## OOPs and Data Structures (SYBCA SEM-3)(304)

Sr.No.	question	answer1	answer2	answer3	answer4
1	Which of the following type of class allows only one object of it to be created?	Virtual class	Abstract class	Singleton class	Friend class
2	Which of the following is not a type of constructor?	Copy constructor	Friend constructor	Default constructor	Parameterized constructor
3	Which of the following is not the member of class?	Static function	Friend function	Const function	Virtual function
4	Which of the following concept of oops allows compiler to insert arguments in a function call if it is not specified?	Call by value	Call by reference	Default arguments	Call by pointer
5	Which of the following concepts of OOPS means exposing only necessary information to client?	Encapsulation	Abstraction	Data Hiding	Data binding
6	Which of the following concepts means adding new components to a program as it runs?	Data hiding	Dynamic typing	Dynamic binding	Dynamic loading
7	A constructor that accepts parameters is called the default constructor.	Yes	Can not say	TRUE	No
8	Can a class have virtual destructor?	Yes	No	May be	None of these
9	Destructor has the same name as the constructor and it is preceded by	!	?	~	\$
10	Which constructor function is designed to copy objects of the same class type?	Create constructor	Object constructor	Dynamic constructor	Copy constructor
11	A function with the same name as the class, but proceeded with a tilde character ( $^{\sim}$ ) is called $@$ f that class.	Constructor	Destructor	Function	Object
12	Which of the following gets called when an object goes out of scope?	Constructor	Destructor	Main	virtual function
13	Which of the following statement is correct?	Destructor destroys only integer data members of the	Destructor destroys only float data members of the	Destructor destroys only pointer data members of the	Destructor destroys the complete object.

14	Which is used to make a copy of one class object from another class object of the same class type.	Constructor	Copy constructor	Destructor	Default constructor
15	Which of the following cannot be declared as virtual?	Constructor	Destructor	Data Members	Both Constructor and Data Members
16	To use an operator on user-defined class objects, operator overloading:	must never be used, with three exceptions.	must never be used.	must always be used.	None of these
17	To implicitly overload the += operator:	Only the = operator needs to be overloaded.	Only the + operator needs to be overloaded.	The += operator cannot be overloaded implicitly.	Both the + and = operators need to be overloaded.
18	Which situation would require the operator to be overloaded as a global function?	The left most operand must be a class object (or a reference to a class	The left operand is an int.	The operator returns a reference.	The overloaded operator is =.
19	An overloaded + operator takes a class object and a double as operands. For it to be commutative (i.e., a + b and b + a both work):	The + operator cannot be overloaded to be commutative.	operator+ must be a non-member function.	operator+ must be a member function of the class from which the objects are instantiated.	It must be overloaded twice; the operator+ function that takes the object as the left operand must be a member
20	Which of the following is not an operator overloaded by the C++ language?	<b>:</b> :	>>	BB.	<<
21	Which of the following is not an operator overloaded by the C++ language?	-	?:	++	>>
22	Which of the following is not a Linear Data Structure?	Array	<b>Graph</b>	Queue	Stack
23	Stack follow concept while Queue follow concept	FIFO,FIFO	FIFO,LIFO	LIFO,FIFO	LIFO,LIFO
24	A copy constructor:	is a constructor that takes no arguments.	is a constructor with only default arguments.	is a constructor that initializes a newly declared object to the value of an existing object of the same class.	None of these

25	Which allows you to create a derived class that inherits properties from more than one base class?	Multilevel inheritance	Multiple inheritance	Hybrid Inheritance	Hierarchical Inheritance
26	Which feature in OOP allows reusing code?	Polymorphism	<u>Inheritance</u>	Encapsulation	Data hiding
27	Which of the following members do get inherited but become private members in child class	Public	Private?	<u>Protected</u>	All of these
28	class derived: public base1, public base2 { } is an example of	Polymorphic inheritance	Multilevel inheritance	Hierarchical inheritance	Multiple inheritance
29	The major goal of Inheritance in c++ is	to facilitate the conversion of data	to help modular programming.	to extend the capabilities of a class.	to hide the details of base class.
30	Advantages of inheritance include	providing class growth through natural selection	facilitating class libraries	avoiding the rewriting of code	None of these
31	A class hierarchy (inheritance)	shows the same relationships as an organization chart	describes "has a" relationships	describes "is a kind of" relationships	shows the same relationships as a family tree
32	Virtual functions allow you to	create an array of type pointer-to-base- class that can hold pointers to derived classes	create functions that have no body	group objects of different classes so they can all be accessed by the same function code	use the same function call to execute member functions of objects from different classes
33	A derived class is.	Inherits data members and member functions from base class.	Inherits constructors and destructors.	Object can access protected members with the dot operator.	None of these
34	Can two classes contain member functions with the same name?	No	Yes, but only if the two classes have the same name.	Yes, but only if the main program does not declare both kinds	Yes, this is always allowed.
35	Which of the below means 'one name, multiple forms'.	Polymorphism	Inheritance	Encapsulation	None of these

36	An object is bound to its function call at compile time known as	Early binding	Compile time polymorphism	Static binding	All of above
37	How can we achieve run time polymorphism in C++?	Friend Function	Virtual function	Operator overloading	Function overloading
38	Polymorphism is divided into how many types.	Two	Three	Four	None of these
39	Which is a derived data type that refers to another data variable by storing the variable's memory address rather than data.	Pointers	Polymorphism	Structure	Inheritance.
40	When we use the same function name in both the base and derived classes, the function in base class is declared as	Friend	<mark>Virtual</mark>	A and b	None of these
41	Which function is declared in a base class that has no definition relative to the base class.	Pure virtual function	Virtual function	Friend function	None of these
42	We can have virtual destructor but not have constructor.	True)	False	May be	None of these
43	What is default access specifier for data members or member functions declared within a class without any specifier, in C++?	Private Private	Protected	Public	Depends on compiler
44	Which among the following is true for constructors overloading?	Constructors can't be overloaded	Constructors can be overloaded using different signatures	Constructors can be overloaded with same signatures	Constructors can be overloaded with different return types
45	What are default arguments?	Arguments which are not mandatory to be passed	Arguments with default value that aren't mandatory to be passed	Arguments which are not passed to functions	Arguments which always take same data value
46	In which of the following way(s) can the object be returned from a function?	Can only be returned by value	Can only be returned by reference	Can be returned either by value or reference	Can neither be returned by value nor by reference
47	When value of an object is assigned to another object	It becomes invalid statement		Its values gets address of the existing values	The compiler doesn't execute that statement

48	Which is the correct condition for function overriding?		The declaration must be exactly the same in base and derived class	should have at least 1	None of these
49	Which among the following is true?	Inheritance must not be using when overriding is used	implemented without using inheritance	Inheritance must be done, to use overriding are overridden	None of these
50	Which among the following best describes member function overriding?	Member functions having same name in base and derived classes	•	Member functions having same name in derived class only	Member functions having same name and different signature inside main function
51	Virtual functions are mainly used to achieve	Compile time polymorphism	•	Runtime polymorphism	Functions code polymorphism
52	Virtual function is class function which expected to be redefined in class, so that when reference is made to derived class object using pointer then we can call virtual function to execute class definition version	Base, derived, derived	Derived, Derived, Derived	Base, derived, base	Base, base, derived
53	Always the base class constructors are called constructor of derived class.	Before	After	Along	According to priority of
54	If a base class is being derived by two other classes, which inheritance will that be called?	Single	Multiple	Multi-level	Hierarchical
55	How to make a derived class a base class?	Change name of the class	·	Make a class derive from it	Can't be done
56	A base class is also known as class.	Basic	Inherited	Super	Sub
57	Which is most appropriate definition of a base class?		It is child of one of the parent class	It is most basic class of whole program	It is class with maximum number of members
58	Derived class is also known as class.	Subclass	Small class	Big class	Noticeable class
59	If a class is being derived using more than two base classes, which inheritance will be used?	Single	Multi-level	Hierarchical	Multiple
60	In a stack, if a user tries to remove an element from empty stack it is called	Underflow	Empty collection	Overflow	Garbage Collection

61	Process of inserting an element in stack is called	Create	Push Push	Evaluation	Рор
62	Which data structure is needed to convert infix notation to postfix notation?	Branch	Tree	Queue	Stack
63	Which control variable is used in stack?	Tree	TOP	Т	S
64	Which data structure is used for implementing recursion?	Queue	Stack Stack	Array	None of these
65	Process of removing an element from stack is called	Create	Push	Evaluation	Pop
66	A linear list of elements in which deletion can be done from one end (front) and insertion can take place only at the other end (rear) is known as a ?	Queue	Stack	Tree	Неар
67	A queue follows	FIFO (First In First Out) principle	LIFO (Last In First Out) principle	Ordered array	Linear tree
68	Circular Queue is also known as	Ring Buffer	Square Buffer	Rectangle Buffer	Curve Buffer
69	A data structure in which elements can be inserted or deleted at/from both the ends but not in the middle is?	Simple Queue	Circular queue	<b>Dequeue</b>	Priority queue
70	A simple queue, if implemented using an array of size MAX_SIZE, gets full when	Rear = MAX_SIZE – 1	Front = (rear + 1)mod MAX_SIZE	Front = rear + 1	Rear = front
71	Which of the following is not the type of queue?	Ordinary queue	Doubly queue	Circular queue	Priority queue
72	Which of the following properties is associated with a Stack?	First In Last Out	First In First Out	Last In First Out	Last In Last Out
73	What is the term for inserting into a full queue known as?	overflow	underflow	null pointer exception	None of these
74	Which of the following is not premitivte data structure?	Integer	Character	Real	Queue)

75	Which of the following is/are type of data structure?	Primitive or Non- Primitive	Linear and Non-Linear	Static and Dynamic	All of these
76	Which of the following is/are example(s) of linear data strcuture?	Tree	Graph	Queue	None of these
77	Which of the following is/are example(s) of non-linear data structure?	Tree	Queue	Array	Stack
78	is known as function calling itself.	Calling function	Function prototype	Recursion	None of these
79	Which of the following type of data structure can be accessed sequntially?	Linear	Non linear	both Linear and Non linear	None of these
80	Which of the following are variaions of dqueue?	Input Restricted	Output Restricted	both a and b	None of these
81	Which of the following operator is used to access address of the variable?	*	<u>&amp;</u> )	\$	%
82	Which of the following condition is used to check overflow in stack?	Rear>=MAX	TOP>=MAX	TOP=0	F>0
83	Which of the following data structre gives the output in the reverse of the given input?	Queue	Stack	Both	None of these
84	What does the following Condition signify? TOP=MAX	Empty stack	Full Stack	Five elements in stack	None of these
85	Which of the follwing condition represents the empty queue in simple queue?	F=0	F=MAX	F=1	R=MAX+F
86	In a circular queue, how do you increment the rear end of the queue?	rear++	(rear+1) % MAX	(rear % MAX)+1	Rear = front
87	What data structure is used when converting an infix notation to prefix notation?	Stack	Queue	B-Trees	Linked-list
88	What is the other name for a postfix expression?	Normal polish Notation	Reverse polish Notation	Warsaw notation	Infix notation

89	Which of the following is not an inherent application of stack?	Reversing a string	Evaluation of postfix expression	Implementation of recursion	Job scheduling
90	The type of expression in which operator succeeds its operands is?	Infix Expression	Prefix Expression	Postfix Expression	Both Prefix and Postfix Expressions
91	Which of the following real world scenarios would you associate with a stack data structure?	one above the other	people standing in a line to be serviced at a counter	offer services based on the priority of the customer	tatkal Ticket Booking in IRCTC
92	While evaluating a prefix expression, the string is read from?	left to right	right to left	center to right	center to left to right
93	What is the other name for a postfix expression?	Normal polish Notation	Reverse polish Notation	Warsaw notation	Infix notation
94	Which of the following is not an application of stack?	evaluation of postfix expression	conversion of infix to postfix expression	balancing symbols	line at ticket counter
95	While evaluating a postfix expression, when an operator is encountered, what is the correct operation to be performed?	1	pop 2 operands, evaluate them and push the result on to the stack	pop the entire stack	ignore the operator
96	Which of the following statement is incorrect?	Postfix operators use value to their right	Postfix operators use value to their left	Prefix operators use value to their right	In postfix expression, operands are followed by operators
97	Which of these operators have the highest order of precedence?	"-" and "+"	"*"and /"	<mark>"~" and "^"</mark>	"+" and "-"
98	To represent hierarchical relationship between elements, which data structure is suitable?	Queue	Stack	Tree	None of these
99	Which of the following is not associated with stack?	FIFO	LIFO	Pile	Push down
100	Stack is type of data structure	Premitive	Non-Primitive Linear	Non-Primitive Non- Linear	None