QUESTION 5 20 minutes 15 points

10150261	E	40180031	B	40180229	D	40190017	C	40190219	A
10150281	A	40180038	E	40180235	B	40190018	D	40190230	C
10160263	C	40180039	A	40180240	E	40190020	B	40190232	D
40090444	D	40180040	C	40180244	A	40190036	E	40190238	B
40150420	B	40180044	D	40180254	C	40190077	A	40190242	E
40160749	E	40180056	B	40180255	D	40190085	C	40190251	A
40170218	A	40180063	E	40180260	B	40190098	D	40190254	C
40170411	C	40180065	A	40180527	E	40190100	B	40190431	D
40170812	D	40180098	C	40180619	A	40190208	E	40190517	B
40180003	B	40180117	D	40180752	C	40190209	A	40190617	E
40180009	E	40180205	B	40180804	D	40190212	C	40190736	A
40180010	A	40180206	E	40180806	B	40190213	D	40190737	C
40180015	C	40180217	A	40180808	E	40190216	B	40190746	D
40180020	D	40180225	C	40180925	A	40190217	E	40190748	B
40190754	A	40190791	E	40190912	C				

GROUP: A GROUP: B GROUP: C GROUP: D GROUP: E

GROUP: A

5) A city health department wishes to determine the mean bacteria count per unit volume of water at a lake. The regulation says that the bacteria count per unit volume of water should be less than 102 for safety use. To test the claim that the water is safe, a researcher collected 10 water samples of unit volume and found the bacteria count to be:

85 110 115 105 110 90 124 117 121 101

Is there enough evidence to reject the claim at $\alpha = 0.05$ level of significance?
Hint: Use *t*-table.

GROUP: B

5) A city health department wishes to determine the mean bacteria count per unit volume of water at a lake. The regulation says that the bacteria count per unit volume of water should be less than 100 for safety use. To test the claim that the water is safe, a researcher collected 10 water samples of unit volume and found the bacteria count to be:

85 110 105 100 110 80 112 108 125 104

Is there enough evidence to reject the claim at $\alpha = 0.2$ level of significance?
Hint: Use *t*-table.

GROUP: C

5) A city health department wishes to determine the mean bacteria count per unit volume of water at a lake. The regulation says that the bacteria count per unit volume of water should be less than 100 for safety use. To test the claim that the water is safe, a researcher collected 10 water samples of unit volume and found the bacteria count to be:

90 104 108 105 118 94 120 116 114 95

Is there enough evidence to reject the claim at $\alpha = 0.1$ level of significance?
Hint: Use *t*-table.

GROUP: D

5) A city health department wishes to determine the mean bacteria count per unit volume of water at a lake. The regulation says that the bacteria count per unit volume of water should be less than 100 for safety use. To test the claim that the water is safe, a researcher collected 10 water samples of unit volume and found the bacteria count to be:

95	104	85	115	117	96	104	103	117	106

Is there enough evidence to reject the claim at $\alpha = 0.05$ level of significance?
Hint: Use *t*-table.

GROUP: E

5) A city health department wishes to determine the mean bacteria count per unit volume of water at a lake. The regulation says that the bacteria count per unit volume of water should be less than 96 for safety use. To test the claim that the water is safe, a researcher collected 10 water samples of unit volume and found the bacteria count to be:

79	114	109	107	99	87	117	119	91	108

Is there enough evidence to reject the claim at $\alpha = 0.1$ level of significance?
Hint: Use *t*-table.