

**UNIVERSITY OF VICTORIA
EXAMINATIONS Fall 2019
Faculty of Education
School of Exercise Science, Physical, and Health Education
EPHE 245 (A01) Motor Learning (CRN) 11557**

NAME: _____ **STUDENT NO.** _____

INSTRUCTOR: DR. OLAVE KRIGOLSON **SECTION (A01 Fall)**
DURATION 3 hours

ALL QUESTIONS ARE TO BE ANSWERED IN PROVIDED ANSWER BOOKLETS (SECTION I AND II AND III).

NOTE, SECTIONS I AND II ARE OPTIONAL. ALL STUDENTS MUST ANSWER SECTION III.

STUDENTS MUST COUNT THE NUMBER OF PAGES IN THIS EXAMINATION PAPER BEFORE BEGINNING TO WRITE AND REPORT ANY DISCREPANCY IMMEDIATELY TO THE INVIGILATOR.

THIS EXAM HAS 13 PAGES.

THIS EXAM HAS 3 SECTIONS.

TOTAL MARKS:	SECTION I	60 marks (15% of course grade)
	SECTION II	60 marks (15% of course grade)
	SECTION III	40 marks (40% of course grade)

SECTION I (OPTIONAL)

There are FOUR questions for each of the SIX introductory lessons. The exam invigilator will randomly select TWO of the FOUR questions for each of the SIX introductory lessons. You will select ONE or the TWO randomly selected questions for each of the SIX introductory lessons. So, you will write a total of SIX short answers, ONE for each of the SIX introductory lessons.

At the end of this exam you will self-grade yourself for each of your six answers based on QUALITY (out of 4), QUANTITY (out of 2), EXAMPLES/DIAGRAMS (out of 2), and COMMUNICATION (out of 2).

Lesson One

1. What are the three stages of learning (according to Fitts and Posner)?
2. What is the Power Law of Practice?
3. Why did Ericsson decide on 10,000 hours as the number to assume expertise?
4. What is deliberate practice?

Lesson Two

1. What is the difference between inherent and augmented feedback?
2. What is the difference between Knowledge of Performance and Knowledge of Results?
3. What is the evidence that suggests video feedback enhances performance?
4. Schmidt and Weinstein have a classic paper about feedback frequency. What does it say?

Lesson Three

1. Differentiate between declarative and procedural memories.
2. What are the 3 stages of memory?
3. What is consolidation and how can we enhance it?
4. Why do we forget?

Lesson Four

1. What is a generalized motor program?
2. What are invariant motor program features?
3. What are variant motor program features?
4. What types of motor program errors occur?

Lesson Five

1. What are massed and distributed practice schedules?
2. Why does distributed practice "work"?
3. What are blocked and random practice schedules?
4. What is contextual interference?

Lesson Six

1. What are constant and variable practice schedules?
2. What is the relationship between variable practice and schema theory?
3. What is the difference between part and whole practice?
4. When should you use part and whole practice?

END OF SECTION I

SECTION II (OPTIONAL)

There are FOUR questions for each of the SIX intermediate lessons. The exam invigilator will randomly select TWO of the FOUR questions for each of the SIX introductory lessons. You will select ONE or the TWO randomly selected questions for each of the SIX introductory lessons. So, you will write a total of SIX short answers, ONE for each of the SIX introductory lessons.

At the end of this exam you will self-grade yourself for each of your six answers based on QUALITY (out of 4), QUANTITY (out of 2), EXAMPLES/DIAGRAMS (out of 2), and COMMUNICATION (out of 2).

Lesson Seven

1. What the difference between reinforcement and supervised learning?
2. What does it mean when we say a choice has "value"?
3. What is a prediction error?
4. Relate prediction errors to providing feedback and learning.

Lesson Eight

1. What is observational learning and how does it differ from reinforcement and supervised learning?
2. What is the mechanism that underlies observational learning?
3. What are mirror neurons?
4. How do mirror neurons facilitate motor skill acquisition?

Lesson Nine

1. What is a motor schema?
2. How are schemas used in skill production?
3. How are schemas used in learning?
4. Explain the relationship between variable practice and motor schemas.

Lesson Ten

1. In terms of skill production, what do the primary motor cortex, SMA, and PMC do?
2. What is the role of sensory feedback (primary sensory cortex, posterior parietal cortex) in skill production?
3. What role does the cerebellum play in movement production?
4. What role does the basal ganglia play in movement production?

Lesson Eleven

1. What is specificity of practice?
2. How does specificity of practice related to processing of sensory information?
3. Provide an example of a learning situation that violates the specificity of practice hypothesis.
4. What are the differences between sensory/motor specificity, context specificity, and processing specificity?

Lesson Twelve

1. What is mental practice?
2. Discuss Figure 11.11. What are the results?
3. Why does mental practice work?
4. Review the second reading. What does it tell you about mental imagery works?

END OF SECTION II

SECTION III : Long Answer Question (40 points)

Your exam invigilator will randomly select one of the questions below. In the provided exam booklet, answer the selected question as a long answer question to the best of your ability. Make sure you include all relevant course material, diagrams, examples, and references to research. You may use prose or point form.

1. How Do We Learn?
2. What Do We Learn?
3. How Can We Improve Learning?

END OF SECTION III

END OF EXAM