Information Technology act.
3. Explain in brief i) Tamil Translation Application ii) Tamil Programming language
4. Write a short note on Tamil computing.
5. Write a short note on Public key encryption.*
6. Write a short note on Madurai project.
7. What is the role of firewall?
8. Define phishing explain with suitable example.
9. Write a note on e-governance.**
10. What is TSCII?*
11. Expand i) TSCII ii) ISCII iii) ASCII
12. Define the following terms i) Virus ii) Cracking iii) Phishing
13. Define the following terms i) Warez ii) Malware iii) hacking
14. Write a note on i) Robotics ii) Nanotechnology
15. List the search engines supported by tamil.
16. Compare Cracking and Hacking.
17. What are the guidelines to be followed by any computer user?

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