

COMP SCI 2ME3 and SFWR ENG 2AA4 Final Examination
McMaster University

DAY CLASS, **Version 1**

Dr. S. Smith

DURATION OF EXAMINATION: 2.5 hours

MCMaster UNIVERSITY FINAL EXAMINATION

April 26, 2018

Please CLEARLY print:

NAME:

Student ID:

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This examination paper includes 19 pages and 35 questions. You are responsible for ensuring that your copy of the examination paper is complete. Bring any discrepancy to the attention of your invigilator.

Special Instructions:

1. It is your responsibility to ensure that the answer sheet is properly completed. Your examination result depends upon proper attention to the instructions on the next page.
2. Calculators, computers, cell phones, and all other electronic devices are **not** to be utilized.
3. Read each question carefully.
4. Try to allocate your time sensibly and divide it appropriately between the questions.
5. Select the **best** answer for each question.
6. The set \mathbb{N} is assumed to include 0.

1–30		30
31		3
32		5
33		5
34		5
35		5
Bonus		2
Total		53

OMR EXAMINATION - STUDENT INSTRUCTIONS

NOTE: IT IS YOUR RESPONSIBILITY TO ENSURE THAT THE ANSWER SHEET IS PROPERLY COMPLETED.

YOUR EXAMINATION RESULT DEPENDS UPON PROPER ATTENTION TO THESE INSTRUCTIONS.

The scanner, which reads the sheets, senses the bubble-shaded areas by their non-reflection of light. A heavy mark must be made, completely filling the circular bubble, with a HB pencil. Marks made with a pen or felt-tip marker will **NOT** be sensed. Erasures must be thorough or the scanner may still sense a mark. Do **NOT** use correction fluid on the sheets. Do **NOT** put any unnecessary marks or writing on the answer sheet.

1. On side 1 (red side) of the form, in the top box, in pencil, print your student number (**NOTE: 9 digits**), name, course name, section number, instructor name and date in the spaces provided. Then you **MUST** sign in the space marked SIGNATURE.
2. In the second box, with a pencil, mark your student number, exam version number, and course section number in the space provided and fill in the corresponding bubble numbers underneath.
3. To indicate your answers, mark only **ONE** choice from the alternatives (1,2,3,4,5 or a,b,c,d,e) provided for each question. The question number is to the left of the bubbles. Make sure that the number of the question on the scan sheet is the same as the question number on the test paper.
4. Pay particular attention to the Marking Directions on the form.
5. Begin answering questions using the first set of bubbles, marked "1".

<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <div style="display: flex; justify-content: space-between;"> <div>STUDENT NUMBER</div> <div>NAME</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>.....</div> <div>SHEET # OF</div> <div>SIGNATURE (in pen)</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>COURSE</div> <div>SECTION</div> <div>INSTRUCTOR'S NAME</div> </div> </div>		 EXAMINATION ANSWER SHEET
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STUDENT NUMBER		VERSION	SEAT NUMBER			MARKING DIRECTIONS <ul style="list-style-type: none"> Use HB black lead pencil only. Do not use ink or ballpoint pens. Make heavy black marks that fill the circle completely. Erase cleanly any answer you wish to change. Make no stray marks on the answer sheet. 	EXAMPLES WRONG 1 (1) (X) (3) (4) (5) WRONG 2 (1) (2) (X) (4) (5) WRONG 3 (1) (2) (3) (X) (5) RIGHT 4 (1) (2) (3) (4) (X)
			ROOM	ROW	SEAT		
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">(0)</div><div style="border: 1px solid black; padding: 2px;">(1)</div><div style="border: 1px solid black; padding: 2px;">(2)</div><div style="border: 1px solid black; padding: 2px;">(3)</div><div style="border: 1px solid black; padding: 2px;">(4)</div><div style="border: 1px solid black; padding: 2px;">(5)</div><div style="border: 1px solid black; padding: 2px;">(6)</div><div style="border: 1px solid black; padding: 2px;">(7)</div><div style="border: 1px solid black; padding: 2px;">(8)</div><div style="border: 1px solid black; padding: 2px;">(9)</div> </div>		<div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">2</div> <div style="border: 1px solid black; padding: 2px;">3</div> <div style="border: 1px solid black; padding: 2px;">4</div> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">6</div> <div style="border: 1px solid black; padding: 2px;">7</div> <div style="border: 1px solid black; padding: 2px;">8</div> <div style="border: 1px solid black; padding: 2px;">9</div>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">0</div><div style="border: 1px solid black; padding: 2px;">1</div><div style="border: 1px solid black; padding: 2px;">2</div><div style="border: 1px solid black; padding: 2px;">3</div><div style="border: 1px solid black; padding: 2px;">4</div><div style="border: 1px solid black; padding: 2px;">5</div><div style="border: 1px solid black; padding: 2px;">6</div><div style="border: 1px solid black; padding: 2px;">7</div><div style="border: 1px solid black; padding: 2px;">8</div><div style="border: 1px solid black; padding: 2px;">9</div> </div>				

CLASSROOM ANSWER SHEET

STUDENT NUMBER		VERSION	SEAT NUMBER		
			ROOM	ROW	SEAT
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">(0)</div><div style="border: 1px solid black; padding: 2px;">(1)</div><div style="border: 1px solid black; padding: 2px;">(2)</div><div style="border: 1px solid black; padding: 2px;">(3)</div><div style="border: 1px solid black; padding: 2px;">(4)</div><div style="border: 1px solid black; padding: 2px;">(5)</div><div style="border: 1px solid black; padding: 2px;">(6)</div><div style="border: 1px solid black; padding: 2px;">(7)</div><div style="border: 1px solid black; padding: 2px;">(8)</div><div style="border: 1px solid black; padding: 2px;">(9)</div> </div>		<div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">1</div> <div style="border: 1px solid black; padding: 2px;">2</div> <div style="border: 1px solid black; padding: 2px;">3</div> <div style="border: 1px solid black; padding: 2px;">4</div> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">6</div> <div style="border: 1px solid black; padding: 2px;">7</div> <div style="border: 1px solid black; padding: 2px;">8</div> <div style="border: 1px solid black; padding: 2px;">9</div>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">0</div><div style="border: 1px solid black; padding: 2px;">1</div><div style="border: 1px solid black; padding: 2px;">2</div><div style="border: 1px solid black; padding: 2px;">3</div><div style="border: 1px solid black; padding: 2px;">4</div><div style="border: 1px solid black; padding: 2px;">5</div><div style="border: 1px solid black; padding: 2px;">6</div><div style="border: 1px solid black; padding: 2px;">7</div><div style="border: 1px solid black; padding: 2px;">8</div><div style="border: 1px solid black; padding: 2px;">9</div> </div>		

SIDE 1

Q	A	B	C	D	E
1	(1)	(2)	(3)	(4)	(5)
2	(1)	(2)	(3)	(4)	(5)
3	(1)	(2)	(3)	(4)	(5)
4	(1)	(2)	(3)	(4)	(5)
5	(1)	(2)	(3)	(4)	(5)
6	(1)	(2)	(3)	(4)	(5)
7	(1)	(2)	(3)	(4)	(5)
8	(1)	(2)	(3)	(4)	(5)
9	(1)	(2)	(3)	(4)	(5)
10	(1)	(2)	(3)	(4)	(5)
11	(1)	(2)	(3)	(4)	(5)
12	(1)	(2)	(3)	(4)	(5)
13	(1)	(2)	(3)	(4)	(5)
14	(1)	(2)	(3)	(4)	(5)
15	(1)	(2)	(3)	(4)	(5)
16	(1)	(2)	(3)	(4)	(5)
17	(1)	(2)	(3)	(4)	(5)
18	(1)	(2)	(3)	(4)	(5)
19	(1)	(2)	(3)	(4)	(5)
20	(1)	(2)	(3)	(4)	(5)
21	(1)	(2)	(3)	(4)	(5)
22	(1)	(2)	(3)	(4)	(5)
23	(1)	(2)	(3)	(4)	(5)
24	(1)	(2)	(3)	(4)	(5)
25	(1)	(2)	(3)	(4)	(5)