

Class XII computer Science _marking scheme

Q1. a	What is the purpose of using a typedef command in C++? Explain with suitable example	02
	Defines new name or alias name for an existing type. typedef double amount; // amount has become an alias name for double amount bill, tax, discount; // the new name amount is used to declare variable , which will be of type double	1 mark + Any proper example 1 mark
b)	Name the header files that should be used for the following code.	01
	<iostream.h> & <iomanip.h>	½ mark each
C	const int <u>max</u> = 10; void main() { <u>int</u> vector[max] = { 20, 50, 10, 30, 40}; for(<u>int</u> c =max – 1; c>=0; c--) cout<<vector[c];	2 marks ½ mark for each correction (underlining alone without correction reduce ½ mark
d	40,600, 648 34,550,605	½ mark for each correct value Wrong format reduce ½ mark
e	iNTTaNEE	¼ for each character
f	i,ii & iv not expected max: value of chance = 11 minimum value = 10	1 mark for options ½ mark for maximum & ½ minimum
2 a	How encapsulation and abstraction are implemented in C++ language? Explain with example.	2
	Data encapsulation is a mechanism of binding the data and the functions that use them and data abstraction is a mechanism of exposing only the interfaces and hiding the implementation details from the user. Creation of user-defined classes implements encapsulation and abstraction	1 mark for definition ½ mark for example Explanation ½ mark
b	(i)Function1 & function 4 together is termed as constructor overloading Stream(int sc, char s[], float f)	½ mark each

	<pre>{ streamcode =sc; strcpy(streamname, s); fees = f; } (ii) stream s(11, "science", 5000);</pre>	1 mark
c	<p>Class customer definition</p> <p>½ mark member declaration</p> <p>½ mark for input () , ½ mark for invoking calcdiscout ()</p> <p>½ mark for show , 1 mark for calcdiscout()</p>	
d	<p>(i) dealer → 118 bytes accessories → 94 bytes</p> <p>(ii) Multilevel inheritance, base class of accessories is AC and derived class is dealer.</p> <p>(iii) Data member:- price Member functions enterdetails(), showdetails() , enteraccessoriesdetails(), showaccessoriesdetails()</p> <p>(iv) Data members: no_of_dealers, dealers_name, no_of_products, price, stabilizer, AC_cover Member functions: entercardetails(), showcardetail(), enteraccessoriesdetails(), showaccessoriesdetails(), enterdetails(), showdetails()</p>	1 X 4 =4
3a	<pre>void half_exchange(int ar[10], int size) { int temp; for(int i=0; i<=size/2; i++) { temp = ar[i]; ar[i] = ar[size/2 - i]; ar[size/2 -i] = temp; } }</pre>	<p>Function heading ½ mark Loop ½ mark Logic 2 marks</p>

b	$\text{Address of mat}[10][15] = 4200 + 8 * [(10 * 20) + 15]$ $= 5920$	Correct formula & substitution 1 mark Answer -> 1 mark
C	<pre> void push() { game *nptr; nptr = new game; cout <<"Enter game name"; gets(nptr->gamename); cout<<"Enter number of players"; cin>>nptr->numberofplayer; nptr-> next = top top=nptr;} void pop() { game *nptr = top; if(nptr ==NULL) cout<< "underflow"; else { cout<<"deleted element"<<endl; cout<<top->gamename<<" "<<top->noofplayer; top = top-> next; delete nptr; } } </pre>	
d	<pre> void swap(int ar[5][5], int s) { int temp; for(int i =0; i<s; i++) for(int j =0; j<s; j++) if(i !=j) { temp = ar[i][j]; ar[i][j] = ar[j] [i]; ar[j][i] = temp; } } </pre>	Function header ½ mark Loop ½ mark Logic 2 mark

	<pre> }</pre>	
e	<p>For final answer 20 -> 1 mark</p> <p>For writing push and pop -> ½ mark</p> <p>Proper steps -> ½ mark</p>	
4a	<pre> file.seekp(9*sizeof(student),ios::beg); file.seekp(3*sizeof(student), ios::beg);</pre>	½ mark each
b	<pre> void count() { ifstream ifile("vowel.txt", ios::in); char word[10]; int c =0; while(!ifile.eof()) { ifile>>word; if(strlen(word) == 3) c++; } cout<<"count ="<<c<<endl; Ifile.close(); }</pre>	<p>Opening of file stream and declaring variables 1 mark</p> <p>Logic 1 mark</p>
c	<pre> void fetch_record(int m) { ifstream ifile("car.dat", ios::in ios::binary); car c; while(!ifile.eof()) { ifile.read((char *) &c, sizeof(c)) if(c.return_mileage(>100 && c.return_mileage()<150) c.display(); } ifile.close(); }</pre>	<p>Function header ½ mark</p> <p>Opening file ½ mark</p> <p>Loop ½ mark</p> <p>Reading ½ mark</p> <p>Condition and display 1 mark</p>
5a	<p>Primary key: Attributes which can uniquely identify rows in a table (tuples in a relation)</p> <p>Candidate key: The attributes of a table which are qualified to become primary key</p>	1 mark each

<p>b (i)</p> <p>(ii)</p> <p>(iii)</p> <p>(iv)</p> <p>(v)</p> <p>(vi)</p> <p>(vii)</p> <p>(viii)</p>	<p>SELECT DCODE, DESCRIPTION FROM DRESS ORDER BY DCODE;</p> <p>SELECT D.DESCRPTION , M.TYPE FROM MATERIAL M DRESS D WHERE D.DESCRPTION = 'FROCK' OR D.DESCRPTION ='EVENING GOWN' AND M.MCODE =D.MCODE;</p> <p>UPDATE DRESS SET PRICE = PRICE +PRICE *5/100 ;</p> <p>SELECT MCODE, AVG(PRICE) FROM DRESS GROUP BY MCODE;</p> <p>2700</p> <table border="0"> <tr> <td>Description</td> <td>Type</td> </tr> <tr> <td>Informal Shirt</td> <td>Cotton</td> </tr> <tr> <td>Formal Pant</td> <td>Terelene</td> </tr> </table> <p>M004</p> <p>Count(distinct price)</p> <p>4</p>	Description	Type	Informal Shirt	Cotton	Formal Pant	Terelene	<p>1 mark for each query</p> <p>½ mark for each output</p>														
Description	Type																					
Informal Shirt	Cotton																					
Formal Pant	Terelene																					
<p>6a</p>	<p>$(X+XY)= X$</p> <p>$X(X+Y) = X$</p>	<p>½ mark for each law (½ + ½ =1)</p> <p>Verification using truth table 1 mark</p>																				
<p>b</p>	<p>$D = A.B' +B.C$</p>	<p>2 marks</p>																				
<p>c</p>	<table border="1"> <thead> <tr> <th>X</th> <th>Y</th> <th>Z</th> <th></th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table>	X	Y	Z		0	0	0	1	0	0	1	0	0	1	0	0	0	1	1	1	<p>¼ mark for truth table,</p> <p>¼ mark for each term</p>
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1	1	0	1															
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	$(X+Y+Z') (X+Y'+Z) (X'+Y+Z)$																	
d	Map drawing ½ mark Marking : ½ mark Result : 2 marks																	
7a	VoIP	1 mark																
B	Any correct valid scripts for client side ½ mark Any correct valid scripts for server side ½ mark	1																
c	Any 2 valid cases ½ mark each	1																
d	Any 2 differences ½ mark each	1																
e	(i) Any valid cable layout (ii) Admin block as more number of systems are there (iii) Admin & senior, admin & junior	1 mark each																
	(iv) Microwave																	
f	URL → www.cbse.nic.in/welcome.html Domain → cbse.nic.in	½ mark each																
G	Any two open source and its application	½ mark each																