Grapecity Sample Paper 2

GRAPECITY PLACEMENT PAPER (OOPS, MATHS, ANALYTICAL, DBMS etc.), OOPS

1.Is it possible for a member function of a class to activate another member function of the same class?
a. no
b. yes, but only public member functions.
c. Yes, only private member functions
d. Yes, both public & private member functions can be activated

2. Can 2 classes contain member functions with the same name?
a. no
b. yes, but only if the 2 classes have the same name
c. yes, but only if the main program does not declare both kinds
d. yes, this is always allowed

3.what is the purpose of template functions?
a. to allow a single function to be used with varying types of arguments
b. to hide the same name of the function from the linker
c. to implement container classe
d. to permit the use of the debugger without the ?gstabs flag

4.what kind of functions can access private member variables of a class
a. friend function of a class
b. private member functions of the class
c. public member functions of the class
e. all of the above
f. none

5. what technique is used to step thro? items of a container class?
a. copy constructor
b. default constructor
c. iterator (ans)

6. what is the term used to describe the situation when a derived class provides a function already provided in the base class ?
a. inheriting
b. overriding
c. abstraction
d. none

7. what r the characteristics of object, in general
a. it has name, properties
b. name, properties, behavior
c. it can act on receiving a message
d. a &c
e. b&c

8. bundling data members together with the functions is called
a. data hiding
b. encapsulation (ans)
c. data morphism
d. data binding

9.why is object oriented programming useful?
a. It supports good s/w engg. Practices
b. It promotes thinking abt s/w in a way that models the way we think & interact naturally
c. Supports code reuse
d. A &b
e. A,b & c

10. suppose you want 2 develop 2 diff, + operators that calculate & return an object of the same class. Which stmt is correct?
a. 1 operator must be a friend & the other must not
b. 1 operator must be public & the other private
c. operators must have different parameter lists
d. it is not possible 2 have 2 different + operators

11.what is inheritance?
a. a relationship in which the structure & functionality of a class (?child) is defined in terms of the structure & functionality of another(parent)
b. a relationship in which the structure & functionality of a class (?parent?) is defined in terms of the structure & functionality of another(?child?)
c. a relationship in which the structure & functionality of a class make calls 2 functionalty of another
d. a relationship in which the structure of a class includes 1 or more instances of another
e. all of above

12. what is relationship betn . a class & its public parent class
a. ?.is a?.?
b. ?has a?
c. ?is implemented as a ???
d. uses a
e. becomes a

13. how does inheritance relate to abstraction?
A . a base class is an abstraction of all its derived classes
b. a derived class is an abstraction of all its base classes
d. Base & derived classes are abstractions for each other
e. Inheritance prevents abstraction
f. No relationship between them

14. why can't compiler ?hard-code? direct calls to virtual functions?

a. bcoz hard ?coding the fn. Call would slow compilation of the program too much
b. bcoz hard ?coding the fn. Call would slow execution of the program too much
c. bcoz the correct fn. To call generally isn't know at compile ?time
d. bcoz virtual fns are always at compile-time so no run-time code is needed at all.

e. Compiler does hard-code direct calls 2 virtual functions.

15. what is accessibility of a protected member of a base class which is inherited privately?

a. private: bcoz the private inheritance makes everything from the base class private in the derived class (ans)

DBMS

1. Indexing must be applied on fields that are
a. seldom refernced in query
b. containing few unique columns
c. on frequently searched columns
d. changed frequently

2. The relational data model includes several types of data integrity .which type of data integrity is ensured by the use of a primary key?
a. entity integrity
b. domain integrity
c. referential integrity
d. relational integrity

3. A student has 3 diff. Teachers . Each of these teachers has several students. Which type of relationship in relation model would effective represent this?
a. 3 one-to-many relationships
b. two many-to-one relationships
c. a single many-to ?many relationships
d. at least 2 many-to-many relationships

4. which of the following properties are required of a column or column sets for the column to function as a primary key?
a. no nulls
b. a clustered index
c. a non-clustered index
d. there must be at least 1 foreign key on the same table.

5. select a.pk, fn, b.zip, c.city from a, b, c wher a.pk=b.pk
tables a,b,&c each contain 100 rows & the primary key for tables a & b is pk. What is the maxm. No. of rows that could be returned by query

a. 100
b. 0
c. 100,000
d. 10,000
e. 1,000,000

6. which of the following is only used with a foreign key constraint ?
a . primary key constraint

b. the refereces clause

c. a check constraint

7. which is used to return the no. of rows in a table?

a. sel;ect all count from tablename

b. select count(*) from tablename

c. select numrows from table name

8.. when writing sql queries , how do u control the query execution plan used by the databases

a. query directly against an idex instead of table

b. define a static cursor & specify the ?using specific index? keyword

c. most databases provide propreitory methods to give database hint

d. enclose quey in atransaction & add a statement using the ?set search? keyword

9.. Which is not allowed in a trigger

a. update

b. select into

c. while

d. begin

10.select type, avg(price), min(price) from product group by category

what is wrong??

a. u can't include multiple aggregates in a select list

b. there is no where clause

c. nothing

C/C++

1. when shud apointer p be a reference parameter?

a. when fn. Changes p, & u want the change to affect actual pointer argument

b. when fn. Changes p, & u do not want the change to affect actual pointer argument

c. when fn. Changes *p, & u want the change to affect actual pointer argument

d. when fn. Changes *p, & u do not want the change to affect actual pointer argument

e. when pointer points to large object

2. output???

Int y=1;

Int k=2;

Int *p1;

Int *p2;

P1=&y;

P2=&k;

p1=p2;

*p1=3

*p2=4;

printf(?%d?,y);

a. 1
b. 2
c. 3
d. 4

3.when shud u use a const reference parameter ??
a. whenever the data type might be many bytes
b. whenever the data type might be many bytes, the fn. Changes the papramter within its body, & u do not want these changes to alter the actual argument
c. whenever the data type might be many bytes, the fn. Changes the papramter within its body, & u DO want these changes to alter the actual argument
d. whenevr the data type might be many bytes , & the function does not change the parameter within it body

4. what c++ syntax is used to declare that a class B is derived from Class A?
a. class A derives B {??};
b. class B: public A {,??..};

5. using the variable , which is legal?
a. a=b;
b. b=a;
c. b1=b2;
d. both a & b are legal but not c;
e. both a & c are legal but not b;
f. both b & c are legal , but not a;

6. suppose there ar e 2 fns. F has an argument of type A and g has an argument of type B. Which is correct?
a. both f(a) & g(a) are legal fn. Calls
b. f(a) is legal , but g(a) is not legal
c. f(a) is not legal , g(a) is legal
d. neither f(a) nor g(a) is legal fn call

7. template<class Item>
void foo(Item x);

which is right way to call with integer argument I?
a. foo(i);
b. foo<int > (i);
c. foo<Item>(i);
d. foo(<int> i);
e. foo(<Item > i);

8.void quiz(int w)
{
if(w>1)
{ quiz (w/2);
quiz(w/2);

```
}
printf(?*?);
}
```
how many asterisks are printed by the function call quiz(5)?
a. 3
b. 4
c. 7
d. 8

10.
```
void test_a (int n)
{
printf(?%d?,n);
if(n>0)
test_a(n-2);
}
test_a(4)?
```

a . 0 2 4
c. 0 2
d. 2 4
e. 4 2
f. 4 2 0

11.
```
char string[8]=?abcdefg?;
*string=?\0?;
printf(?%s?,string);
```
a. compiler error
b. run-time error
c. no o/p, but no error
d. creates bcdefg

12.
```
char string[8]=?abcdefg?
```

o/p :
```
printf(?%s\n?,string +3);
```
a. abcdefg
b. abc
c. defg
d. cdefg

13.
```
main()
{ int I=-3, j=2,k=0,m;
m=++I&&++j||++k;
printf(?\n%d%d%D?, I,j,k,m);
```

a. ?2 3 0 1
b. ?2 3 1 1
c. ?2 3 1 0
d. ?2 3 0 0

14. main()
{
int I;
for(;;)
{
printf(?%d?,I++)
if(I>10)
break;
}
}
a. condition in a for-loop is mudt
b. no error
c. 2 ; shud be dropped

15.void goop (int z[]);//prototype
int x[10];
which ois the correct way to call goop
a. goop(x);
b. goop(x[]);
c. goop(x[10]);
d. goop(&x);
e. goop(&x[]);

16. int a=3,b=17;
a=b%a;
b=++a+5;
printf(?a,b);

a. 2 8
b. 2 7
c. 3 7
d. 2 8
e. none

18. how many time shello will be printed?
FILE *fp=fopen(?test.txt?,w)
Fprintf(fp,?hello?);
Fork();

a. 1
b. 2
c. 0
d. none

19. int a;
int b=0;
while(a)
{

```
{ a&=a-1;
b++;
}
```
a &b
a. 0 & 15
b. 1 & 16
c. 0 & 16
d. none

20. class A
```
{
public:
static int a;
A() {a=10};
};
int main()
{
A b;
Printf(?%d?,b.a);
Return 0;
}
```
will the program compile?
a yes
b. no

NUMERICAL ABILITY

1. A salesman marks an item 60% above the cost price & offers 2 successive discounts of 25% & 15% on the marked price. His profit is:
a. 15% b. 2% c. 7.5% d. 10 e. none

2.Had it been sold at 55% loss, SP would have been Rs. 10.80. The C.P is;
a. Rs 26 b. 28 c. 36 d.24 e. none

3. If 18 men can build a wall 140 mtrs. In 42 days . In how many days can 15 men be able to construct a similar wall 100 mtrs . long??
a. 36 b. 60 c. 60 d. 33 e. none

4. Successive discounts of 15% & 20% on any goods amount to a total discount of :
a. 50 % b. 35% c. 34% d.32 % e.none

5. In a km race A beats B by 40 m or 7 secs. A?s time (in secs) over the cource is:
a.180
b. 280
c. 168
d. 175
e. none

6. A widow & a son are to receive Rs 20000 and Rs 10,000 respectively frm inheritance of Rs. 70,000.

The rest is 2 be divide so that the widow recives 3/2 times as much of it as the son. Then the amount received by (widow,son) pei9r in thousands of rs. Is:
a. (44,26)
b. 42,28
c. 40,30
d. 45,30
e. none

8.the demand for a commodity linearly decreases by 0.5 unit for each unit increase in price & it vanishes when the price is set at 60 . The supply of the commodity vanishes when the price is set at 25 & equals the square root of the price in excess of this threshold price. Then the equilibrium at which the supply coincides with the demand is:
a. 45
b. 50
c. 55
d. 62+/-3 under-root86
e. none

ANALYTICAL ABILITY

A farmer plants only 5 diff. Vegetables-beans, corn, kale, peas& squash. Every year the farmer plants exactly 3 kinds of vegetables as follows:]
If the farmer plants corn, the farmer also plants beans that year.
If he plants kale 1 year, he does not plant it next year
In any year, farmer plants no more than one of the vegetable the farmer planted in the previous year.

1. Which of the following is possible combinations plant in 2 successive years?
a. beans, corn, kale,; corn, peas, squash
b. beans,corn,peas; beans,corn,squash
c. beans, peas,squash; beans,corn.kale
d. corn,peas, squash; beans,kale,peas
e. kale, peas, squash; beans, corn,kale

2.if he plants beans, corn & kale in 1st year , which must be planted in 3rd year?
a. beans, corn, kale
b. peas, corn & kale
c. beans, kale , peas
d. beans, peas, squash
e. kale, peas , squash

In a game exactly 6 inverted cups stand side by side ina straight line & each exactly has 1 ball hidden under it. The cups are numbered consecutively 1 thro? 6. Each of the balls is painted a single solid color. The colors of the balls are green, magenta, orange ,purple,red & yellow. The balls have been hidden under following conditions:
The purple ball must be hidden under a lower-numbered cup than the original ball.
The red ball must be hidden under a cup immediately adjacent 2 the cup under which the magenta ball is hidden
The green ball must be hidden under cup 5.

1. which of the following could be colors of balls from 1 to 6?
a. green, yellow, magenta,red, purple, orange
b. magenta, green , purple, red, orange, yellow
c. magenta, red , purple, yellow, green , orange
d. orange, yellow. Red, magenta, green, purple
e. red, purple, magenta, yellow, green, orange

2. if red ball is under cup4 ? howmany sequences are possibl;e
a. 0
b. 1
c. 2
d. 3
e. 4

3. which is true?
a. green ball is under lower-numbered than the yellow ball.
b. orange ball is under lower-numbered than the green ball.
c. purple ball is under lower-numbered than the green ball.
d. purple ball is under lower-numbered than the RED ball.
e. Red ball is under a lower- numbered cup than the yellow ball

4. If red & orange ball are kept 0ofadjacnet to each other, how many valid seqiuences sre possible?
a. 1
b. 2
c. 3
d. 4
e. 5

5. If the magenta is bill is under cup, 1 balls of which ththf following colors must be under cops immedistely adjacent to each ather??
a. green & orange.
b. Green & yellow
c. Purple & red
d. Purple & yellow
e. Red & yellow

6. Karim is exactly twice as old as Rahim. Karim's age 10 yrs. ago was 2 times saleem?s present age.
a. saleem is 5 yrs. Younger than rahim
b. rahim is twice as old as saleem
c. saleem is the same age as rahim
d. saleem is 10 yrs. Younger than rahim

7. X & Y are +ve integers. The sum of X&Y is less then their product
a. atleast one of X & Y is not 1
b. both X & Y are greater than 2
c. neither takes value 1
d. atleast one of X & Y is greater than 2

Logical Reasoning

He greatest chance for the existence of extraterrestrial life is on a planet beyond our solar system. This is b?coz the Milky Way galaxy alone contains 100 billion other suns, many of which could be accompanied by planets similar enough to make them suitable abodes of life.

The argument above assumes which of following?

a. living creatures on another planet would probably have the same appearance as those on earth

b. life cannot exist on other planets in solar system

c. if the appropriate physical conditions exist, life is an inevitable consequence

d. more than one of the suns in the galaxy is accompanied by an earth like planet

e. it is likely that life on another plane would require conditions similar to those on earth