



Digital Systems

ICA#17: Practice Exam

FOX
MIS

ROADMAP

START

Week 1:

Introduction & Systems Analysis

- Course Description
- Systems Thinking

Assignments #01 & 02

Week 2:

Digital Product Management & Introduction to Process Mapping

- Max Labs 1a & 1b
- Systems & Processes
- Swim Lane Diagrams

Assignment #03

Week 3:

Data Modeling with Entity Relationship Diagrams

- Swim Lane Diagrams
- ERD Diagrams

Assignment #04

Week 4:

Digital Systems – Learn IT! #1

- ERD Diagrams
- Learn IT Kickoff
- Exam Prep

Assignment #05

Week 5:

Exam #1, Information Systems: Part I & II

- CRM & ERP

Assignment #06

Week 9:

Exam #2

& JavaScript Unit #1

- Parts I & II
- Hello World, Variables

Week 8:

Information Systems & Cybersecurity

- Protection Protocols
- Artificial Intelligence

Assignment #08

Week 7:

Platforms & Digital Business Models: Part I & II

- Platforms & Digital Models
- APIs

• Extra Credit (optional)

Week 6:

Information Systems: Parts I - III

- Data Analytics
- SCM

Assignment #07

Week 10:

JavaScript Unit #2 Functions

- Values & Variables
- Operator types
- Strings

Assignment #9

Week 11:

JavaScript Unit #3 Logical Operators & Conditional Logic

- Logical Operators
- Conditional Types

Week 12:

JavaScript Unit #4 Loops

- Intro to Loops
- While and Do

Assignment #10

Week 13:

JavaScript Unit #4 Working with Loops & HTML & CSS Unit

- Writing the code
- HTML & CSS Basics

Week 14:

- Exam Prep
- SFF

Exam #3

Assignments #11

FINISH

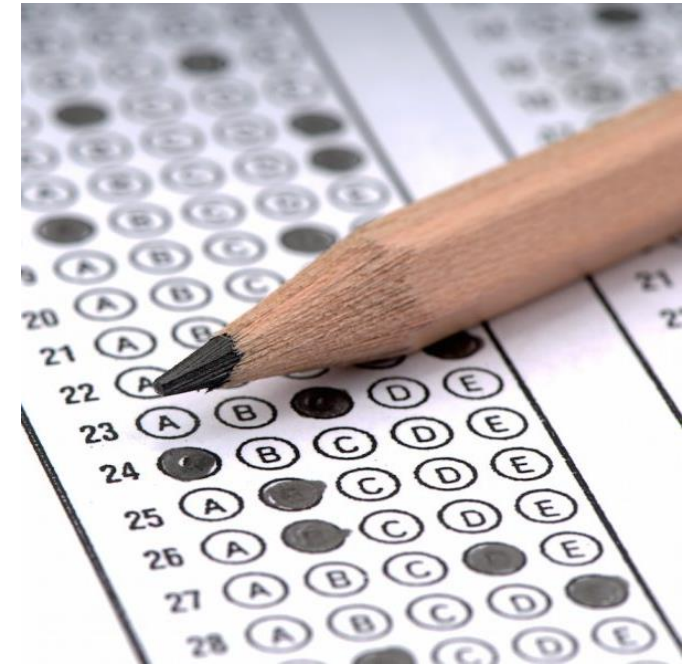
**Final Exam is on:
Tuesday December 13
from 2-3 pm!**

Bring: Calculator & pencil #2

Exam will Cover Discussions from week 9-14

- Total of 20 multiple choice questions
- Readings and Lectures (50% - 10 questions)
 - Values & Variables
 - Functions
 - Logical Operators
 - Conditional Logic
 - Loops
 - CSS, HTML and JavaScript basics
- Coding – Demonstrate your ability to apply (50% - 10 questions)
 - Code Analysis & Diagnosis

You can use a
CALCULATOR



Source: https://target.scene7.com/is/image/Target/GUEST_a97f68d0-6348-4802-9d47-89b3a854a20e?wid=488&hei=488&fmt=pjpeg

Source: <https://ccesnews.org/opinion/2018/04/23/10-tips-for-exam-preparation/#photo>

Sample Question:

- A loop cannot start with a negative number?

- Refer to the example below:

```
for (var i = -10; i <= 30; i=i+5) {
```

- True or False

Sample Question:

- A loop cannot start with a negative number?

- Refer to the example below:

```
for (var i = -10; i <= 30; i=i+5) {
```

- True or **False**

Sample Question:

- What is your MPG if you have driven 320 Miles and used 20 Gallons of gas? (analyze the code)
- A. 15
- B. 16
- C. 20
- D. 32

```
1 <!DOCTYPE html>
2 <html>
3 <body>
4     <!-- replace the text below with your name!-->
5     <!-- -->
6     <title> TYPE YOUR NAME HERE</title>
7 <script>
8 //
9 // A car's miles-per-gallon (MPG) can be calculated with the following formula:
10 // MPG=Milesdriven/Gallonsofgasused
11 //
12
13 function calculateMPG(miles, gas) {
14
15     //////////////////////////////////////
16     // Insert your code between here and the next comment block.  Do not alter //
17     // any code in any other part of this file. //
18     //////////////////////////////////////
19
20     return miles/gas;
21
22     //////////////////////////////////////
23     // Insert your code between here and the previous comment block.  Do not alter //
24     // any code in any other part of this file. //
25     //////////////////////////////////////
26
27 }
28
29 var milesDriven = prompt('How many miles have you driven? ');
30 var gasUsed = prompt('How much gas have you used driving that far? ');
31
32 alert('Your car is getting ' + calculateMPG(milesDriven, gasUsed) + ' MPG.');
```

Sample Question:

- What is your MPG if you have driven 320 Miles and used 20 Gallons of gas? (analyze the code)

A. 15

B. 16

(320/20)

C. 20

D. 32

```
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24  // any code in any other part of this file. //
25  //////////////////////////////////////
26
27 }
28
29 var milesDriven = prompt('How many miles have you driven? ');
30 var gasUsed = prompt('How much gas have you used driving that far? ');
31
32 alert('Your car is getting ' + calculateMPG(milesDriven, gasUsed) + ' MPG.');
```


Sample Questions:

1. After 10 minutes, how many calories have you burned?

- A. 0 **B. 45** C. 67.5

2. After 30 minutes, how many total calories have you burned?

- A. 112.5 **B. 135** C. 450 D. 1350

3. If we change the initial value of i to 20 how many times does the function run and how many total calories are burned?

- A. 3, 90 B. 5, 135 **C. 3, 135** D. Does not run

4. If we change $i \leq 30$ to $i \leq 40$ how many times does the function run and how many total calories are burned?

- A. 5, 135 **B. 7, 180** C. 7, 225 D. Does not run

```
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2 <html>
3 <body>
4   <!-- replace the text below with your name!-->
5   <!-- -->
6   <!-- -->
7   <title> TYPE YOUR NAME HERE</title>
8 <script>
9
10 function displayCaloriesBurned() {
11
12   //////////////////////////////////////////////////////////////////////////////////////////////////////////////////
13   // Insert your code between here and the next comment block. Do not alter //
14   // any code in any other part of this file.                               //
15   //////////////////////////////////////////////////////////////////////////////////////////////////////////////////
16
17   for (var i = 10; i <= 30; i=i+5) {
18     alert('In ' + i + ' minutes, you will have burned ' + i*4.5 + ' calories');
19   }
20
21   //////////////////////////////////////////////////////////////////////////////////////////////////////////////////
22   // Insert your code between here and the previous comment block. Do not alter //
23   // any code in any other part of this file.                               //
24   //////////////////////////////////////////////////////////////////////////////////////////////////////////////////
25
26 }
27
28 displayCaloriesBurned();
29
30 </script>
31 </body>
32 </html>
```

Sample Questions:

Using the program myFunction.html, what is displayed when you pass 11 as the first number and 14 as the second number?

- a. 1114
- b. 25
- c. 1411
- d. 50
- e. None of the above

```
1
2 <!DOCTYPE html>
3 <html>
4 <body>
5   <!-- replace the text below with your name!-->
6   <!-- -->
7   <!-- -->
8   <title> TYPE YOUR NAME HERE</title>
9 <script>
10
11 function myFunction (firstNumber, secondNumber) {
12
13   var valueToReturn = 0;
14   for (var i = firstNumber; i<= secondNumber; i++ ) {
15     valueToReturn = valueToReturn + i;
16   }
17   return valueToReturn;
18
19 }
20
21 var firstNumber = parseInt(prompt("What is the first number?"));
22 var secondNumber = parseInt(prompt("What is the second number?"));
23 alert (myFunction(firstNumber, secondNumber));
24
25 </script>
26 </body>
27 </html>
```

Sample Questions:

Using the program myFunction.html, what is displayed when you pass 11 as the first number and 14 as the second number?

- a. 1114
- b. 25
- c. 1411
- d. **50** **(11+12+13+14)**
- e. None of the above

```
1
2 <!DOCTYPE html>
3 <html>
4 <body>
5   <!-- replace the text below with your name!-->
6   <!-- -->
7   <!-- -->
8   <title> TYPE YOUR NAME HERE</title>
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10
11 function myFunction (firstNumber, secondNumber) {
12
13   var valueToReturn = 0;
14   for (var i = firstNumber; i<= secondNumber; i++ ) {
15     valueToReturn = valueToReturn + i;
16   }
17   return valueToReturn;
18
19 }
20
21 var firstNumber = parseInt(prompt("What is the first number?"));
22 var secondNumber = parseInt(prompt("What is the second number?"));
23 alert (myFunction(firstNumber, secondNumber));
24
25 </script>
26 </body>
27 </html>
```

Sample Question:

- **What's wrong with the statement listed below?**

```
var 365days = prompt ("How many days are in a year?");
```

Sample Question:

- What's wrong with the statement listed below?

```
var 365days = prompt ("How many days are in a year?");
```

Variable name cannot begin with a number!

Individual Practice Exam:

- **Open the file on canvas (In Class Activity #17)**
- **Fill out your answers**
- **Upload your updated file**

ICA Answers

- 1. D
- 2. B
- 3. C
- 4. B
- 5. A
- 6. A
- 7. D
- 8. A
- 9. E (The correct answer is 22)
- 10. B

- Enter the exit code

Question 9 1 pts

Exit Code

1639

Please Fill out SFF

(Student Feedback Form)

