महाराष्ट्र शासन
शालेय शिक्षण व क्रीडा विभाग
राज्य शैक्षणिक संशोधन व प्रशिक्षण परिषद, महाराष्ट्र
७०८ सदाशिव पेठ, कुमठेकर मार्ग, पुणे ४११०३०
संपर्क क्रमांक (०२०) २४४७ ६९३८ E-mail: evaluationdept@maa.ac.in

---

Question Bank

Standard:- 12th

Subject:- Computer Science (D9) Paper I

March 2021

सूचना

१. फक्त विद्यार्थ्यांना प्रश्नप्रकारांचा सराव करून देण्यासाठीच

२. सदर प्रश्नसंचातील प्रश्न बोर्डाच्या प्रश्नपत्रिकेत येतीलच असे नाही याची नोंद घ्यावी.

QUESTION BANK

XII COMPUTER SCIENCE (D9) – PAPER I

CHAPTER 1 – OPERATING SYSTEM

MCQ – 1 Mark		
Q. No.	**Question**	**Marking scheme**
1.	Operating system is a _____ i) hardware **ii) software** iii) printer iv) input device	1 mark for correct alternative
2.	'Open files' is a system call provided under _____ of operating system. **i) Information management** ii) Process management iii) Memory management iv) GUI	1 mark for correct alternative
3.	Program under execution is known as _____. i) File ii) Information iii) Data iv) **Process**	1 mark for correct alternative
4.	_____is a service of memory management of operating system. i) Copy a file ii) Suspend a Process iii) **Allocate a chunk of memory** iv) Open a directory	1 mark for correct alternative
5.	Windows 98 is a _____ operating system. **i) Single user multitasking** ii) Uni-programming iii) Multiuser iv) Multiprocessing	1 mark for correct alternative
6.	_____ is a free operating system. i) Unix ii) **Linux** iii) Mac OS iv) MS Windows	1 mark for correct alternative
7.	In Magnetic tapes _____ access method is used. i) Direct ii) Random	1 mark for correct alternative

	iii) **Sequential** iv) Binary	
8.	Concentric circles on disk surface are known as _____. i) **Tracks** ii) Sectors iii) Clusters iv) Paths	1 mark for correct alternative
9.	Time taken to adjust the appropriate sector under read /write head in disk is called as _____. i) Seek time ii) Access time iii) Transmission time iv) **Latency time**.	1 mark for correct alternative
10.	Device drivers are _____ **i) Software programs** ii) Viruses iii) Scanners iv) Devices used to run CD	1 mark for correct alternative
11.	A terminal or VDU means _____. i) Voice Doubling Unit **ii) Visual Display Unit** iii) Very Dumb Unit iv) Video Display Utility	1 mark for correct alternative
12.	____ is a logical unit of data that operating system defines for its convenience. i) Track ii) Sector **iii) Block** iv) Plate	1 mark for correct alternative
13.	In multiprogramming operating system, the number of processes running simultaneously is known as _____. i) Context ii) Index number iii) Threads **iv) Degree of multiprogramming**	1 mark for correct alternative
14.	When a process is waiting for an external event like I/O, it is in _____ state. i) Running ii) **Blocked** iii) Ready iv) Halted	1 mark for correct alternative

15.	In Non-preemptive philosophy of process scheduling throughput _____ i) Decreases **ii) Increases** iii) Remains constant iv) Has no effect	1 mark for correct alternative
16.	_____ process scheduling is most suitable for real time systems. i) Slow ii) Non preemptive iii) **Preemptive** iv) Single	1 mark for correct alternative
17.	_____ is also known as light weight process. i) **Thread** ii) Program iii) Time slice iv) Operating system	1 mark for correct alternative
18.	Operating system maintains all the information about each process in a data structure called _____ i) Process List **ii) Process control block** iii) Process schedule iv) Process philosophy	1 mark for correct alternative
19.	Memory management service of operating system manages allocations of _____ i) Disk based memory ii) Tape based memory **iii) Main memory** iv) Flash memory	1 mark for correct alternative
20.	_____ is a non contiguous real memory management system. i) Fixed partitioned ii) Variable partitioned iii) Single contiguous iv) **Paging**	1 mark for correct alternative
21.	In _____ method of memory management system logical divisions of a program are of variable sizes. i) **Segmentation** ii) Paging iii) Variable partitioned iv) Fixed partitioned.	1 mark for correct alternative
22.	Wastage of memory space within the partition is called as _____ i) Compaction ii) **Internal fragmentation** iii) External fragmentation iv) Dirty page	1 mark for correct alternative

23.	If page size of 4MB memory is 2 kb then the number of higher order bits on address bus, used to denote page numbers is _____ i) 8 ii) 9 iii) 10 **iv) 11**	1 mark for correct alternative
24.	When a page which is not in main memory is reference then _____ occurs. i) Locality of reference ii) **Page fault** iii) Dirty bit iv) System crash	1 mark for correct alternative
25.	_____ cannot work independently. i) Operating system ii) Drivers iii) **Virus** iv) Worm	1 mark for correct alternative
26.	_____ spread more rapidly in computer networks but do not cause direct harm to computer system. i) **Worms** ii) Memory resident virus iii) Boot sector virus iv) Bomb	1 mark for correct alternative
27.	_____ control in GUI allows to select only one option from the given options. i) Check button ii) Entry box iii) Push button iv) **Radio button**	1 mark for correct alternative
28.	_____ is generally used in GUI to look at the information which is not currently visible on screen. i) Menu bar ii) **Scroll bar** iii) Push button iv) Check button	1 mark for correct alternative
29.	_____ is not an operating system. i) DOS ii) WINDOWS iii) LINUX **iv) C++**	1 mark for correct alternative
30.	_____ is allotted to every process so that a process does not use the CPU indefinitely. i) Context	1 mark for correct alternative

	ii) Priority **iii) Time slice** iv) Process control block	

3 marks Questions.

Q. No.	Question	Marking scheme
1.	What is an Operating System? Write various functions of Operating System.	Definition of OS 1 mark Any 4 functions ½ mark each
2.	Write in short about services provided by operating system, divided in three different areas. OR Which are the three main areas in which the operating system divides its services?	3 Services 1 mark each.
3.	What is Memory Management? List services provided under it.	About MM 2 marks 2 services ½ mark each
4.	What is system call? How system calls are used in application program?	Definition 1 mark Use 2 marks
5.	Write in short different features of Windows 98.	Any 6 features ½ mark each
6.	What are features of Windows NT?	Any 6 features ½ mark each
7.	Write different features of Linux.	Any 6 features ½ mark each
8.	Write a short note on file system in operating system. Or What is file system in operating system?	File system 1 mark 2 types 1 mark each
9.	What are two different modules of Information management system? Write their functions in short. Or What are functions of file system and device management system(or Device driver)	File system Device Driver 1 ½ marks each.
10.	Write advantages of Disk based system over Tape based system.	Any 3 advantages 1 mark each
11.	Explain in short three different operations carried out while performing read/write (or I/O) operation on disk.	(track selection, sector selection, read/write)

		3 operations 1 mark each
12.	What is VDU? Explain what is dumb terminal and intelligent terminal?	VDU 1 mark Dumb and Intelligent terminal 1 mark each
13.	Explain Video RAM and how it is used in terminal hardware. Or Explain video RAM along with data byte and attribute byte.	Video RAM and diagram 1 mark Data byte 1 mark Attribute byte 1 mark
14.	Why terminal is called memory mapped? Explain the different memories involved in input output operation between keyboard and the monitor.	Reason 1 mark 4 memories ½ mark each.
15.	Explain the following terms related to process management: i) Process ii) Context switching iii) Degree of multiprogramming	Each term 1 mark each
16.	Explain context switching in process management with the help of suitable diagram	Explanation 2 marks Diagram 1 mark
17.	Explain three basic process states.	3 states 1 mark each.
18.	Explain the following terms related to process scheduling. i) Turnaround time ii) Waiting time iii) Response time	Each term 1 mark each.
19.	Explain the following process scheduling objectives. i) Fairness ii) Throughput iii) Good CPU utilization	Each term 1 mark each.
20.	Explain Time slice, Preemptive and Non-preemptive philosophies of process scheduling.	Each term 1 mark each.
21.	State names of any six memory management systems.	6 names ½ mark each
22.	Explain memory map of single user operating system.	Explanation 2 ½ marks Diagram ½ mark
23.	Explain single contiguous memory management system	Explanation 2 ½ marks Diagram ½ mark
24.	Write limitations/ disadvantages of Fixed partition?	3 limitations 1 mark each.
25.	Explain in detail paging in memory management	Explanation 2 marks

		PMT diagram 1 mark
26.	Explain the concept of virtual memory.	Correct answer 3 marks
27.	Explain three elements of security.	3 elements 1 mark each
28.	What is security in terms of operating system? Discuss in brief threats to security.	Definition of security 1 mark Any 3 threats 1 mark each
29.	What are computer worms? Explain how worms affect computer systems?	Definition 1 mark Explanation 2 marks
30.	What is computer virus? State various types of viruses.	Definition 1 mark Any four types ½ mark each.
31.	What is computer virus? How does it operate?	Definition 1 mark Explanation 2 marks
32.	Discuss virus detection, prevention and removal philosophies.	3 philosophies 1 mark each.
33.	What is GUI? State any four advantages using GUI.	Meaning 1 mark 4 advantages ½ mark each.
34.	What is GUI? Explain in short any four features of GUI.	Meaning of GUI 1 mark 4 features ½ mark each.
35.	Explain following components of GUI. i) Menu bar ii) Dialogue boxes iii) Option button	Explanation of 3 components 1 mark each
36.	Explain in brief the following programs of MS-Windows. i) Program manager ii) File manager iii) Control panel	3 programs 1mark each

4 marks Questions

Q. No.	Question	Marking scheme
1.	What is Information Management? List system calls in it.	About IM 2 mark Any 4 Calls 1/2 mark each

2.	What is Process Management? List system calls in it	About PM 2 mark Any 4 Calls 1/2 mark each
3.	What are two different modules of Information management system? Write their functions in short. Or What are functions of file system and device management system(or Device driver)	File system Device Driver 2 marks each.
4.	Explain in short the following terms related to magnetic disk i) Track and sector ii) Seek time iii) Latency time/ Rotational delay iv) Transmission time	Each term 1 mark each.
5.	Explain any four file operations on file system of Information Management system.	Each operation 1 mark each.
6.	Explain Video RAM and how it is used in terminal hardware.	Video RAM and diagram 2 marks Data byte 1 mark Attribute byte 1 mark
7.	Explain context switching in process management with the help of suitable example.	Explanation with diagram 2 marks Example 2 marks
8.	What is process scheduling? Explain any three scheduling objectives.	Process scheduling 1 mark Any 3 objectives explanation 1 mark each
9.	What is priority? Explain Internal, External and Purchased priorities.	Priority definition 1mark 3 priorities 1 mark each
10.	Explain the concept of Multithreading with suitable example.	Concept explanation 3 marks Example 1 mark
11.	Write main functions of Memory management. State names of any four memory management systems	2 functions 2 marks 4 system names ½ mark each

12.	What is partitioning of memory? Explain fixed and variable partitioning in memory management.	Partitioning meaning 1 mark Fixed and variable partitioning 1 ½ marks each.
13.	Write various steps involved in the allocation of partition in case of fixed partitioned memory management.	All correct steps 3 marks Diagram 1 mark
14.	Explain in detail segmentation in memory management system. Give suitable example.	Explanation 3 marks Example 1 mark
15.	Explain the following terms related to virtual memory management i) Locality of reference ii) Page replacement policy iii) Working set iv) Page fault	 1 mark 1 mark 1 mark 1 mark
16.	Explain security aspect of operating system. And explain three main elements of security.	Security 1 mark 3 elements 1 mark each.
17.	Explain in short any four ways in which a system can be attacked in computing environment.	Any four ways 1 mark each
18.	Explain any four methods by which computer virus can infect the programs.	Four methods with explanation 1 mark each
19.	Differentiate between computer virus and worm.	Any four points 1 mark each
20.	List essential components of GUI. Explain in brief any three components.	List of 5 components 1 mark Explanation with diagram 1 mark each(one diagram with 3 components is considered correct.)
21.	Explain following controls of GUI. i) Push button ii) Radio button iii) Check button iv) Box control	 1 mark 1 mark 1 mark 2 box controls ½ mark each

22.	In terms of GUI, what is window? Explain in short various operations performed on a window.	Explanation for window with diagram 1 mark 3 operations 1 mark each.

CHAPTER 2 - DATA STRUCTURE

Question NO.	Question	Marking Scheme
	MCQ	
1	____ is the Non – linear data structure. i) Linked List ii) Array iii**) Tree** iv) Stack	1 Mark for correct alternative
2	Maximum number of nodes of symmetric binary tree with depth *n* is _____ . i) n ii) log n iii) n^2 **iv) 2 $^{n-1}$**	1 Mark for correct alternative
3	Maximum number of nodes of symmetric binary tree with depth *6* is _____ . i) 64 ii) **63** iii) 6 iv) 31	1 Mark for correct alternative
4	The number of comparisons required for bubble sorting of an array of n elements are _____. i**) n (n-1)/2** ii) n/2 iii) $\log_2$ n iv) $\log_{10}$ n	1 mark for correct alternative
5	In _____ data structure, an element can be inserted or deleted only at one end called top. i) Tree ii**) Stack** iii) Queue iv) Array	1 mark for correct alternative
6	The stack is called as _____ type of data structure. **i) LIFO** ii) FIFO iii) SIFO iv) FISO	1 mark for correct alternative

7	The stack is called as _____ type of data structure. **i) LIFO** ii) FIFO iii) SIFO iv) FISO	1 Mark for correct alternative
8	The Queue is called as _____ type of data structure. i) LIFO **ii) FIFO** iii) QIFO iv) QISO	1 Mark for correct alternative
9	In a linked list, the link part contains _____. i) Data of the next node ii) Address of the last node **iii) Address of the next node** iv) Array	1 Mark for correct alternative
10	The most efficient search algorithm is _____. i) Linear **ii) Binary** iii) Pointer iv) Bubble	1 mark for correct alternative
3 Marks Questions		
1	What is an array? How it is represented in memory?	Array – 1 mark Memory Representation – 2 marks
2	What is a record? How it is represented in memory using array?	Record – 1 mark Memory representation using array with example – 2 marks
3	What is a linked list ? Draw a labelled diagram of a linked list with at least six nodes.	Link list – 1 mark Labelled diagram – 2 marks
4	What is linked list ? State its advantages over array.	Link List – 1 mark Any 4 advantages – 2 marks
5	How linked lists are represented in memory ?	Memory representation of link list with diagram – 3 marks

6	Explain insertion and deletion of element from linked list with example.	Insertion – 1 ½ marks Deletion – 1 ½ marks
7	Explain Stack and Queue with suitable example. OR Explain LIFO and FIFO systems with suitable example	Stack / LIFO 1 ½ marks Queue / FIFO 1 ½ marks
8	Explain the following terms related with tree. a) Level Of Tree b) Depth / Height c) Degree	Each Term – 1 mark
9	What is a binary tree ? With suitable example show the relationship between the total number of nodes and depth of the tree.	Binary tree definition – 1 mark Relationship with diagram – 2 marks
4 Marks Questions		
1	What is inserting ? Explain insertion of an element in an array with algorithm and example.	Inserting – 1 marks Algorithm with example – 2 marks
2	What is deleting ? Explain deletion of an element in an array with algorithm and example.	Deletion – 1 marks Algorithm with example – 2 marks
3	Explain bubble sort algorithm with suitable example.	Algorithm 2 marks Example 2 marks
4	Explain linear search algorithm with suitable example.	Algorithm 2 marks Example 2 marks
5	Explain binary search algorithm with suitable example	Algorithm 2 marks Example 2 marks
6	What is a tree ? Define the terms root , leaf , child , siblings related to tree.	Tree diagram with explanation of terms – 4 marks
7	What is binary tree ? Draw a binary tree structure for the following expression. E = (x + y) / [(p * q) - r]	Binary tree – 1 mark Correct Tree structure – 3 marks

8	What is a complete binary tree ? Draw a binary tree structure for the following expression. $E = (2a + b) / (a + b)^2$	Complete Binary tree – 1 mark Correct Tree structure – 3 marks
9	What is extended binary tree ? Draw a binary tree structure for the following expression. $E = ((p – q) + (m + n)) / p$	Extended Binary tree – 1 mark Correct Tree structure – 3 marks
10	What is binary search tree ? Draw a binary tree structure for the following expression. $P = ((a+2b)^2 – c/d$	Binary search tree – 1 mark Correct Tree structure – 3 marks

CHAPTER 3 – C++

MCQ - 1 Mark		
Q. No.	**Question**	**Marking Scheme.**
1.	_____ is not a derived data type in C++. i. Functions ii. Array iii. Pointer **iv. Class**	1 mark for correct alternative
2.	_____ is not the feature of Object Oriented programming. i. Polymorphism ii. Data abstraction iii. Operator Overloading **iv. Top down approach.**	1 mark for correct alternative
3.	If all the visibility labels are missing, then by default members of a class are. i. Public **ii. Private** iii. Protected iv. Void	1 mark for correct alternative
4.	In C++, _____ is an extraction operator i. << **ii. >>** iii. ++ iv. &&	1 mark for correct alternative
5.	In C++, _____ operator cannot be overloaded. i. +	1 mark for correct alternative

	ii. * **iii. ::** iv. /	
6.	To access the data members of one class in another class we must use _____ between the two classes. **i. Friend function** ii. Inline function iii. Operator function iv. Constructor function.	1 mark for correct alternative
7.	_____ is not a keyword in C++ **i. main** ii. void iii. int iv. case	1 mark for correct alternative
7.	When a class is made _____, it takes all the necessary care to see that only one copy of that class is inherited in the derived class. i. Abstract ii. Base iii. Derived **iv. Virtual**	1 mark for correct alternative
8.	_____ is not a floating data type in C++ i. float ii. double iii. none of the above **iv. both i and ii.**	1 mark for correct alternative
10.	In public derivation, protected members remain _____ in the derived class. i. public **ii. protected** iii. private iv. Not-inherited.	1 mark for correct alternative
11.	_____ is not an inheritance in C++ i. Multiple ii. Multilevel iii. Hybrid **iv. Virtual**	1 mark for correct alternative
12.	_____ is not a part of polymorphism in C++ i. Operator overloading ii. Function overloading iii. Virtual function **iv. Inheritance**	1 mark for correct alternative
13.	Early or static binding in C++ is supported by _____ i. Operator overloading ii. Function overloading	1 mark for correct alternative

	iii. Both i and ii iv. None of the above.	
14.	In C++ _____ is an exit control loop. i. While **ii. Do…. While** iii. For iv. If	1 mark for correct alternative
15.	_____ is used to give an additional task to an already existing operator. i. Constructor function **ii. Operator function** iii. Default constructor iv. Parameterized constructor.	1 mark for correct alternative
16.	_____ is not built in data type in C++. i. int ii. void **iii. class** iv. double	1 mark for correct alternative
17.	_____ is not a visibility label i. public ii. private iii. protected **iv. virtual**	1 mark for correct alternative
18.	Size of an int data type in C++ is _____ i. 1 Byte **ii. 2 Byte** iii. 4 Byte iv. 8 Byte	1 mark for correct alternative
19.	When we want read data from a file, we must open the file in _____ mode. i. output **ii. input** iii. trunc. iv. append.	1 mark for correct alternative
20.	_____ is not an operator in C++ i. sizeof ii. new iii. delete **iv. MOD**	1 mark for correct alternative
21.	In C++, (* ptr)++ implies _____(where ptr is a pointer) **i. Content of memory location are incremented by one** ii. Memory location in incremented by one. iii. None of the above iv. Both i and ii.	1 mark for correct alternative
	3 Mark Question	

Q. No.	Question	Marking Scheme.
1	Draw a chart diagram showing the different data types in C++.	Proper Chart
2.	Write a short note on Insertion operator Extraction operator Scope resolution Operator	 1 Mark 1 Mark 1 Mark
3.	Write a short note on inline functions in C++.	Correct explanation 3 marks
4.	Explain default arguments with suitable example.	Correct explanation 3 marks
5.	What are arrays in C++? Explain with example.	Explanation, syntax and example of array.
6.	What are pointers? Give different advantages of pointers.	Pointer Explanation 1 mark, and advantages 2 marks.
7.	Write a short note on 1. Call by value 2. Call by reference	Explanation Of call by value 1 Mark, call by reference using pointers and reference variables 2 Marks.
8.	Explain with example what are classes? Give general form of class declaration.	class explanation with syntax and example. General form required 3 marks.
9.	Write a short note on friend function. Give characteristics of friend function.	1 Mark ½ marks for 2 characteristics
10.	Write any six rules of virtual functions.	Any six rules ½ mark each.
11.	Explain input and output streams in C++.	Explain input/output stream 2 marks and diagram 1 mark.
12.	Write a short note on following classes 1. ifstream 2. ofstream 3. fstream	1 mark for each class
13.	Write a short note on following classes 1. filebuf	1 mark for each class

	2. fstreambase 3. fstream	
14.	What is function overloading? Give suitable example for function overloading.	Definition and example required.
15.	With a suitable example explain array of objects in C++.	Example and explanation.
4 Marks Question		
Q. No.	**Question**	**Marking Scheme.**
1.	What are constructors? Give characteristics of constructor.	Constructor with syntax . Characteristics ½ marks each
2.	What is inheritance in C++? With a suitable diagram explain different types of inheritances in C++.	Inheritance 1 Mark Types½ mark
3.	What is polymorphism in C++? Explain different types of polymorphism in C++.	Polymorphism 1Mark 2 Types 1 ½ Mark
4.	What is operator overloading? Explain with a suitable example.	Operator function explanation, syntax and example
5.	What are different rules of Operator Overloading.	½ marks for each rule
6.	Write a short note on memory management operator.	2 Marks for new 2 Marks for delete.
7.	Explain any four, control structure in C++.	Any four if, if else. while, do while, switch, for.
8.	With a suitable example explain how we can write a function inside a class and outside a class.	Inside class function Outside with scope resolution op
9.	Write a short note on static data members and static member functions.	2 marks each for proper explanation
10.	Explain with example parametrized and default constructors.	Examples of both.
11.	Write a short note on type conversion in C++. Explain any one with an example.	Three types and any one Example.
12.	List different file modes available in C++.	Any eight modes
13.	Write a short note on 1. seekp( ) 2. seekg( ) 3. tellp( ) 4. tellg( )	Proper Explanation
14.	Explain following functions 1. put( ) 2. get( ) 3. write ( ) 4. read( )	Proper Explanation

15.	Explain the following operators in C++. 1. Arithmetic operator 2. Relational operator 3. Assignment operator 4. Conditional operator	Proper list and explanation.
16	Write a short note on following string functions in C++ 1. strlen( ) 2. strcat ( ) 3. strcmp( ) 4. strtrunc( )	

5 Marks Programs

Q. No.	**Question**	**Marking Scheme.**
1.	Write a program in C++, to find max of two numbers using if else control structure	Program with proper logic and correct syntax.
2.	Write a program in C++, to find maximum and minimum of two numbers using conditional operator.	Program with proper logic and correct syntax.
3	Write a program in C++, to find if the given year is leap year or not using if else control structure	Program with proper logic and correct syntax.
4.	Write a program in C++, to find factorial of a given number using for loop.	Program with proper logic and correct syntax.
5.	Write a program in C++, to print the sum of first 100 natural numbers using for control structure	Program with proper logic and correct syntax.
6.	Write a program in C++, to print first 15 terms of Fibonacci series	Program with proper logic and correct syntax.
7.	Write a program in C++, to read array of 10 elements and print its sum.	Program with proper logic and correct syntax.
8.	Write a program in C++, to find factorial of a given number using function void fact (int);	Program with proper logic and correct syntax.
9.	Write an Object Oriented Program in C++, to implement inventory class to calculate total price of number of items purchased.	Program with proper logic and correct syntax.
10.	Write an Object Oriented Program in C++, to find the GCD of two given numbers	Program with proper logic and correct syntax.
11.	Implement a class fact, to find the factorial of a given number.	Program with proper logic and correct syntax.

12.	Write an Object Oriented Program in C++, to implement circle class to find area and circumference of a circle using functions void area(), void circum().	Program with proper logic and correct syntax.
13.	Write a program in C++ to find the no of occurrences of character 'a' in the given string.	Program with proper logic and correct syntax.
14.	Write a Program in C++, to reverse a given string.	Program with proper logic and correct syntax.
15.	Implement class temperature to convert degree Fahrenheit (F) to degree Celsius (C). Using formulae C =(F -32/9)*5.	Program with proper logic and correct syntax.
16.	Write a program in C++, to find the largest number in an array of 10 integers.	Program with proper logic and correct syntax.
17.	Write a program in C++, to check if the given number is a prime number .	Program with proper logic and correct syntax.
18.	Write a program in C++, to calculate x^y , using the function void power (int, int);	Program with proper logic and correct syntax.
19.	Write a program in C++, to count the number of words in a line of text.	Program with proper logic and correct syntax.
20.	Write a program in C++, to swap two integers using function void swap (int &, int&);	Program with proper logic and correct syntax.

CHAPTER 4 - HTML

Question NO.	Question	Marking Scheme
	MCQ	
1	The _____ attribute of IMG tag is used to insert image on the web page. i) <ALT> **ii) <SRC>** iii) <HREF> iv) <URL>	1 mark for correct alternative
2	To insert a line break in HTML code _____ tag is used. i) <HR> ii) <CB> **iii) ** iv) <TT>	1 mark for correct alternative

3	To display definition list on web page _____ tag is used. i) <OL> ii) <LI> iii) <UL> **iv> <DL>**	1 mark for correct alternative
4	The long form of HTLM is _____. **i) Hypertext Markup Language** ii) Hypertext Marking Language iii) Higher Text Markup Language iv) High Text Mostly Language	1 mark for correct alternative
5	To merge columns of a table _____ attribute of TABLE tag is used. i) <ROWSPAN> ii) <MERGECOL> **iii) <COLSAPN>** iv) <MCOL>	1 mark for correct alternative
6	To merge rows of a table _____ attribute of TABLE tag is used. **i) <ROWSPAN>** ii) <MERGEROWS> iii) <COLSAPN> iv) <MROW>	1 mark for correct alternative
7	<A> tag has attribute _____ which defines the URL of the document to be linked. i) SRC **ii) HREF** iii) VREF iv) REF	1 mark for correct alternative
8	To scroll the text _____ tag is used. i) <ROLL> **ii) <MARQUEE>** iii) <HR> iv) <RR>	1 mark for correct alternative
9	_____ HTML tag is used to insert horizontal rule on Web page. **i) <HR>** ii) <RULE> iii) <P> iv) <TR>	1 mark for correct alternative
10	Border attribute is used in _____ HTML tag. i) <P> **ii) <TABLE>** iii) <ALT> iv) <TITLE>	1 mark for correct alternative

11	____ attribute of <BODY> tag is used to place image as background of Web page. i) <BGIMG> ii) <IMG> **iii) <BACKGROUND>** iv) <BACKIMG>	1 mark for correct alternative
12	____ attribute of <BODY> tag is used to ser background color of Web page. i) <BCLOR>> ii) <COLOR> iii) <BACKGROUNDCOLOR> **iv) <BGCOLOR>**	1 mark for correct alternative
3 Marks Questions		
1	Explain in short the general structure of HTML web page.	Document structure tags <HTML> , <HEAD> , <BODY> With page payout diagram
3	Explain the use of following HTLM tags with example. a) <SMALL> b) <TT> c) <STRIKE>	For each tag Use - ½ mark Example – ½ mark
4	Explain the use of following HTLM tags with example. a) <SUB> b) <SUP> c) <PRE>	For each tag Use - ½ mark Example – ½ mark
5	Explain the use of following HTLM tags with example. a) <P> b) c) <HR>	For each tag Use - ½ mark Example – ½ mark
6	Explain the use of following HTLM tags with example. a) <STRONG> b) <EM> c) <BIG>	For each tag Use - ½ mark Example – ½ mark
7	Explain the use of following HTLM tags with example. a) <FONT> b) <IMG> c) <A>	For each tag Use - ½ mark Example – ½ mark
8	Explain the use of following HTLM tags with example. a) <TH> b) <ROWSPAN> c) <COLSPAN>	For each tag Use - ½ mark Example – ½ mark

9	Explain the use of <OL> tag ? Or How ordered lists are created in HTML ?	Use of tag -1mark Example HTML code – 1 mark Show Output – 1 mark
10	Explain the use of <UL> tag ? Or How unordered lists are created in HTML ?	Use of tag -1mark Example HTML code – 1 mark Show Output – 1 mark
11	What are nested lists ? How nested lists are created in HTML ?	Nested lists and their creation with example – 3 marks
12	Explain the use of <ROWSPAN> and <COLSPAN> attributes of <TABLE> tag.	<ROWSPAN> - 1 1/2 marks <COLSPAN> - 1 1/2 marks
5 Marks Questions		

1	Write output of the following HTML code. <html> <body> Programming Languages <ol type="A"> Low Level Machine Language Assembly Language High Level Procedural Language Object Oriented language </body> </html>	Correct output 5 Marks
2	Write the output of the following HTML code. <html> <body> <h1> H.S.C. Exam </h1> <p align="center"> Subject :- Computer Science <p align="center"> Theory & Practical Exam <p align="center"> <u> 200 Marks </u> </body> </html>	Correct output 5 Marks

3	Write output of the following HTML code. <html> <head> <title> Computer Shop </title></head> <body> Megastar Company <p align=”center”> Address : Surya Complex , Delhi Deals in Software Hardware Peripherals </body> </html>	Correct output 5 Marks
4	Write the output of the following HTML code. <html> <body> <table border=”2”> <tr> <td colspan=”2”> H.S.C. Exams </td> </tr> <tr> <td> <u> Paper 1 </u> <td> <u> Paper 2 </u> </tr> <tr> <td> 50 Marks <td> 50 Marks </tr> </table> </body> </html>	Correct Output 5 Marks

<table>
<tr>
<td>5</td>
<td>Write HTML code to obtain the following output.

Data types in C++

1. Fundamental
• Integer
• Float
• Character
2. Derived
• Arrays
• Functions
• Pointers</td>
<td>Correct HTML Code

5 Marks</td>
</tr>
<tr>
<td>6</td>
<td>Write HTML code to obtain the following output.

<table>
<tr><td>State</td><td>State Animal</td><td>State Bird</td></tr>
<tr><td>Maharastra</td><td>Shekru</td><td>Harial</td></tr>
<tr><td>Karnataka</td><td>Elephant</td><td>Indian Roller</td></tr>
<tr><td>Gujrat</td><td>Lion</td><td>Greater Flemingo</td></tr>
</table>
</td>
<td>Correct HTML Code

5 Marks</td>
</tr>
<tr>
<td>7</td>
<td>Write HTML code to obtain the following output.

<table>
<tr><td colspan="3">ABC College</td></tr>
<tr><td>Courses</td><td>Number of Seats</td><td>Fees (per anum)</td></tr>
<tr><td>B.Sc. Computer Science</td><td>150</td><td>40,000 Rs/-</td></tr>
<tr><td>BCA</td><td>120</td><td>38000 Rs /-</td></tr>
</table>
</td>
<td>Correct HTML Code

5 Marks</td>
</tr>
</table>

<table>
<tr><td>8</td><td>Write HTML code to obtain the following output.

<table><tr><td rowspan="3">Pav – Bhaji</td><td>With Amul Butter</td><td>With Cheese</td></tr><tr><td>Rs 120 /-</td><td>Rs 130 /-</td></tr><tr><td>Extra pav free</td><td>Extra pav Jodi free</td></tr></table></td><td>Correct HTML Code

5 Marks</td></tr>
<tr><td>9</td><td>Write HTML code to obtain the following output.

<table><tr><td colspan="2" rowspan="2"></td><td colspan="3">Year</td></tr><tr><td>1998</td><td>1999</td><td>2000</td></tr><tr><td rowspan="2">Sale</td><td>Unit</td><td>500</td><td>700</td><td>1000</td></tr><tr><td>Income</td><td>3000</td><td>4000</td><td>7000</td></tr></table></td><td>Correct HTML Code

5 Marks</td></tr>
<tr><td>10</td><td>Write HTML code to obtain the following output.

<table><tr><td rowspan="2">Year</td><td colspan="3">Students</td></tr><tr><td>Boys</td><td>Girls</td><td>Total</td></tr><tr><td>2016</td><td>55</td><td>65</td><td>120</td></tr><tr><td>2017</td><td>75</td><td>80</td><td>155</td></tr></table></td><td>Correct HTML Code

5 Marks</td></tr>
</table>