Name:

PSYCHOLOGY 435
Fall 2005 Test #1

Part I. Please answer all three questions in this section. Questions 1 and 2 are worth 30 points each, and Question 3 is worth 20 points. (Distribute your time accordingly!) As always, you should **CITE EXPERIMENTAL EVIDENCE** (*including names!*), where possible, to support your answers.

1. In this experiment, you will be conditioning animals using a shock with a maximum association value of **100**, and you will be using three CSs:

a **light** CS (salience = .**4**) a **bell** CS (salience = .**2**) a **click** CS (salience = **.2)**

There will also be **two groups**. Each has 5 trials involving the UCS, but they differ in terms of **which CSs** are paired with the UCS **on which trial**. Here is the design of the experiment telling you which stimuli are present on each trial for our two groups:

	Group 1 CS Present On Trial	**Group 2 CS Present On Trial**
Trial 1	**bell & light**	**light & click**
Trial 2	**bell**	**bell**
Trial 3	**bell**	**bell**
Trial 4	**light**	**bell & click**
Trial 5	**bell & light & click**	**bell & light**

Given this, and calculating what the ***Rescorla-Wagner*** model predicts ***ought*** to happen,

(a) Fill in the tables for each group on the next page (and **SHOW YOUR CALCULATIONS** on paper, so I know where and how you got your numbers. To keep things simple, ***round your numbers to the nearest tenth:*** i.e., use just one decimal place):

(b) Is there any **inhibition** in this experiment, and if so, for **which group**, and on **which trials** and **why**? (Justify your answer by talking about numbers!)

There will be negative changes on T5 for Group 1, with the association for the click becoming negative. This is due to the total association on that trial being greater than lambda.

(c) On **each** of Trials 1 through 5, **which group has the strongest conditioned response**? And **which response** is that? (Justify your 5 answers here).

T1: both groups equal: Light at 40 Trial 2: same
T3: G1: Bell at 48.8 T4: G1: Light at 64 T5: G1: Light at 58.9

(d) **Which group** has the **greatest overshadowing**, and why?

You could have answered this several different ways. One is to notice that G2 has OS on 3 trials instead of 2 trials

(e) Would **Pavlov** or **Hull** have expected the results you got on **Trial 5**? Why or why not?

In G1, P & H would predict excitation for the click, and they would certainly not predict

weakening responses for the other two. When UCS is present, fpor them, there should only be excitation. Also, neither handles OS or blocking

(F) Graph the **learning curve** over the 5 trials for the **bell** in both groups.

Group 1							
	$V_{presentCues}$ (fill in if present):			TOTAL V	CSs		
	CS_A: Light	CS_B: Bell	CS_B: Click		CS_A: Light	CS_B: Bell	CS_B: Click
Trial 1	0	0		0	40 40	20 20	
Trial 2		20		20		16 36	
Trial 3		36		36		12.8 48.8	
Trial 4	40			40	24 64		
Trial 5	64	48.8	0	112.8	-5.1 58.9	-2.6 46.2	-2.6 -2.6

Group 2							
	$V_{presentCues}$ (fill in if present):			TOTAL V	CSs		
	CS_A: Light	CS_B: Bell	CS_B: Click		CS_A: Light	CS_B: Bell	CS_B: Click
Trial 1	0		0	0	40 40		20 20
Trial 2		0		0		20 20	
Trial 3		20		20		16 36	
Trial 4		36	20	56		8.8 44.8	8.8 28.8

Group 2				
Trial 5	40 44.8	84.8	6.1 46.1	3 47.8

2. For **each finding** below, briefly discuss what happens, and experiments relevant to it, when possible. Discuss, too, what each of the four major theories of classical conditioning (**Pavlov; Rescorla-Wagner; Wagner; Miller**) predict ought to happen in that situation, so I know whether the finding supports or disconfirms (or is simply irrelevant to) a given theory. (So organize your essay around these 4 findings/situations. And be specific about **naming** the specific studies!)

a. **Long-delay learning** b. **Latent inhibition** c. **Overshadowing**
d. **Familiarity** (note two cases here! - familiarity of either the **UCS** or **CS**; and familiarity of an event that occurs **after** presentation of the UCS or CS)

a. You could have talked about Kalat & Rozin; Garcia et al.; Hinson & Siegel; etc. Since LDL violates temporal contiguity, it shouldn t happen in Pavlov s model. It does have features of contingency and informativeness, and so could fit RW on that basis. For Wagner, you need the CS to be unusual enough that it is still being rehearsed when the UCS finally appears. And it s not clear whether Miller s model fits.

b. Some studies here: Reiss & Wagner; Anderson et al.; Grahame et al.; Blaisdell et al. Neither P nor RW expect LI: presenting a CS first by itself should not cuase anything to happen that would later interfere with the association. For Wagner, the CS gets rehearsed, so that it becomes familiar. Later, when the UCS is presented, the CS is being only weakly rehearsed, if at all, so that a memory episode of CS and UCS together will be weak. For Miller, presenting the CS by itslef strengthens its link to the context/comparator cues, making the indirect path strong. (Evidence here is the release-from-LI effect): a response deficit instead of, as in Wagner, a learning deficit.

c. Some studies: Kamin; Matzel et al.; Blaisdell et al. P doesn t handle OS. For RW, OS works through the CS salience values; higher salience captures more association (learning deficit for the lower salience CS). For W, higher salience CS is rehearsed more (also a learning deficit account). For M, the two stimuli are compared and the higher salience one wins. (Response deficit, shown by release-from-OS studies)

d. Studies: Kalat & Rozin; Terry; Pfautz & Wagner; Wagner, Rudy, & Whitlow. There should be no familiarty effects for P. The only effect RW might be able to handle is UCS pre-exposure, and it would handle this as blocking by a contextual CS. For W, familiar stimuli won t have many rehearsals (which is why a familiar PTE won t disrupt rehearsals in Wagner et al.). For M, it s again a response deficit: familiar stimuli form strong associations with the context/comparator cues.

3. Choose two studies for each of the following, and **briefly** discuss them and their theoretical significance:

learned taste aversions **learning without muscle movement**

Compensatory conditioning **distractor task**

LTA: phenomena here included long-delay learning; familiarity; belongingness; potentiation (and there were plenty of studies to choose from), which are of obvious relevance to Pavlov; Hull; RW; and Wagner s rehearsal theory. LDL, for example, goes against temporal contiguity; potentiation goes against RW s OS; etc.

LMM: Studies by Light and Gantt (the paralyzed dog paw study) and Smith (the curare study) show learning in the absence of responding, and so go against Hull and Watson (but not an S-S view like Pavlov s)

CC: Studies by Siegel and by O Brist et al. show a CR that is the opposite of the UCS. This goes against stimulus substitution theories like Pavlov and Hull which claim that CR should resemble UCR, because in some sense it is the same response!

DT: I was looking for you to discuss PTE (Wagner, Rudy, & Whitlow) and the human distractor studies (Brown; the Petersons) in terms of how disrupting rehearsals affects long-term memory (relevant, obviously, to Wagner s model).

Part II. Briefly identify five of the following (each is worth 4 points):

1. Wundt

2. Mind-Body Problem

3. Bentham

4. Hull s theory of Classical Conditioning

5. MaccKintosh s theory of Classical Conditioning

6. Aplysia

BONUS (for up to three points): Identify the one remaining term above (but ***let me know*** which term you want to count as your bonus!!!)