

**Q1. Solve all parts on answer sheet attached.****(10+15+20=45 Points)****Part 1:** Choose valid option for each of the following?

<b>a.</b> $3+5*4-2$ A. 30      B. 30      C. 21      D. 13	<b>b.</b> $2+(3+5)*(6-2)$ A. 34      B. 40      C. 58      D. 60
<b>c.</b> $9/4$ A. 1      B. 1.25      C. 2.25      D. 2	<b>d.</b> $7\%4$ A. 3      B. 1      C. 1.75      D. 2.25
<b>e.</b> "abcdefgh".charAt(4) A. d      B. e      C. 4      D. 5	<b>f.</b> "abcdefgh".indexOf() A. 34      B. 40      C. 58      D. 60
<b>g.</b> "abcdefgh".substring(2,5) A. bcd      B. bc      C. cde      D. cd	<b>h.</b> ? ("12\b34'+'\b'+\"56"); A. 12456      B. 12\b34\b56      C. 1\b3\b56      D. 1356
<b>i.</b> int x=7, y=4; ? ("x/y:"+x/y); A. x/y:1.75      B. x/y:1      C. x/y1.75      D. x/y1	<b>j.</b> int x=7; double y=4; ? ("x\\y."+x/y); A. x\\y.1      B. x\\y.1.75      C. x\\y.1.75      D. x\\y.1

**Part 2:** Mention syntax, logical and run-time error(s) if any in the following codes with reason. There may be more than 1 error(s) in any part, mention all of them. In case of no error clearly write "No Error". Don't leave blank. (10 Points)**Note:** Using variable without declaration is not an error.

<b>a.</b> String s="This is.;" if (s.charAt(4)== ' ' ) ? ("Found"); ? ("Well Done"); else ? ("Not Found");	<b>b.</b> String s="This is.;" ? ("First Word:"); ?ln (s.substring(0,3)); ? ("String Length is:"); ?ln (s.length());
<b>c.</b> String s="This is.;" for (i=0;i<s.length();i++) if (s.charAt(i)== ' ' ) ? ("Space Found"); else ? ("Space not found");	<b>d.</b> String s="Please help me.;" ?ln ("Printing word by word"); for (i=0;i<s.length();i++) if (s.charAt(i)== ' ' ) ?ln (); else ? (s.charAt(i));
<b>e.</b> int count=1; for (i=1;i<=10;i++) if (i%3==0) count++; ? (count+" numbers are divisible"); ?ln (" by 3");	<b>f.</b> //input m to print grade if (m<50) ? ("F"); if (m<60) ? ("D"); if (m<70) ? ("C"); if (m<80) ? ("B"); if (m>=80) ? ("A");
<b>g.</b> String s="Do not take tension"; ?ln ("Printing word by word"); for (i=1;i<=s.length();i++) if (s.charAt(i)== ' ' ) ?ln (); else ? (s.charAt(i));	<b>h.</b> ? ("Printing square of stars"); ?ln (" of size 5 by 5 "); for (i=1;i<=5;i++) for (j=1;j<=5;j++) ?("*"); ?ln ();
<b>i.</b> ? ("Printing 10 multiples of 3 - 5");	<b>j.</b> class Mid{

<pre>?ln (" line by line "); for (i=3;i&lt;=5;i++)     for (j=1;j&lt;=10;j++){         ?(i*j+" ");         if (j==11)             ?ln ();     }</pre>	<pre>public static void main(String []a){     ?ln("Keep Hope!" +cube(2)); } public static int cube(int n){     ? ("Cube"+(n*n*n));     return n*n*n; }</pre>
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**Part 3:** Mention Output of the codes if there is no output clearly mention "No Output"?

**Note:** Using variable without declaration is not an error.

<p><b>Consider these variables for part a to d:</b>  <b>int a=7,b=3; double d1=2.3, d2=2, d3=1.5;</b></p>		
<p>a. ? ("**:"+b*d3+"\n"+d2*d1+"\ta*b");          ?ln ((int)d1*7+"\n"+d3*3+"\t"+d1);          ?ln ((int)(d3*d2)+"::"+(int)d3*d2);</p>	<p>b. String s="This is where I am?";          ?(s.substring(b,a)+ "::-");          ?(s.indexOf(' ',5)+ "\n"+s.length());</p>	
<p>c. String s="This is.";          if (a+b==d3*4)              System.out.print("&lt;Nice&gt;");          else              System.out.print("&lt;Not Nice&gt;");              System.out.print("&lt;So So&gt;");</p>	<p>d. if (a/b&gt;2)              System.out.print("&lt;A&gt;");          else if (a/b==2 &amp;&amp; a%b==2)              System.out.print("&lt;B&gt;");          else if (a/b&gt;2    !(a%b==1))              System.out.print("&lt;C&gt;");</p>	
<p style="text-align: center;"><b>int i,j; String s1="Time to repent to Allah";//for part e &amp; f</b></p>		
<p>e. for (i=5;s1.charAt(i)!='p';i++)              ?(s1.charAt(i)+",");          ?("^"+i+"^");          ?((char)(s1.charAt(i)+2));</p>	<p>f. for (i=0,j=0;i&lt;2;j++){              if (s1.charAt(j)==' ') i++;              ?(s1.charAt(j)+",");          }</p>	
<p>g. for (i=1;i&lt;=4;i++){              ?("&lt;");              for (j=1;j&lt;=4;j++)                  if (i==j){                      ?("*"+j);                      j++;                  }              else                  ?("*");              ?ln("&gt;");          }</p>	<p>h. for (i=2;i&lt;=6;i=i+2){              ?("&lt;");              for (j=1;j&lt;=i;j++)                  ?("-");              ?(i/2);              for (j=1;j&lt;=i;j++)                  ?("-");              ?ln("&gt;");          }</p>	
<p>i. f1(2);          f1(3);          f1(5);          public static void f1(int n){              ?ln(n+": "+n*n);          }</p>	<p>j. t=5;          for (t=5;t&lt;=6;t++)              ?ln(pr(t));</p>	<p><b>PS</b> int pr(int n){              int i,pr=1;              String s="";              for(i=3;i&lt;=n;i++){                  ?(i+",");                  pr=pr+i;              }              return pr;          }</p>

**Q2.**

**(15+20=35 Points)**



**Part 2: Complete codes without modifying given code, you must write program using given code? (2+3+3+4+4+4)**

a. Fill print statement to produce given output?

```
String s="Remember";
for (i=0;i<8;i++)
    ? (                );/Fill
```

**Output:**  
R-e-m-e-m-b-e-r-

b. Fill code to produce given output, without adding any loop?

```
for (i=1;i<=4;i++){
    for (j=1;j<=4;j++){
```

**Output:**  
\* 1 2 3 4  
1 \* 2 3 4  
1 2 \* 3 4  
1 2 3 \* 4

```
    }
    System.out.println();
}
```

c. Complete code to get v2 randomly. Your code must generate v2 until value is more than double value of v1?

```
double v1, v2;
v1=Math.random()*10;
```

d. Complete code to print 5 random values from -50 to 150. Show output as given on right hand side? (... mean values)

```
int n, val;
```

**Output:**  
Value 1: ...  
Value 2: ...  
Value 3: ...  
Value 4: ...  
Value 5: ...

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e. Call *printD* method in main to print **532** in first line and **4687** in second line?

<pre>PSVM (String []args){     int x=5324687;     _____     _____ }</pre>	<pre>PSV printD(int n, int start, int end){     String s=""+"n;     for (int i=start;i&lt;=end;i++)      System.out.print(s.charAt(i));     System.out.println(); }</pre>
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- f. Write method *isHalf* to receive two integer parameters and return true if first parameter is half of second parameter?

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ROUGH WORK

ROUGH