1	1-9	10	11	12	13	14	15	16	XXX	XXX	XXX	XXX	XXX	XXX	тот	
1																
University of Gaziantep, Department of Duration 100 min.									in.							
Student Name, Surname : * * * S A M								Е *	* *				I	Date/	Time	
Student Id No			:													
<ul> <li>1. Which of the following variable names are illegal in C++ syntax?</li> <li>I) integral II) integer III) _number1</li> <li>IV) 1stMidterm v) Top_10</li> <li>(a) I and IV</li> <li>(b) III and IV</li> <li>(c) II and IV</li> <li>(d) IV only</li> <li>(e) III, IV, and V</li> </ul>								<pre>5. What is the output of the following code segment? int a; a=3; switch(a) {   case 2: cout &lt;&lt; "i"; break;   case 3: cout &lt;&lt; "ii";   case 4: cout &lt;&lt; "zz"; break;   default: cout &lt;&lt; "iii"; }</pre>								
<pre>2. What is the value of c in the following statement? int a=5, b=13; int c = (a &lt; b) ? b/a : a/b; (a) 2 (b) 0 (c) 2.6 (d) 0.4 (e) 0.3846</pre>							<ul> <li>(a) i</li> <li>(b) ii</li> <li>(c) iiiiii</li> <li>(d) iizz</li> <li>(e) zz</li> <li>7. What is the value of x after the execution of</li> </ul>									
<pre>3. What is the output of the following code fragment? int k = 10, t; t = -k; cout &lt;&lt; k &lt;&lt; " " &lt;&lt; t &lt;&lt; endl; (a) 9 10 (b) 9 -10 (c) -10 -11</pre>							the below statements? int $x = 4$ ; x /= x - 2; (a) 0 (b) -1 (c) 2 (d) 1 (e) 4									
(d) 9 -11 (e) -10 -10							8. What is output of the following code segment? int x = 4;									
<pre>4. What will be th segment? int m=0; do {     m=m-2; } while (m&gt;5) cout &lt;&lt; m; (a) 0 (b) 2 (c) -2</pre>	e outp ;	out of t	he be	low co	ode		for } (a) ^ (b) ^ (c) 1 (d) ^ (e) ^	(int x += t << 10 12 14 16 18	i=0; 2; x;	• i<4	; i+	+) {	of the	follow	20	
(d) -5 (e) -7							9. W mat	hemat	ical explored $\sqrt{ \alpha }$	$\frac{10 \text{ C}}{10 \text{ c}}$	+ equi sion:	vaient	or the	IOIIOWI	ng	
5. if x is negative in the following assignment						1	$K = \sqrt[6]{\frac{  u  - b  }{\ln x^2}}$									
double y =	sqrt	(x);														

then .....is assigned to variable y;

(100/)[10]	#include (instroom)
(1070)[10].	
vvrite down the output of the program given right.	using namespace std;
	interview() (
	int main() {
	double x=1.0;
	<pre>int k=5;</pre>
	<pre>while(k&gt;0) {</pre>
	if ( log10(x)>2.0 ) {
	x = x/20;
	cout << x << endl;
	k:
	erse
	$\mathbf{x} = \mathbf{x} \mathbf{x} 1 0 0;$
	}
	}
(10%)[11].	<pre>#include <iostream></iostream></pre>
Write down the output of the program given right.	using namespace std;
	int main (){
	int $c1=1$ , $c2=c1$ ;
	$int c_3 = (c_1 > c_2) + 2 + 1 + 0 + 1$
	110000 = (01002) + 10000
	while $(c_{3}<15)$ {
	$a_{3} = a_{1} + a_{2}$
	$c_{J} = c_{I} + c_{Z},$
	CI = CZ;
	$c^2 = c^3;$
	cout << c1 << " " << c3 << endl;
	}

(10%)[12]. For the flow chart given below, write a C++ program:



(10%)[13]. (a) By using a for loop, write a C++ program

that evaluates sum of the first N terms of the following infinite series:

$$\sin(\pi) + 2\sin(\frac{\pi}{2}) + 3\sin(\frac{\pi}{3}) + 4\sin(\frac{\pi}{4}) + \cdots$$

where N in the input from keyboard.

(b) What is the output of your program for N = 5?

(05%)[14]. Convert following for loop into a while loop
int s = 0, i;
for(i = 0; i < n; i++) {
 s += 2\*i;</pre>

```
}
```

(05%)[15]. Rewrite the following switch block using else if statement

```
switch(octalDigit){
   case 0: cout << "zero "; break;
   case 1: cout << "one "; break;
   case 3: cout << "three"; break;
   case 5: cout << "five "; break;
   case 6: cout << "six "; break;
   case 7: cout << "seven"; break;
   default: cout << "out of range";
}</pre>
```

(15%)[16]. Write a program that calculates the factorial of the integer input N (i.e.  $N! = 1 \cdot 2 \cdot 3 \cdot ... \cdot N$ ). The program must output an error message if the input is negative. For this case the program should not attempt to compute the factorial and stop the execution.