

PSYCHOLOGY 268 - Fall 2000  
FINAL EXAM

(94)

No Name Please Alt code for Posting: \_\_\_\_\_ Enter 4-digit ID # 6067 (last 4 of Student ID#)

1. (total 30 points) Please answer part a, and then ANY TWO of the remaining parts. The percent time data apply to all versions of the question. Consider the following data collected on percent time spent on activities by two people:

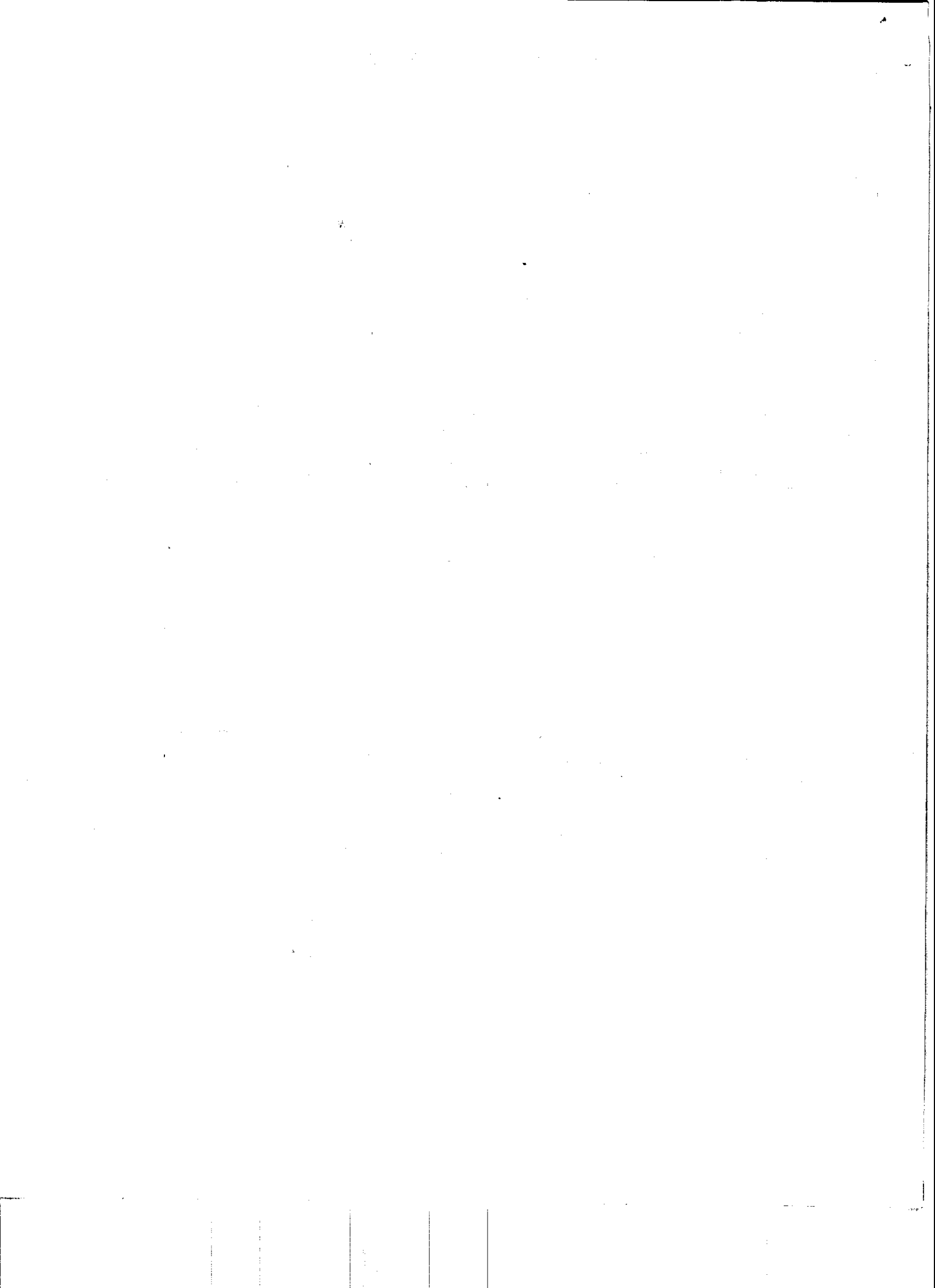
	Anna Mar Home	Anna August Home		Andrew August Home	Andrew August Camp
Reading	25	25	Exercise	10	40
TV	20	20	Read	15	25
Exercise	0	20	Cooking	20	5
Music	45	35	Computer	40	30
Sewing	10	0	Car work	15	0

a. (10 points) Give one example for each person of a contingency arrangement between two activities that would yield a reinforcement effect. Your example should satisfy Premack's time-based account of reinforcer value and also meet the response deprivation criterion for an effective contingency. Your examples should identify the activities, the contingency relation, and the exact scheduled values to be used. You should specify which of the four hierarchies of value you are using. You should also describe what you expect to be the result of each contingency.

- Anna/Mar/Home: If she exercises for 5, she can listen to music for 35. Here music will be reinforcing for exercise. Anna will exercise more in order to reach music bliss pt of 45.
- Andrew/August/Camp: If he cooks for 10, he can use the computer for 25. Here computer is reinforcing cooking. Andrew will cook more in order to reach computer bliss point of 30.

Answer ANY TWO of the following four questions (10 points each). Your answers to all of these questions should specify for each contingency the time/context of the hierarchies used, both activities, the contingency relation, and the exact amounts of the schedules. Each answer should satisfy Premack's time-based account of reinforcer value and also meet the response deprivation criterion for an effective contingency.

b. Give two contingencies from a single person (please specify a single time and context) that demonstrate that the reinforcement value of a single activity is relative to others, not an absolute or fixed functional role. Explain how your examples demonstrate the relativity of reinforcement.



c. Give two contingencies using the same activity as a reward that demonstrate that the reinforcement value of that activity is idiosyncratic (unique to each person's hierarchy of value). Explain how your answer accomplishes the demonstration. This can be done either by having two identical contingencies, only one of which would be effective, or by having two effective contingencies that must have different schedule values to be effective.

d. Give two contingencies that demonstrate that the reinforcement value of a single activity is specific to its time. Be sure to describe which kind of example you are giving and explain why your example is a demonstration. This can be done either by having two identical contingencies, only one of which would be effective, or by having two effective contingencies that must have different schedule values to be effective.

• Anna/Mar/Home: If Anna reads for 30, she can listen to music for 35. Anna will read more to reach music bliss point of 45.

• Anna/Aug/Home: If Anna sews for 10, she can listen to music for 30. Anna will sew more to reach music bliss point of 35.

In both instances, music is reinforcing another activity. In Mar music is reinforcing reading; in Aug music is reinforcing sewing. An activity can be reinforcing at different times but its levels are different.

e. Give two contingencies that demonstrate that the reinforcement value of a single activity is specific to its context. Be sure to describe which kind of example you are giving and explain why your example is a demonstration. This can be done either by having two identical contingencies, only one of which would be effective, or by having two effective contingencies that must have different schedule values to be effective.

• Andrew/Aug/Home: If Andrew reads for 20, he can use the computer for 30. Andrew will read more to reach computer bliss pt of 40.

• Andrew/Aug/Camp: If Andrew cooks for 0, he can use the computer for 25. Andrew will cook more to reach computer bliss pt of 30.

In both instances, computer is reinforcing an activity, at Home computer is reinforcing reading & at camp computer is reinforcing cooking. This shows a single activity is specific to context because different levels are needed to reinforce.

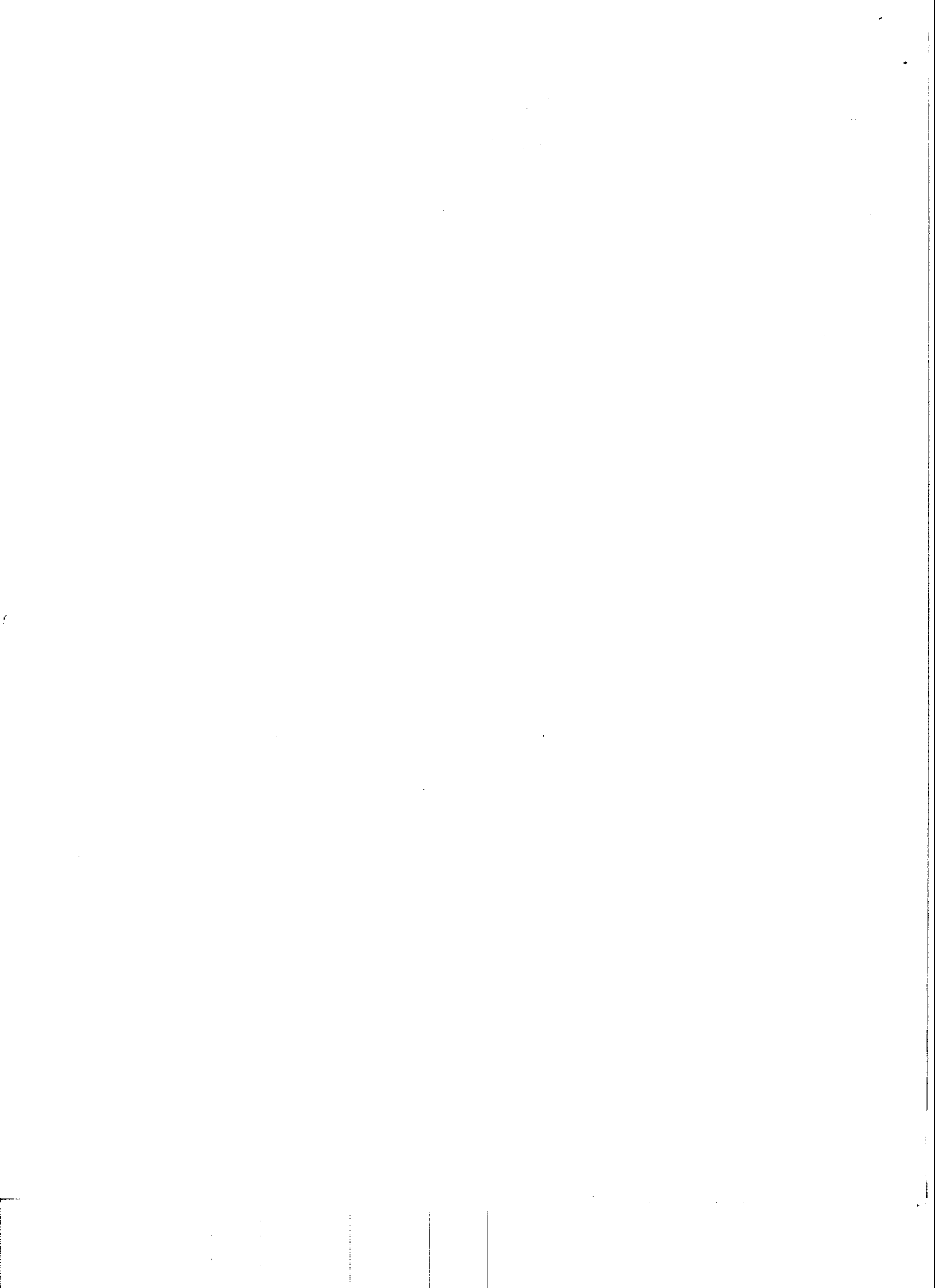
d. Both of these contingencies are effective, however the reinforcing activity, listening to music has different amounts in order to have effective contingencies for March & August.

e. Both of the contingencies are effective, however the reinforcing activity, using computer has different amounts in order to have effective contingencies for home & camp.

2. (20 points) Suppose you were asked to implement a motivational program in a third grade class. It is a regular school that meets six hours a day, including the following activities: arithmetic problems, reading and discussing stories, exploring geography, internet searching, handwriting, recess, and fine arts time. Based on your understanding of the study of the fast food restaurant, how would you proceed to improve the quality of the students' work by using access to activities as a motivator? Your answer should include ~~the assessment of the relative values of activities, the establishment of contingencies (be sure to give a specific example), and a simple design for evaluating the project.~~ Finally, ~~describe the costs and benefits of the program for the teachers and make a recommendation about whether or not it should be implemented.~~

I would start by having the student fill out a survey, listing the class activities in order from most preferred to least preferred. I would then use an ABAB baseline design. I would begin to record the students' performance on the class activities without introducing an intervention. This 1 week would be the baseline period. I would then establish the contingency <sup>the following week</sup> by telling the students that "IF performance increased on the activities, the student would be able to choose what activity he/she would engage in the following day." This would be my intervention, which would last 1 week. Still recording the students' performance the baseline period would ~~occur~~ the next week, where no intervention would take place for 1 week, then I would reinstate the intervention again for 1 week. If the students performance was better during the intervention periods in comparison to the baseline periods, the contingency worked. Although this program would be expensive <sup>how?</sup>, the students performance would increase & the students would be able to reach potential. I would recommend <sup>I have a good time doing so.</sup>  $\nearrow$

the students' program for



A-Instructional  
B-Shaped

Please answer ANY TWO of the following THREE questions (3, 4, and 5), worth 15 points each:

3. (15 points) Suppose you were working at a fitness center with two sets of aerobic exercisers, helping them acquire basic skills in getting a decent aerobic workout. With group A you gave them set sequences of 4 movements and durations, occasionally changing the order and gradually increasing the duration. At all points you showed them exactly how to move and counted out the sequences, often leading them by loudly counting the movements over a public address system. With group B you demonstrated to them a couple of times the same set of 4 movements that when repeated would result in elevated heart and respiration rates. After that first day you encouraged them to do those exercises in whatever sequences they liked, and you suggested that they pay attention to changes in their own pulse and breathing rates. Two months later both groups were able to do all 4 exercises acceptably, and you asked them to do two things. First they were asked to create a new routine that would yield 15 minutes of elevated heart and respiration rates. Second they were asked to learn a set routine that was to be taped for a local TV commercial for the fitness center. Describe how each group would do on each new task and justify your answer based on the effects of their different learning histories.

Group A would learn the set routine faster because their learning history was instructional, and the set routine is more complex. However, Group B would create a new routine faster than Group A, because this group's learning history was shaped and the new routine is a new contingency. However, both groups (A+B) will eventually learn both routines.

Dig → Pig  
Speed → kneed race

4. (15 points) Generate your own example of classical conditioning using the neutral stimuli of the printed words dig and speed along with the eliciting relation (like a reflex) between a puff of air in the eye and an eyeblink (blowing air in the eye results in a clear blink). Your example should include all of the following components: a description of a conditioning procedure that would produce different reactions to the two stimuli, a description of a procedure (a trial) that tests for the direct effects of successful conditioning, a description of a procedure that would test for physically mediated generalization, a description of a procedure that would test for semantically mediated generalization, and the likely results of the three test procedures for an intact adult human.

I would use classical conditioning to associate the word "speed" with the eye blinking. I would do this by pairing "speed" to the eyeblink by administering a puff of air to the eye when showing the "speed" card. I would not pair the "dig" card with any relation, keeping it neutral. I would then do a test trial, without eliciting any relation (would not puff air to eye) I would show the cards in random order 5 times and measure eyeblinking. The speed card would have more # of eyeblinking occur than the dig card. Then to test for physically mediated generalization I would use a new card with the word "Pig" in replace of "dig" & another card with "kneed" in replace of "speed." I would show these →

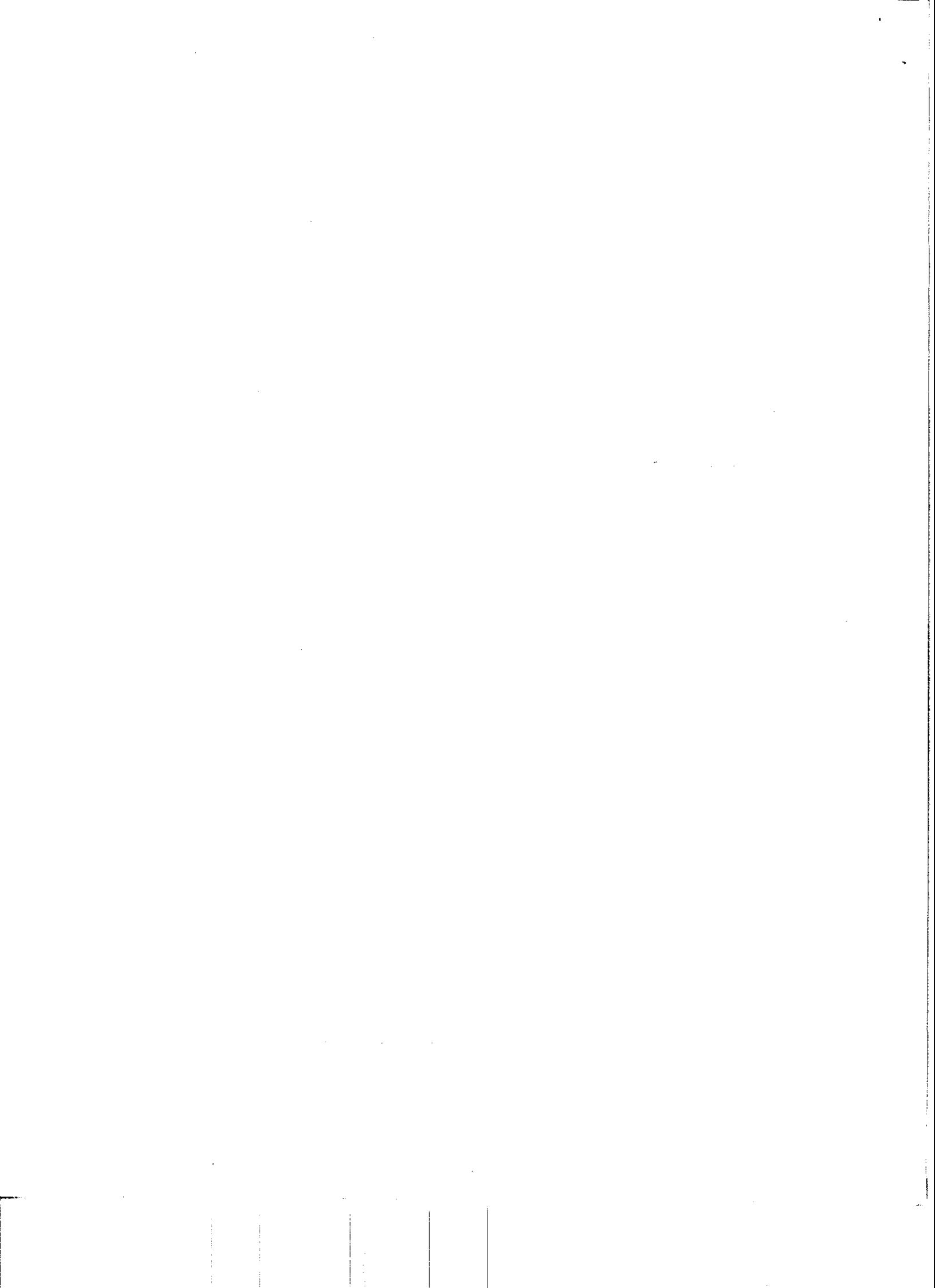
[continue your answer on the next page if needed]

cards in random order 5 times & measure the occurrence of eyeblinking. There would not be a significant difference in the # of eyeblinks and different cards. The results would not show much generalization. I would test for semantically mediated generalization by using a card with the word "scoop" in replace of "dig" and "race" in replace of "speed." I would show these cards in random order 5 times & measure the number of eyeblinks. There would be more eyeblinks when the "race" card was shown than the "scoop" card. These results would show generalization.



5. (15 points) Give an example of a form of rule governed behavior that would be useful in the face of an ineffective ("defective") contingency. Your answer would include both an original example of a defective contingency and the specific rule-based procedure to support the appropriate behavior that you think should occur. How would this rule-governed performance be useful or productive in dealing successfully with the natural relation between actions and their outcomes that you have described?

\*\*\*\*\* [end of the set of three questions, choose two of them]\*\*\*\*\*



6. 20 points) Suppose it is your task to find a way to decrease the frequency of people walking across a set of railroad tracks in an area that has no marked crossing zone with warning devices. ~~There is real risk of injury because there are multiple tracks that are used frequently for moving cars.~~ You have been asked to set up a punishment program to eliminate this problem before someone is hurt. What context for crossing outside of the marked safe zone would you identify first as part of your plan? What punishing consequence would you use? What characteristics would you include in your punishment system to maximize the likelihood that it would be effective? What additional element would you need to include to make the plan maximally effective? Be sure that your answer is specific to this context.

First I would determine what was reinforcing the people to walk in this area & discover they felt it was a shorter route to the parking lot. I would begin the punishment program by using response-cost as the punisher. I would do this by fining every person who crossed in this area \$50,000. I would make sure the punishment is effective by ensuring the fine was given in a clear, consistent, and immediate manner. In addition to the fee, I would do extinction on crossing in this area and set up alternative reinforcers for crossing the tracks in the proper zones. I would do this by moving the parking lot entrance closer to the proper crossing zones, and give a free parking pass (Saturdays only) to those who crossed the tracks at the proper zone Monday through Friday. low?

