BAL BHARATI PUBLIC SCHOOL GRH MARG

PRE-BOARD II 2015-16

MARKING SCHEME

TIME: 3 HOURS MAX. MARKS: 70

GENERAL INSTRUCTIONS:

(I) All questions are compulsory
(II) Programming Language: C++

1.		
a.	Simple variable holds some data; whereas pointer variable holds the address of some other variable.	2
b.	(i) stdio.h (ii) math.h	1 – ½ each
c.	const int Max = 10; int Numbers[Max] = {20, 50, 10, 30, 40}; or int Numbers[] = {20, 50, 10, 30, 40};	2 – 1 each
d.	(i) and (iv)	2 – 1 each
e.	0 2 2 4 4 6 6 8 8 10 10 12	3 – 1 each
2.		
a.	In private inheritance, private members are not inherited whereas public members of the base become private of the child class. Example	2 – 1 each
b.	Class definition + Constructor + NewTravel() + ShowTravel()	4 – 1 each
c.	Base2 Der2 Destruct Der Destruct Base	2 – ½ each
d.	(i) Multiple inheritance (ii) All (iii) SchName, SCode, Attendance, TotMarks, Salary (iv) SchEntry(), SchDisplay()	4 – 1 each
3.		

a.	void Reverse(int A[], int N) {
	int temp, i, j;
	for(i=0; j=n-1; i<=j; i++, j--) {
	temp = A[i]; A[i]=A[j]; A[j]=temp;
	}
	}
		3

b.	Arr[i][j] = Base + Width[columns(i-Lr) + (j-Lc)] Base = 1092 Arr[3][2] = 1340	3 1 - formula 1 - Base 1 – final

c.	void QUEUE :: DELETE( ) {
	Node *ptr;
	if (front == NULL)
	cout<< “Underflow\n”;
	else
	if(front == rear) {
	ptr = front;
	front = rear = NULL;
	delete ptr;
	}
	else {
	ptr = front;
	front = front -> link;
	delete ptr;
	}
	}
		4
		1-underflow
		1-condition
		1-pointer
		1-delete

d.	void AddEnd2(int A[][4], int N, int M) {
	int sum=0;
	for(int i=0; i<N; i++)
	for(int j=0; j<4; j++)
	if(A[i][j] %10 == 2)
	sum += A[i][j];
	cout<<”Sum of values ending with 2 : “ << sum;
	}
		2 – 1 def
		1- mod

e.	Stack Status + Result FALSE/F	2 – 1 each
4.		

a.	void SUCCESS() {
	ifstream fin(“STORY.TXT”, ios:in);
	char ch[8]; int count=0;
	while(!fin.eof()) {
	fin>>ch;
	if(strcmpi(ch, “STORY”)==0)
	count++;
	}
	cout<<count;
	fin.close();
	}
		2 – ½ open
		½ close
		1 – comparison

b.	void Economic() {
	fstream fs(“ITEMS.DAT”, ios:binary | ios:in | ios:out);
	ITEMS item;
	while(fs.read((char*)&item, sizeof(ITEMS)))
	{
		3 – ½ open
		1- read
		1- compare
		½ close

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```
        if(item.getCost()<2500)
            item.See();
    }
    fs.close();
}
```

</td><td></td></tr>
<tr><td>c.</td><td>PRESENT RECORD : 3</td><td>1</td></tr>
<tr><td>5.</td><td></td><td></td></tr>
<tr><td>a.</td><td>Candidate Key: Code, Item Primary Key: Code</td><td>2 – 1 each</td></tr>
<tr><td>b.</td><td>(i) SELECT WNO, NAME, GENDER FROM EMPLOYEE ORDER BY WNO;
(ii) SELECT NAME FROM EMPLOYEE WHERE GENDER='MALE';
(iii) SELECT WNO, NAME FROM EMPLOYEE WHERE DOB BETWEEN '1987-01-01' AND '1991-12-01';
(iv) SELECT COUNT(*) FROM EMPLOYEE GROUP BY GENDER HAVING DOJ>'1986-01-01' AND GENDER='FEMALE';
(v) COUNT(*) DCODE
2 D01
2 D05
(vi) DISTINCT DEPARTMENT
INFRASTRUCTURE
MARKETING
MEDIA
FINANCE
HUMAN RESOURCE
(vii) NAME DEPARTMENT
George K. INFRASTUCTURE
Ryma Sen MEDIA
(viii) MAX(DOJ) MIN(DOB)
2014-06-09 1984-10-19</td><td>6 –
(i) to (iv) 1 each

(v) to (viii) ½ each</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>6.</td><td></td><td></td></tr>
<tr><td>a.</td><td>Absorption Law</td><td>2 – 1 law
1 Truth table</td></tr>
<tr><td>b.</td><td>A'B+(C+D')'</td><td>2</td></tr>
<tr><td>c.</td><td>F = (X+Y+Z')(X+Y'+Z)(X'+Y+Z)(X'+Y+Z')</td><td>1</td></tr>
<tr><td>d.</td><td>K map + F(A, B, C, D) = A'D + A'B + BC'

<table>
<tr><th></th><th>[00] C'D'</th><th>[01] C'D</th><th>[11] CD</th><th>[10] CD'</th></tr>
<tr><td>[00] A'B'</td><td></td><td>1</td><td>1</td><td></td></tr>
<tr><td>[01] A'B</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>[11] AB</td><td>1</td><td>1</td><td></td><td></td></tr>
<tr><td>[10] AB'</td><td></td><td></td><td></td><td></td></tr>
</table>
</td><td>3 – 1 label
1 pair/quad
1 result</td></tr>
</table>

7.		
a.	**Advantage:** Since there is a single common data path connecting all the nodes, the bus topology uses a very short cable length which considerably reduces the installation cost. **Disadvantage:** Fault detection and isolation is difficult. This is because control of the network is not centralized in any particular node. If a node is faulty on the bus, detection of fault may have to be performed at many points on the network. The faulty node has then to be rectified at that connection point.	1 – ½ each
b.	(i) Star topology + diagram (ii) As per 80 – 20 rule, SalesDept beacause it has maximium no. of computers. (iii) Each building should have hub/switch and Modem in case Internet connection is required. (iv) MAN (Metropolitan Area Network)	1–½ each 1–½ each 1–½ each 1
c.	(i) VoIP (Voice over Internet Protocol) (ii) IRC (Internet Relay Chat)	1 – ½ each
d.	An IP address is a unique identifier for a node or host connection on an IP network. An IP address is a 32 bit binary number usually represented as 4 decimal values, each representing 8 bits, in the range 0 to 255 (known as octets) separated by decimal points. This is known as "dotted decimal" notation. Example:140.179.220.200	1
e.	HTTP is a protocol that is used for transferring hypertext (i.e. text,graphic,image,sound,video,etc,)between 2 computers and is particularly used on the Worldd Wide Web (WWW).	1
f.	When the user browses a website, the web server sends a text file to the web browser. This small text file is a cookie. They are usually used to track the pages that we visit so that information can be customised for us for that visit.	1
g.	3G technology adds multimedia facilities such as video,audio and graphics applications whereas 4G will provide better than TV quality images and video-links.	1