## Student Number: SolutionsName: AnswersEskişehir Osmangazi University, Faculty of Engineering & ArchitectureDepartment of Electrical Engineering "Introduction to Programming"

21.10.2011 1<sup>st</sup> midterm

- What is the evaluation order of foo() function within the expression given?
   a) before | |
   b) not evaluated
   c) after +
  - d) after  $\geq =$   $\overline{e}$ ) before  $\sim =$  f) after  $\sim =$

A=1;B=2;C=3;D=4; if((A+B>=C)||(foo(C)~=D)) D=C; end

2. The code piece given uses isAsal boolean function and calculates the number of prime numbers upto Nmax. How do you change the code to find number of prime numbers between two numbers given?

N = 2; for m=3:2:Nmax if isAsal(m) N = N +1; end; end

a) replace isAsal with isPrime
b) replace N=N+1 with N=N+2
c) use a code changer
e) refine using N=N-Nmin
f) loop upto Nmin and use N=N-1 in that afterwards

3. What is missing code in the function FindMin3 that returns the smallest of 3 given numbers.

```
a) (x3<x1)&&(x3<x2)
b) O=(x1>x2>x3);
c) if(x3<x1)&&(x3<x2) O=x3;
d) O=x3; end
e) return;
f) O=0; return;</pre>
```

```
if(x1<x2) && (x1<x3) 0 = x1;
elseif(x2<x1) && (x2<x3) 0 = x2;
else
```

function O = FindMin3(x1, x2, x3)

- 4. What is the intention of given statement?
  - a) obtain fractional part of x
  - c) See if x is a stable number
  - e) find out if x is a fractional number

numtype =  $(round(x) \sim = x);$ 

b) Round × to nearest integerd) Calculate the type of rounding

f) Perturb x around a whole number

5. What is the intended operation in the expression given?

a) 
$$A = B^{\pi} + \frac{yC}{x}$$
 b)  $A = \frac{B^{\pi+C}}{xy}$  c)  $A = B^{\pi} + \frac{C}{xy}$   
d)  $A = B^{\pi+\frac{C}{xy}}$  e)  $A = B^{\frac{\pi+Cy}{x}}$  f)  $A = B^{\pi+\frac{Cy}{x}}$ 

- 6. The function bigone is designed to return the biggest of two numbers but complains about an unassigned output argument. How would you correct the error?
  - a) change xm to mx b) change < to >
  - d) remove the last line e) change bigone to begone
- 7. What is the value of D after the statement?
  a) 0
  b) 1
  c) 2
  d) 4
  e) 3
  f) 10

```
function xm=bigone(x1,x2)
if x1>x2 xm=x1;
elseif x1<x2 xm=x2; end</pre>
```

A=B^pi+C/x\*y;

c) change elseif to else

f) put ; after end

D=mod(10-mod(10,3),2);

No books, no notes, no cellphones and no calculators allowed. 50 minutes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
В	D	D	Е	А	С	В	F	В	F	С	F	Е	Α

8. The code piece given displays the given k=3; output on the command window. What while k>0 for ## should be the code in the place marked fprintf('%d%d',k,i); with ## signs? end a) k=0:3b) i=33:-1:10 k=k-1; c) i=3:-1:k-3d) i=3:-1:0 333231302221201110 end e) k=k-1:0**f**) i = k: -1:09. The expression given can be used to not(ceil(x)-floor(x)) determine whether or not the scalar x is a whole number. Which of the following can be used for the same purpose? a) fix(x) -round(x) b) (floor(x) ~=ceil(x)) c) round (x) - xf) x=fix(x) d) (round (x) == x) e) mod (x) 10. How would you correct the errors in the code if  $x \ge y z = x$ ; end; piece given? elseif y<z u=z; end;</pre> a) remove all end; s else w=u; end; b) remove end; in the last line c) put ; between ...y and z... in the first line d) enclose logical expressions within (). e) remove all end; s and change elseif to else if. f) remove first two end; s 11. What is the final value of i? for i=-1:0.5:1,i a) 1 b) -0.5 c) -1 if i break; end, end d) 0.5 e) 0 f) none of the others 12. What is the final value of i? i=0; a) 0 b) 0.5 c) 0.6 while i<2.1 f) 2.2 if i<1 i=i+0.5; d) 1.1 e) 1.6 else i=i+0.6; end end 13. The code piece given is expected fprintf('Angle Sin\n'); to display an angle-vs-sine table for a=0:5:90 whose first few lines are shown. fprintf('%d %f\n',a,sin(a/180\*pi)); What is missing in the code? end Angle Sin a) %f instead of %d must be used 0 0.000000 b) aci instead of a must be used 10 0.173648 c) a\*pi/180 instead of a/180\*pi must be used 20 0.342020 d) disp instead of fprintf must be used  $\mathbf{e}$  0:10:90 instead of 0:5:90 must be used f) code is correct 14. Determining if three points on x-y plane are collinear is easy. Just check the slopes of two lines out of possible three lines that pass through two of these three points, and see if these slopes are equal. The logical expression given is written for that purpose. What is wrong with it? abs((y2-y1)(x3-x2)-(y3-y2)(x2-x1))<0.001 a) \*s are missing b) nothing c) abs is not a good choice d) a) is missing e) 0.001 must be 0.0 f) calculation is wrong