

**Orthopedic Division of the Canadian Physiotherapy Association
Information for Candidates Preparing to Write the
Level 1 Multiple Choice Examination**

Introduction

Candidates preparing to write the Level 1 Multiple Choice Examination will benefit from the following information, which describes the parameters used to select the 60 questions for the examination. Four sample questions, which are typical of the type of questions selected for the examination, have also been provided for your reference.

The selection of questions for the examination is guided by a table of specifications that is approved by the Canadian Physiotherapy Association. The table of specifications outlines the number of questions selected for the examination according to the *cognitive level* at which the question is written, and the *content domain* from which the question is taken:

- *There are three different cognitive levels at which questions can be written:*

*Knowledge Comprehension (KC)
Application of Knowledge and Skills (AP)
Critical Thinking (CT)*

- *There are four different content domains from which questions can be taken:*

*Anatomy, Physiology, Neurophysiology (APNP)
Biomechanics of Joints (BIOM)
Myokinematics and Myokinetics (MYOK)
Pathology (PATH)*

Candidates will be familiar with the four content domains described above, but may benefit from a further description of what is meant by the three different cognitive levels.

- *Knowledge Comprehension (KC): Knowledge Comprehension questions require candidates to recall factual information and understand concepts.*
- *Application of Knowledge and Skills (AP): Application questions require candidates to apply or transfer knowledge and skills to new situations.*
- *Critical Thinking (CT): Critical Thinking questions require candidates to analyze, compare, contrast, evaluate and justify information and ideas. It also requires candidates to understand relationships, structures and patterns.*

The table below describes the *approximate* number of questions from each of the cognitive levels and each of the content domains that will be on the Level 1 Exam.

Table of Specifications for the 60 MCQs Selected for an Examination

<i>Cognitive Level</i>	<i>Knowledge Comprehension (KC)</i> <i>Application of Knowledge and Skills (AP)</i> <i>Critical Thinking (CT)</i>	48 (80%) 6 (10%) 6 (10%)
<i>Content Domains</i>	<i>Anatomy, Physiology, Neurophysiology (APNP)</i> <i>Biomechanics of Joints (BIOM)</i> <i>Myokinematics and Myokinetics (MYOK)</i> <i>Pathology (PATH)</i>	18 (30%) 18 (30%) 6 (10%) 18 (30%)

The information in the previous chart can be broken out in further detail by describing a cross tabulation of a specific cognitive level with a specific content domain. The chart below provides an example of this information:

Sample Cross Tabulation of Cognitive Levels and Content Domains

N = 60	<i>APNP</i>	<i>BIOM</i>	<i>MYOK</i>	<i>PATH</i>	N =
<i>KC</i>	15	14	4	15	48
<i>AP</i>	1	2	1	2	6
<i>CT</i>	2	2	1	1	6
N =	18	18	6	18	60

Interpreting this Chart: Examples

In the third column, BIOM, there are 14 questions from biomechanics that are knowledge comprehension questions (KC), 2 that are application questions (AP), and 2 that are critical thinking questions (CT), for a total of 18 questions from the content domain of biomechanics.

In the fifth column, PATH, there are 15 questions from pathology that are knowledge comprehension questions (KC), 2 that are application questions (AP), and 1 that is a critical thinking question (CT), for a total of 18 questions from the content domain of pathology.

In the fourth row, CT, there are 2 critical thinking questions from anatomy (APNP), 2 from biomechanics (BIOM), 1 from myokinematics (MYOK), and 1 from pathology (PATH) for a total of 6 questions from the cognitive level of critical thinking.

Subjects, Locations, Body Parts

It is also important to note that questions developed for the Level 1 Examination will cover the following subject areas, locations or body parts. The approximate number of questions on the 60-question examination is given beside each topic. The number of questions may vary by plus or minus one depending on the selection of questions in any given year.

✓ Assessment of musculoskeletal system	5% or 3 questions of 60
✓ Thoracic examination, spinal components	5% or 3 questions of 60
✓ Biomechanics and clinical reasoning	5% or 3 questions of 60
✓ Subjective examination theory	5% or 3 questions of 60
✓ Objective examination theory	5% or 3 questions of 60
✓ Upper quadrant scan	5% or 3 questions of 60
✓ Lower quadrant scan	5% or 3 questions of 60
✓ Cervical examination	5% or 3 questions of 60
✓ Shoulder examination	5% or 3 questions of 60
✓ Elbow examination	5% or 3 questions of 60
✓ Wrist/Hand examination	5% or 3 questions of 60
✓ Lumbar examination	5% or 3 questions of 60
✓ Hip examination	5% or 3 questions of 60
✓ Knee examination	5% or 3 questions of 60
✓ Foot/Ankle examination	5% or 3 questions of 60
✓ Manual therapy theory	3% or 2 questions of 60
✓ Vascular supply	3% or 2 questions of 60
✓ Cranial nerves	3% or 2 questions of 60
✓ Embryology	3% or 2 questions of 60
✓ Inert tissue	3% or 2 questions of 60
✓ Nervous system	3% or 2 questions of 60
✓ Segmental facilitation	2% or 1 question of 60
✓ Pain	2% or 1 question of 60
✓ Posture	2% or 1 question of 60
✓ Gait	2% or 1 question of 60
✓ Pharmacology	2% or 1 question of 60
✓ Medical team	2% or 1 question of 60

Sample Questions

The four sample questions that follow will give candidates an indication of the format, level of difficulty, and content of questions that will be on the examination. Below each of the sample questions is an information bar. This bar provides the candidate with an annotation for the question. The annotation provides the correct answer, the content domain from which the question is taken, the body part or subject area, the cognitive level of the question, and the manual reference for the question. This annotation, of course, will not be present on the examination.

1. In terminal extension at the knee, what motion best describes what the tibia does on the femur?
 - A. It rocks.
 - B. It swings.
 - C. It rolls.
 - D. It rotates medially.

Answer A	BIOM	KNEE	AP	Theory Manual 1, page 248
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2. Which of the following postures includes hip joint hyperextension?
 - A. Ideal
 - B. Lordotic
 - C. Flat
 - D. Sway

Answer D	APNP	POSTURE	KC	Theory Manual 1, page 406
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3. A back pain patient has a positive passive cervical flexion test. Which structure is most likely to be at fault when this test is positive?
 - A. Pia mater
 - B. Dura mater
 - C. Perineurium
 - D. Epineurium

Answer B	BIOM	NERVOUS SYSTEM	AP	Theory Manual 1, p. 30-31
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4. During a lumbar scan, it is noticed that dorsiflexion of the left great toe occurs while checking the sensation of the ipsilateral anterior tibia. The lateral four toes are noted to fan out at the same time. Why is this a concern?
- A. L4 nerve root involvement, possible associated drop-foot
 - B. Positive Hoffman's test, indicative of upper motor lesion
 - C. Positive Oppenheimer's test, indicative of upper motor lesion
 - D. Babinski sign, indicative of upper motor lesion

Answer C	PATH	LQ SCAN	CT	Theory Manual 1, page 283
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Prepared for the Canadian Physiotherapy Association

Original: June 30, 2016

Revised: June 14, 2017