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SPORT PHYSIOTHERAPY CANADA

CERTIFICATE EXAM MARKING GUIDE

CANDIDATE'S NAME: _____

EXAMINER'S NAME: _____

TODAY'S DATE: _____

INSTRUCTIONS TO EXAMINERS

- A. Fill in the situation or scenario asked of the Candidate each time.
- B. Check each objective as:
U – Unacceptable; A – Acceptable; G – Good; N/A – Not Applicable
Note: U = Requirements not met, performance poor
A = Requirements met, performance acceptable
G = Requirements met, performance strong
- C. For unacceptable performances, ALWAYS include DETAILED comments that will qualify or clarify why the performance was poor.
- D. Space is provided for comments for each performance criteria/objective. If additional space is required use the bottom of the section.
- E. When marking your decision as to whether a Candidate has passed or failed the section, remember you are judging the Candidate's ability to competently complete the task in a reasonable time frame. Please do not use "Weak Pass."
- F. The examiner should also base their decision on the following:
- The Candidate's ability to adapt to the situation;
 - The Candidate's ability to apply basic principles to analyze situations which they may not have encountered in their practical experience (ie. equipment that they have not seen before);
 - The Candidate's ability to demonstrate an in-depth theoretical and practical knowledge, which meets the Certificate Level objectives.
- G. Candidate's must pass ALL STATIONS in the examination to pass the Practical/Oral Examination.
- H. Your comments must be complete and legible. A resume of your comments is sent to the Candidate.

CURRICULUM OBJECTIVES OF THE SPORT PHYSIOTHERAPY CERTIFICATE

PROTECTIVE EQUIPMENT

On successful completion of the Sport Physiotherapy Certificate, the Physiotherapist will be able to:

- Identify and describe the principles of protective equipment including the properties of different materials and how equipment can prevent injury.
- Describe the different types of protective equipment seen in sports and explain advantages and disadvantages of the different types of equipment for the different parts of the body and in different sports.
- Properly fit different types of equipment on an athlete.
- Describe the uses of different types of footwear seen in sports and analyze the advantages and disadvantages of each type.
- Describe the indications for and precautions associated with protective equipment in different sports.
- Carry out basic maintenance and repair of protective equipment.
- Demonstrate the safe removal of equipment in an emergency situation.
- Show how protective equipment may be modified and/or adapted to improve fit, protect from injury, or protect a present injury.
- Explain how different types of playing surfaces may be associated with certain patterns of injuries.
- Describe the role of braces, splints and orthotics in sports injury prevention and management.

BASIC TAPING TECHNIQUES

On successful completion of the Sport Physiotherapy Certificate, the Physiotherapist will be able to:

- Describe the functions of taping and wrapping.
- Explain and perform pre-taping procedures including reasons for and methods of pre-taping procedures.
- Describe the different types of tape and tape products.
- Demonstrate common taping techniques to the various joints of the body and explain the effects of the technique considering function.
- Analyze the basic elements of common taping techniques relative to biomechanical and anatomical needs.
- Demonstrate and explain appropriate wrapping techniques to the various joints of the body.

- g. Demonstrate and explain appropriate application of various types of sling applications.
- h. Demonstrate and explain the procedure of tape removal and aftercare of the skin. (Note: Candidate is expected to perform functional taping, wrapping and strapping techniques in a reasonable time frame.)

ORTHOPEDICS AND BIOMECHANICS

On successful completion of the Sport Physiotherapy Certificate, the Physiotherapist will be able to:

- a. Demonstrate detailed knowledge of the anatomy and biomechanics of bones, joint surfaces, ligaments, and muscles of spinal and peripheral joints.
- b. Describe the basic development of articular structures.
- c. Explain the development and distribution of myotomes, dermatomes and sclerotomes.
- d. Outline the basic mechanisms of lubrication of joints.
- e. Explain shear, stress, strain and load as they apply to the body.
- f. Describe the functional mechanics of vertebral and peripheral joints.
- g. Explain the mechanical deformation of neural and vascular tissues with spinal movement.
- h. Describe the biomechanical principles of flexibility and strength and the effects of flexibility and strengthening techniques on different types of tissue.
- i. Perform a scanning examination of the upper and lower body segments.
- j. Perform a comprehensive examination of each of the peripheral and spinal joints of the body.
- k. Explain the concept of proprioception and its effects on the body.
- l. Describe and differentiate between the different types of joint receptors.
- m. Explain proper body mechanics as related to the sport situation.

EXERCISE PHYSIOLOGY

On successful completion of the Sport Physiotherapy Certificate, the Physiotherapist will be able to:

- a. Describe the principles of aerobic training and how one can train to improve aerobic capacity.
- b. Explain the principles of anaerobic (lactic and alactic) training and how one can train to improve anaerobic capacity.
- c. Describe how to maintain the fitness of an athlete while he/she has an injury.
- d. Describe how a therapist can ensure that the athlete is physiologically ready to return to competition or to be integrated back to activity based on physiological principles.
- e. Differentiate between training for strength, power and endurance.
- f. Explain the basic methods for assessing strength, power and endurance in an athletic population.
- g. Explain the systems involved in developing an effective training program.
- h. Discuss the physiological basis for warm-up and cool-down in training programs.

SPORT PHYSIOTHERAPY

On successful completion of the Sport Physiotherapy Certificate, the Physiotherapist will be able to:

- a. Describe the structure and function of Sport Physiotherapy Canada.
- b. Describe Sport Physiotherapy as a profession in terms of: the role of the Physiotherapist in sports, professional relationships, qualifications of Sport Physiotherapists, standards for sport physiotherapy practice, and professional responsibilities to the athlete.
- c. Discuss the recording and reporting of injuries, confidentiality and discretion with disclosing information, use of consent forms, and legal liability as it relates to sports
- d. Explain the legal aspects of working as a Physiotherapist in a clinical or non-clinical setting.

SPORTS INJURIES

On successful completion of the Sport Physiotherapy Certificate, the Physiotherapist will be able to:

- a. Describe the etiology, signs and symptoms, pathology and management of overuse syndromes seen in athletics.
- b. Common orthopedic conditions seen in sports and how treatment of these conditions might differ for athletes, as opposed to the non-athletic individual.
- c. Conditions of the abdomen and thorax, which may be seen in sports.
- d. Orthopedic conditions, which are common to specific sports.
- e. Conditions of the head, neck and face, which are commonly seen in sports.
- f. Viral, bacterial and fungal skin infections commonly seen in sports.
- g. Heat and cold disorders seen in sports.

- h. Describe the stages of soft tissue healing related to assessment and management of sports injuries.
- i. Discuss the theory, limitations and application of electrophysical agents in the management of sports injuries.
- j. Discuss the differences in sports injuries encountered between team and individual sporting activities.
- k. Differentiate sports injuries sustained during contact and non-contact activities.
- l. Discuss the hazards of playing locations and how a site inspection for a competition may be carried out.
- m. Develop and implement functional testing specific to sport requirement and considering the injury.

SPORTS MASSAGE

On successful completion of the Sport Physiotherapy Certificate, the Physiotherapist will be able to:

- a. Explain indications, contraindications, and precautions of massage in athletics.
- b. Differentiate the physiological bases for pre-event and post-event massage.
- c. Explain the mechanical, reflexive and psychological effects of common massage techniques used in sports.
- d. Demonstrate the types of massage including: effleurage, petrissage, tapotement, vibration and frictions.
- e. Demonstrate an appropriate and effective pre-event and post-event massage for a given sport, with emphasis on muscle groups, positioning, handling and sequence of techniques.

Station A - Emergency and Immediate Care (Maximum allowable time: 20 Minutes)

Station A1:

Unconscious/Conscious Head Injury, Spinal Injury and/or Major Trauma

Note: All performance criteria do **NOT** necessarily have to be completed. The Examiner need only ensure that those criteria which are applicable to the situation asked are complete. Thus, the Candidate is to be judged on his/her ability and performance in the given situation **NOT** whether they complete all performance criteria. All performance criteria are to be evaluated according to the Certificate Level references, and based on accepted, standard practices.

EXAMINATION SCENARIO: _____

Performance Criteria		Note: Unacceptable column				Distinc tion
		U	A	G	N/ A	D
A	THE CANDIDATE:					
	SCENE SURVEY					
	Evaluated and took control of the situation:					
	• Assessed scene safety					
	• Assessed mechanism of injury					
	• Established number of victims					
	• Call for more help if need is imminent or if athlete is unconscious – and unresponsive to pain, verbal or tactile stimuli for longer than 10 seconds -911					
	B					
	PRIMARY SURVEY					
	• B – Stabilize spine when applicable					
	U – ASSESS UNRESPONSIVENESS (AVPU)					
	❖ Alert, Verbal Stimuli, Painful Stimuli, Unconsciousness					
	❖ Communicate and reassure the athlete					
	A – AIRWAY					
	❖ Airway access: open with appropriate maneuver, mouth guard, gum					
❖ Maintain airway under facemask/visor						
❖ Remove facemask/visor if airway not accessible						
❖ Airway obstructed measures if required						
B – BREATHING (max 10 seconds)						
❖ Start AR if required						
C – CIRCULATION (max 10 seconds)						
❖ Check pulse						

Performance Criteria	U	A	G	N/A	D
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	❖ Start CPR if required					
	❖ AED if accessible and required					
	❖					
	BODY SCAN					
	❖ Check for bleeding or gross deformity – 15-30 seconds					
	CALL FOR HELP after primary evaluation if needed – 911					
C	SECONDARY SURVEY					
	VITAL SIGNS (assessed every 3-5 minutes)					
	Level of awareness					
	Breathing rate					
	Pulse rate					
	Blood pressure (BP cuff, Carotid artery=60mmHg systolic, Femoral artery=70mmHg, radial artery=90mmHg)					
	HISTORY: Sample / PAIN Assessment: OPQRST					
	SAMPLE: Signs and Symptoms, Allergies, Medication, Past medical history, last meal, Events before the incident					
	PAIN: Onset, Provoke, Quality, Region (or radiate), Severity, Time					
	SECONDARY HEAD TO TOE (circle or add what applies):					
	HEAD: Palpation of the scalp, feeling for depression of skull, integrity of peri-orbital region, maxilla, mandible, zygomatic bones, CSF/blood from ear or nose, Battle sign, missing teeth, lacerations, hematoma or bruised area, pupil PERLA, skin color					
	NECK: palpation of spine for tenderness, distended jugular veins, tracheal midline and intact, bruising or lacerations, skin color					
	CHEST: clavicle intact, absence or subcutaneous emphysema at apex, sternum stable, absence of tenderness at ribs, equal bilateral chest expansion, equal air entry upon auscultation, no flail chest observed, no bruising, no open wounds					
	UPPER EXTREMITIES: absence of tenderness, good motor function, ROM and proper bone integrity for the shoulder, humerus, forearm, wrist, hands and fingers. Good distal pulses, capillary refill and sensations. (PMSC = Pulse, Motor, Sensation, Capillary refill). Hoffman test for CNS. Dermatomes/myotomes if required.					
	ABDOMEN: absence of distension, hard/soft, absence of tenderness in quadrants, absence of bruising					
	PELVIS: stability in compression/distraction/loading test, femoral pulse bilaterally. Absence of incontinence.					
	LOWER EXTREMITIES: absence of tenderness, good motor function, ROM and proper bone integrity for the femur, tibia/fibula, knee, ankle, foot and toes. Good distal pulses, capillary refill and sensations. (PMSC = Pulse, Motor, Sensation, Capillary refill). Babinski and clonus tests for CNS. Dermatomes/myotomes if required. Ottawa ankle and knee rule tests.					
D	ON-GOING SURVEY					

Performance Criteria	U	A	G	N/A	D
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	Monitor ABCs					
	Monitor vital signs (Awareness, Pulse, Respiration, BP, skin color – every 3 to 5 minutes)					
	Identified red flags for emergency concern (if applicable)					
E	TRANSPORT:					
	Apply Canadian C-Spine rule					
	Determine appropriate plan for transport					
	If back boarded:					
	Good use of cervical collar					
	Proper position of the board					
	Good transfer onto the board					
	Proper strapping					
	Securing of the neck					
	General comfort					
	On-going evaluation and vital signs					
	Relating the findings to ambulance personnel					
F	SIDELINE ASSESSMENT					
	CHILD SCAT 3: Concussion assessment if required					
	Glasgow coma scale					
	Background questions: child report, parent report					
	Cognitive evaluation					
	❖ Orientation (month, date, day of the week, year)					
	❖ Immediate memory					
	❖ Concentration: digits backwards					
	Neck examination:					
	❖ Tenderness					
	❖ ROM					
	❖ Upper and lower limb sensation					
	Balance evaluation (Modified Balance Error Scoring System (BESS) testing):					
	❖ Double leg stance					
	❖ Tandem stance					
	❖ Tandem gait					
	Coordination examination (upper limb coordination)					
	SAC: Memory - delayed recall					
	ADULT SCAT 3: Concussion assessment if required					
	Glasgow coma scale					
	Maddocks Score					
	Background information					
	How do you feel questionnaire (22 questions)					
	Cognitive evaluation					
	❖ Orientation (month, date, day of the week, year)					
	❖ Immediate memory					
	❖ Concentration: digits backwards					

Performance Criteria

U **A** **G** ^{N/A} **D**

	❖	Concentration: months backwards					
	Neck examination:						
	❖	Tenderness					
	❖	ROM					
	❖	Upper and lower limb sensation					
	Balance evaluation (Modified Balance Error Scoring System (BESS) testing):						
	❖	Double leg stance					
	❖	Single leg stance					
	❖	Tandem stance					
	❖	Tandem gait					
	Coordination examination (upper limb coordination)						
	SAC: Memory - delayed recall						
G	ON-GOING CARE (with or without second problem)						
	Communicated plan of action to athlete:						
	Explained situation and reassured athlete						
	Communicated plan of action to assistants:						
	Instruction on positioning of athlete						
	Athlete presents with second threatening problem						
	Responded to athlete complaint (secondary problem)						
	Performed an appropriate examination						
	Provided appropriate support/immobilization of area						
H	RETURN TO SPORT DECISION FOLLOWING POTENTIAL TRAUMA TO THE HEAD						
	Can the athlete return to play?						
	Rationale						
	Under which condition can the athlete return to play?						
	Explained effective home monitoring						
	Discussed the appropriate follow-up required						
	Appropriate knowledge of return to play protocol						

GENERAL COMMENTS (Strengths/Weaknesses)

Performance Criteria	U	A	G	N/A	D
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Examiner's Recommendation for Station A: Emergency Care PASS / FAIL
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Reason for Decision: If the Candidate failed this station summarize the reasons for failure. Refer to performance criteria/objectives by letter (a, b, etc.) to clarify individual points.

Performance Criteria

U	A	G	N/A	D
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Station B – Sling and Splinting, Taping and Strapping (Maximum TOTAL allowable time: 40 minutes)

Section B1: Sling/Splinting Techniques (20 minutes total – 15 minutes for application and 5 minutes for questions/discussion)

Note: The conditions asked are acute conditions in which the candidate is asked to prepare the model for transportation to a medical centre or home.

All performance criteria are to be evaluated on accepted, standard practices, according to Certificate level references.

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(note: UNacceptable column)

EXAMINATION SCENARIO:	#1				#2			
	U	A	G	N/A	U	A	G	N/A
Performance Criteria B1 20 minutes								

The Candidate:

a.	Analyzed the problem and described a possible mechanism							
b.	Chose an appropriate technique to achieve a functional outcome							
c.	Selected suitable materials to achieve a functional outcome							
d.	Positioned and handled the athlete comfortably and continually monitored the athlete for comfort							
e.	Positioned the athlete effectively to achieve functional outcome							
f.	Prepared the body part adequately for application of materials							
g.	Applied materials in an organized and neat manner							
h.	Applied materials within a reasonable time frame (time:)							
i.	Achieved a functional outcome with technique demonstrated:							
-	compression							
-	immobilization							

(note: UNacceptable column)		#1				#2			
		U	A	G	N/A	U	A	G	N/A
Performance Criteria B1 20 minutes		U	A	G	N/A	U	A	G	N/A
-	restricted movement in desired plane(s)								
-	comfortable, circulation and sensation intact								
-	materials secure when stressed by athlete and examiner(s)								
j.	Explained the rationale for the technique used (physical, psychological and practical considerations)								
k.	Adapted technique to improve functional outcome								
l.	Explained the possible complications that must be considered								
m.	Explained appropriate home care and follow-up management								

General Comments: (Strengths/Weaknesses)

Examiner's Recommendation for Section B1 (Slings and Splints):	PASS / FAIL
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Reasons for Decision: If candidate failed this section summarize reasons, referring to performance criteria by letter (a, b, etc.) if necessary.

Station B – Slings and Splinting, Taping and Strapping (Maximum TOTAL allowable time: 40 minutes)

Section B2: Taping/Strapping Techniques (20 minutes) – 15 minutes to apply, 5 minutes questions/discussion

Note: Candidates are asked to perform basic taping and strapping techniques that are commonly used for the following joints or structures: arm, elbow, forearm, wrist, hand, fingers, chest, hip, thigh, leg, ankle, foot or toes. Functional outcome and speed are of primary importance.

All performance criteria are to be evaluated on accepted, standard practices, according to Certificate level references.

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EXAMINATION SCENARIO:	(note: UNacceptable column)							
	#1				#2			
Performance Criteria	U	A	G	N/A	U	A	G	N/A

The Candidate:

a.	Analyzed the problem and described a possible mechanism								
b.	Chose an appropriate technique to achieve a functional outcome								
c.	Selected suitable materials to achieve a functional outcome								
d.	Positioned and handled the athlete comfortably and continually monitored the athlete for comfort								
e.	Positioned the athlete effectively to achieve functional outcome								
f.	Prepared the body part adequately for application of materials								
g.	Applied materials in an organized and neat manner								
h.	Applied materials within a reasonable time frame (time:)								
i.	Achieved a functional outcome with technique demonstrated:								
-	compression								
-	immobilization								

Performance Criteria	#1				#2			
	U	A	G	N/A	U	A	G	N/A
- restricted movement in desired plane(s)								
- comfortable, circulation and sensation intact								
- materials secure when stressed by athlete and examiner								
j. Explained the rationale for the technique used. (physical, psychological and practical consideration)								
k. Adapted technique to improve functional outcome								
l. Explained the possible complications that must be considered								
m. Explained appropriate home care and follow-up management								

General Comments: (Strengths/Weaknesses)

Examiner's Recommendation for Section B2 (taping and strapping):

PASS / FAIL

Reasons for Decision: If candidate failed this section summarize reasons, referring to performance criteria by letter (a, b, etc.) if necessary.

Station C - Protective Equipment, Functional Testing and Sport Massage (Maximum TOTAL allowable time: 45 minutes)

Section C1: Protective Equipment (15 minutes)

Note: The Candidate must be able to successfully demonstrate knowledge of the equipment, analyze strong and weak features, and explain modification methods to protect or prevent and injury.

All performance criteria are to be evaluated on accepted, standard practices, according to Certificate level references.

(note: UNacceptable column)

EXAMINATION SCENARIO:	#1				#2			
	U	A	G	N/A	U	A	G	N/A

The Candidate:

a. Analyzed the role of the equipment								
b. Differentiated between the protective qualities/characteristics of various materials and design of equipment								
c. Demonstrated appropriate fitting of equipment and explained the basic principles of fitting								
d. Explained the factors that must be considered when modifying equipment (practical, safety and legal)								
e. Analyzed the positive aspects of the equipment								
f. Analyzed the negative aspects of the equipment								
g. Describe appropriate methods to modify the equipment								

General Comments: (Strengths/Weaknesses)

Examiner's Recommendation for Section C1 (Protective equipment)
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PASS / FAIL

Reasons for Decision: If candidate failed this section summarize reasons, referring to performance criteria by letter (a, b, etc.) if necessary.

Station C - Protective Equipment, Functional Testing and Sport Massage (Maximum TOTAL allowable time: 45 minutes)

Section C2: Functional Testing (15 Minutes)

Note: The Candidate must demonstrate appropriate functional tests for the situation asked. They must demonstrate an in-depth knowledge of the effect of the tests and explain how the tests should be progressed or changed to stress the structure(s) being assessed.

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(note: UNacceptable column)

EXAMINATION SCENARIO:	#1				#2			
	U	A	G	N/A	U	A	G	N/A

The Candidate:

a.	Explained the physical requirements of the sport (ie. R.O.M., forces intrinsic/extrinsic, balance/coordination, endurance, skill)							
b.	Progressed tests from least to most difficult							
c.	Demonstrated tests that were specific to the problem							
d.	Analyzed how the tests stressed specific structures							
e.	Demonstrated an effective testing regime							

General Comments: (Strengths/Weaknesses)

Examiner's Recommendation for Section C2 (Functional testing):	PASS / FAIL
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Reasons for Decision: If candidate failed this section summarize reasons, referring to performance criteria by letter (a, b, etc.) if necessary.

Station C - Protective Equipment, Functional Testing and Sport Massage (Maximum TOTAL allowable time: 45 minutes)

Section C3: Sport Massage (15 minutes)

Note: The Candidate must demonstrate proficiency at applying the appropriate massage techniques for an athlete who will be competing in a major event, specified by the scenario given.

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(note: UNacceptable column)

EXAMINATION SCENARIO:	#1				#2			
	U	A	G	N/A	U	A	G	N/A

The Candidate:

a.	Selected appropriate massage technique(s) (sport, time of massage, and previous history considered)							
b.	Positioned and handled the athlete comfortably (monitored subjective response)							
c.	Positioned athlete, considering muscle group (relaxed, accessible)							
d.	Positioned their own body appropriately (good mechanics)							
e.	Demonstrated an effective massage:							
-	force							
-	smoothness (skin friction minimal)							
-	direction							
-	covered muscle group(s)							
f.	Demonstrated knowledge of the physiological and psychological effects of sport massage							
g.	Explained the practical limitations/considerations							

General Comments: (Strengths/Weaknesses)

Examiner's Recommendation for Section C3 (Massage):	PASS / FAIL
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Reasons for Decision: If candidate failed this section summarize reasons, referring to performance criteria by letter (a, b, etc.) if necessary.