

2003

Psychology GA 3: Written examination 2

**GENERAL COMMENTS**

Performance on the November paper was generally comparable with previous years, with a slight reduction in the mean score for the short-answer section, suggesting that students continued – as in the Unit 3 examination – to have some difficulty with interpretation of questions. In each of the three Areas of Study, the mean score on the multiple-choice section was superior to the mean score on the equivalent short-answer section. As in 2002, this tended to be as a result of imprecise or incomplete answers.

In general, the Memory area of study was answered better than either Learning or Research Methods, with Learning being the most problematic in multiple-choice questions and Research Methods in the short-answer section.

**Marking Policy**

Where a short-answer question required ‘ticking of a box’, check-marks that extended over two of the boxes were not accepted. Students must ensure that their chosen check-mark remains within one box.

In general a 2-mark question requires two pieces of information – 1 mark will be given for each part and an answer that fails to address both parts cannot achieve full marks. In this examination this applied to Questions 1b, 5b, 8, 11, 16 and 17, whilst Question 9 required naming and describing of each of the steps to achieve full marks.

It cannot be sufficiently emphasised that where a question requires definition of a term, use of the term (or its derivatives) as part of its own definition precludes the award of full credit for that response – clearly such a response does not show full understanding.

**SPECIFIC INFORMATION**

**Multiple-choice questions**

This table indicates the approximate percentage of students choosing each distractor. The correct answer is the shaded alternative. Some of the questions that students found most difficult are discussed.

**Memory**

Question	A	B	C	D	
1	97	0	0	3	
2	4	5	90	1	
3	2	4	91	3	
4	40	25	19	16	Many students obviously failed to apply the first rule of answering multiple-choice questions – elimination of alternatives that are obviously incorrect. Students had difficulty understanding that a more sensitive measure of retention will be capable of registering a low intensity or strength of retention, which would be missed by a less sensitive measure.
5	9	75	8	8	
6	3	1	2	94	
7	4	1	91	4	
8	75	22	1	2	
9	9	7	9	75	
10	84	2	5	9	
11	7	4	23	66	
12	1	88	7	4	
13	3	8	86	3	
14	56	12	12	20	
15	8	3	19	70	

## Learning

	A	B	C	D	
Question	%				
16	9	72	7	12	
17	60	20	17	3	The large proportion of students who believed that “shaping” was the answer indicated a lack of comprehension of shaping as the method of successive approximations.
18	15	14	13	58	
19	63	17	9	11	
20	79	4	16	1	
21	2	3	87	8	
22	36	10	5	49	
23	74	15	6	5	
24	86	5	8	1	
25	1	70	17	12	
26	44	19	27	10	Selecting alternative A ‘Fixed Ratio’, suggested a lack of understanding of the difference between reinforcement schedules that incorporate <i>Continuous Reinforcement</i> (reinforcement occurring after each trial) and <i>Partial Reinforcement</i> (in which not every response is reinforced). It is emphasised that “Fixed Ratio” is one form of <i>Partial Reinforcement</i> schedule.
27	9	51	6	34	Students need to be clear in their understanding that ‘Fixed Ratio’, ‘Fixed Interval’, ‘Variable Ratio’ and ‘Variable Interval’ are the four schedules of <i>Partial Reinforcement</i> .
28	8	26	22	44	
29	12	24	59	5	
30	9	0	1	90	

## Research methods

	A	B	C	D	
Question	%				
31	12	8	78	2	
32	4	82	6	8	
33	4	6	83	7	
34	5	54	15	26	The students who believed that a correlation of -0.85 between hours of television watched and level of happiness shows that ‘Watching television makes people unhappy’ exhibited a lack of understanding that a correlation <i>does not</i> show cause and effect; a fundamental flaw that needs to be addressed.
35	7	10	75	8	
36	8	6	10	76	
37	31	42	23	4	The fact that all participants were first-year university students suggests a reasonable degree of consistency in the level of education of the participants; similarly all had been deprived of sleep for a similar amount of time. The fact that caffeine effects are likely to be influenced by body mass, which in turn is likely to be lower for females than males suggests that gender is the most likely confounding variable.
38	7	91	1	1	
39	13	8	75	4	
40	17	51	20	12	Many students did not recognise that the ‘apparently identical’ capsule indicated that this was a single blind design. There is no way of telling whether the students <i>were</i> randomly selected from the population, thus alternative C was not the most correct answer.
41	11	32	2	55	
42	3	79	8	10	
43	89	6	4	1	
44	1	1	94	4	
45	1	12	75	12	

## Short-answer questions

### Memory

#### Question 1

##### 1a

Marks	0	1	Average
%	20	80	<b>0.80</b>

Many students confused the *duration* (time maintained) of short-term memory with the *capacity* (number of items contained) of long-term memory – they therefore indicated that the duration was 5 to 9 seconds. Any answer between 12 and 30 seconds was accepted due to some inconsistency among textbooks.

##### 1b

Marks	0	1	2	Average
%	26	32	42	<b>1.16</b>

Most students failed to provide **both** a description **and** an example.

#### Question 2

##### 2ai

Marks	0	1	Average
%	9	91	<b>0.91</b>

Because of the wording of the question both ‘the end’ and ‘beginning and end’ were accepted as correct answers, and therefore nearly all students obtained the mark for this question.

##### 2aii

Marks	0	1	2	Average
%	30	16	54	<b>1.23</b>

Students who had indicated ‘the end’ as their answer for Question 1a obtained full marks for an explanation of *recency effect*; those who had shown both ‘beginning and end’ for Question 1a needed to explain both *recency* and *primacy effect*.

##### 2b

Marks	0	1	Average
%	39	61	<b>0.61</b>

Most students understood that only the *primacy effect* – involving long-term memory – would occur after 24 hours.

#### Question 3

Marks	0	1	2	Average
%	50	31	19	<b>0.69</b>

Responses to this question indicated *either* students did not read the question carefully (and ignored the phrase ‘According to consolidation theory ...’) or that consolidation theory is not well understood.

#### Question 4

Marks	0	1	2	3	Average
%	2	6	32	60	<b>2.50</b>

This question exemplifies the manner in which various answers may be accepted where appropriate – ‘your seat on an aeroplane’ could be *semantic* memory if you consider remembering your seat number from your boarding pass, or *episodic* memory if you remember the seat because your game console did not work and you were sitting next to a person who was airsick all the way from Melbourne to Singapore! Either or both answers were therefore acceptable.

#### Question 5

##### 5a

Marks	0	1	Average
%	26	74	<b>0.74</b>

Either or both of ‘Repression’ or ‘Motivated forgetting’ were acceptable, since the study design stipulates ‘Motivated forgetting/repression’.

##### 5b

Marks	0	1	2	Average
%	39	17	44	<b>1.05</b>

This question was not particularly well answered, with many students confusing proactive and retro-active interference. Others did not distinguish proactive interference from anterograde amnesia (a fundamental error).

## Learning

### Question 6

#### 6a

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	65	35	<b>0.35</b>

Shaping does not appear to be well understood.

#### 6b

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	28	72	<b>0.72</b>

The word 'Describe' in the question required a pragmatic description of an actual example. Some students attempted to use generic answers without referring to the scenario of the shoelaces and as such were not awarded a mark.

### Question 7

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
<b>%</b>	11	20	44	25	<b>1.84</b>

Where there is some debate, students were not penalised and any appropriate answer was awarded marks, for example in *operant conditioning* the nature of the response can be both voluntary (most common) and involuntary.

### Question 8

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>Average</b>
<b>%</b>	59	20	21	<b>0.61</b>

The comment relating to Question 6a applies.

### Question 9

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
<b>%</b>	43	12	35	10	<b>1.11</b>

Most students did not achieve full marks because they failed to both name and define each of the steps.

### Question 10

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>Average</b>
<b>%</b>	58	25	17	<b>0.59</b>

Many students made no attempt to answer this question. Students need to understand that any intelligent, reasoned response, even if not specifically accurate, may gain at least partial credit.

### Question 11

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>Average</b>
<b>%</b>	23	24	29	24	<b>1.54</b>

Most students were able to name a learning process that could be used (although the learning processes were generally poorly explained). The frequent response of 'Aversion Therapy' was not appropriate in this case.

## Research methods

### Question 12

#### 12a

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	59	41	<b>0.41</b>

#### 12b

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	70	30	<b>0.30</b>

#### 12c

<b>Marks</b>	<b>0</b>	<b>1</b>	<b>Average</b>
<b>%</b>	73	27	<b>0.27</b>

#### 12a–c

Inferential statistics are those that allow researchers to draw conclusions relating to accepting or rejecting the experimental hypothesis – they determine cause-and-effect relationships between independent and dependent variables. They are useful when attempting to draw conclusions about relationships between variables (accepting or rejecting the experimental hypothesis) and the implications are that the statistical significance of results can be determined and findings generalised to the population represented by the sample. For this examination it was not significant which response students gave in which sequence.

### Question 13

#### 13a

Marks	0	1	Average
%	63	37	0.37

Students found it difficult to gain the mark for this question – an operational hypothesis requires identification of the population, operationalisation of any continuous variable and a clear statement of the relationships among them. Any two of the required pieces of information achieved the mark.

#### 13b

Marks	0	1	2	Average
%	57	32	11	0.54

‘Repeated Measures’ is one of the three experimental designs listed in the study design, and this question unambiguously demanded two benefits, so it was disappointing that many students did not achieve any marks. Clearly, elimination of participant-related variables is a key advantage but any reasonable advantage identified gained credit. The ability to use fewer participants than in ‘Independent Groups’ design or not requiring pre-testing to establish level of pre-treatment characteristics as in a ‘Matched Subjects’ design, clear advantages, were infrequently mentioned.

### Question 14

#### 14a

Marks	0	1	Average
%	85	15	0.15

This pure ‘knowledge’ question was not well answered. Counterbalancing can readily be used by students themselves in Empirical Research Activities and is a widely used experimental technique.

#### 14b

Marks	0	1	2	Average
%	82	9	9	0.27

In view of the poor responses to Question 14a, this ‘understanding’ type question was poorly answered.

### Question 15

Marks	0	1	2	Average
%	62	18	20	0.57

Comments made in relation to multiple-choice Question 34 are acceptable in that ‘This lack of understanding that a correlation *does not* show cause and effect; is a fundamental flaw that needs to be addressed’.

### Question 16

Marks	0	1	2	Average
%	17	29	54	1.36

This question was reasonably well answered. It exemplifies the importance of being aware of the multiple-choice questions in answering related short-answer questions. Multiple-choice Question 44 lists ethical issues and the stem of the question describes problems with refusing withdrawal rights – a most appropriate response for this question.

### Question 17

Marks	0	1	2	Average
%	21	20	59	1.37

The wording of this question did *not* require that students give a definition of ‘random’ since the question sought *the difference* and ‘random’ was common to both procedures. The best answers were able to identify that *random selection* is a means of obtaining participants from a population in a way that gives each member of that population an equal chance of selection, whereas *random allocation* refers to the experimental procedure of placing participants in groups so that each participant has an equal chance of allocation to any experimental or control condition.

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