

Std. 11

9-9-2015

Half Yearly Examination in **COMPUTER SCIENCE**

Time : 3 hrs.

M. Marks : 70

1. a) Mention the header files for the following built in functions. [2]
i) getch() ii) exit() iii) clrscr() iv) main()
 - b) What is the significance of a break statement in a switch statement? What is the effect of absence of break in switch statement? Explain with example. [2]
 - c) What is the purpose of using default in switch case statement? [1]
 - d) What do you mean by unreachable code? Explain with example. [1]
 - e) Difference between (Write any two):- [8]
 - i) Entry controlled and exit controlled loops
 - ii) Multiple if ..else and switch .. case
 - iii) Selection and Iteration constructs
 - iv) Conditional operator and if..else construct
 - f) Explain empty loop and true loop with example. [2]
 - g) Can we write multiple conditions in for loop? Explain with example. [2]
 - h) Write one limitation of multiple initialization in for loop with example. [1]
 - i) What is the use of long and unsigned modifiers? [1]
2. Underline the errors and write the corrected code.
 - a) #include<iostream.h> [2]
void main()
{
const MAX = 0.5 ;
int a, b;
cin<<a>>b;
if(a > b)
MAX = a;
for(int x=0,x<MAX, x++)
cout<<x;
}
b) void main<> [3]
{ int c;
switch(c);
case 1.5: cout<<" India is great\n";
brake;
'case' 2: cout<<" hello\n";
} }
c) int x=1, y; [3]
while(x<=10, x++)
[y =* x;
cout<<y else cout << "@"<< y;
]
 3. Convert the following code segments :-

a) Convert multiple if-else to switch statement [3]

```
int x,y,z;
cin>>x>>y>>z;
if (x==1 || x==2 )
cout<<x*y+5;
else if (x==3)
cout<<x+2+y;
else if (x==4)
{
z=(x*y*6)/3;
cout<<z;
}
else
cout<<x<<" "<<y<<" "<<z;
```

b) Convert conditional operator to if else [2]

```
int val, res, n=2000;
cin>>val;
res = n+val>2750 ? 1400:1200;
cout<<res;
```

4. Write output of the following code :-

a) void main() [3]

```
{ int i=1,ua=0,ub=0,fail=0;
while( i<5 )
{ switch(i++)
{ case 1: ++ua;
case 2:
case 3: ++ub;
case 4:
default : ++fail;
}
i +=2;
cout<<"ua ="<<ua<<","ub ="<<ub<<","fail="<<fail;
}
}
```

b)void main() [4]

```
{ int U=10, V=20;
for(int i=1; i<=2; i++)
{
cout<<"[1]="<<U++<<"&"<<V-5<<endl;
cout<<"[2]="<<++V<<"&"<<U+2<<endl;
}
}
```

c)void main() [2]

```
{ int a=5, b=5, c=3, ans;
```

```
ans = (a++ < ++b ? b/2 : c/2);
cout<<ans;
```

d) Write output if the input given to the variable code is :- [3]

```
i. u      ii. a      iii. h
switch(code)
{
case 'a': cout<<"\n accountant";
case 'b': cout<<"\n Banker"; break;
case 'u': cout<<"\n Urban";
case 'f': cout<<"\n Fail"; break;
default: cout<<"\n work again";
}
```

5. Write a program to enter grade from the user. If the entered grade is 'P' print the message "PASS" and if the entered grade is 'F' print the message "FAIL".(use ? : operator) [3]

6. Write a program to input the sides of a rectangle. Calculate area and perimeter. If area is greater than perimeter display area otherwise display perimeter. (use if..else). [3]

7. Write a program to find the ticket fare of a bus according to the code of a bus.(use switch case)[3]

<u>code</u>	<u>fare</u>
d	Rs.4
r	Rs.5
w	Rs.10
c	Rs.12

8. Write a program in C++ to prepare a frequency distribution table of the percentage marks in Computer studies of sixty students, **input percentage of marks** and count number of students for each category based on the following table :(use multiple if..else) [4]

<u>Category</u>	<u>Marks(%)</u>
F	0-34
P	35-59
G	60-79
V	80 and above

The output should display the categories and the corresponding frequencies, i.e, the number of students in each category in two columns as shown below:

<u>Category</u>	<u>No of students</u>
F	4
P	30
G	150
V	50

9. Write a program to read a 5 digit number. Check whether the number is palindrome or not and

exchange the first and last digit of that number. (use while or for loop)
For example : if the given number is 45372 then the output should be 25374. [4]
Palindrome number is the number whose reverse is equal to the number itself.
ie. 43234 the reverse is same as the number.

10. An library charges fine on late book returning as follows: [3]
Late for first 5 days - 2 Rs per day
Late for next 10 days - 4 Rs per day
Beyond 15 days - 5 Rs per day
All members are charged security also which is Rs. 100/-
Write a program to read the member code and number of days, and print out the fine with member code in a presentable way.

11. Write a program to input type of card, purchase amount from user and calculate discount and net amount. (for type of card enter P for platinum and G for gold).Discount is calculated based on type of card and purchase amount according to the following table: (use nested statements) [5]

Card	Purchase amount	discount
P	<=1000	10%
	>1000 and <=5000	12%
G	<=2000	10%
	>2000 and <=7000	12%

Print the complete data in a presentable way.

-X-X-X-X-X-X-