**ST MARY’S UNIVERSITY**

**TWICKENHAM, LONDON**

BSc Sport Rehabilitation

Level **FOUR**

Title**: Clinical Assessment of Neuromusculoskeletal Injury**

Code: **SRE4012**

Semester: **Resit**

Date: **01 July 2019**

Time: **09:30-11:30am**

TIME ALLOWED: **TWO** HOURS

**Section 1:**

Answer **ALL** of the multiple choice questions in your answer booklet.

1. What does HOPC stand for in the subjective assessment?
2. History of past conditions
3. History of presenting complaint
4. History of previous complaints
5. History of prior crepitus
6. Fibrillation is a feature of:
7. Hyaline articular cartilage damage
8. Bone fracture
9. Labral tears
10. Ligament ruptures
11. Proteoglycans are found in:
12. Hyaline articular cartilage
13. Bone forming Cells
14. Nerve axons
15. None of the above
16. Fracture malunion usually occurs due to:
17. Delayed immobilisation
18. Failed reduction
19. Avascular necrosis
20. All of the above
21. Which of these best describes avascular necrosis?
22. Cell renewal
23. Cell or tissue death from lack of blood supply
24. Programed cell death
25. Cell multiplication
26. Which individuals are at higher risk of adhesive capsulitis of the shoulder?
27. Adolescents
28. Male adults
29. Female middle aged adults
30. Younger children
31. What is the sequence of normal bone fracture healing?
32. Haematoma, inflammation, remodelling
33. Haematoma, inflammation, hard callus formation, soft callus formation, remodelling
34. Inflammation, proliferation, remodelling
35. Haematoma, inflammation, soft callus formation, hard callus formation, remodelling
36. What are the cardinal signs of inflammation?
37. Pain, swelling, heat, loss of function, redness
38. Pain, bruising, loss of range, redness
39. Pain, weakness, swelling, heat redness
40. Pain, redness, swelling, heat
41. Platelet aggregation occurs in which phase of healing?
42. Inflammation
43. Bleeding
44. Remodelling
45. Proliferation
46. What replaces damaged hyaline articular cartilage?
47. Blood vessels
48. Hyaline articular cartilage
49. Fibrocartilage
50. Nerves
51. What is Grade 1 cartilage damage in the Outerbridge grading system?
52. Exposed subchondral bone
53. Lesion of less than 1cm diameter
54. Softening of cartilage locally
55. All of the above
56. What is fibrillation?
57. The positive response to optimal load on cartilage
58. Flaking of the surface of hyaline articular cartilage
59. Subchondral cysts
60. Loss of synovial fluid
61. What is eburnation of a joint evidenced by?
62. Sclerosis of the joint cartilage
63. Superficial surface fissuring
64. Softening of the joint surface
65. None of the above
66. Which of these are features of Osteoarthritis?
67. Joint narrowing
68. Capsular thickening
69. Osteophytic lipping
70. All of the above
71. Which of these is not a feature of osteoarthritis?
72. Thinning of the synovial membrane
73. Subchondral cysts
74. Thickened capsule
75. Reduced synovial space
76. Which of these is not a clinical feature of osteoarthritis?
77. Pain
78. Loss of joint position sense
79. Muscle hypertrophy
80. Crepitus
81. Which best describes the effects of synovitis?
82. Microfractures
83. Synovial thickening and hyperaemia
84. Paraesthesia
85. All of the above
86. What is the usual timescale of remodelling to occur?
87. 1-3 weeks
88. 0-3 days
89. 0-3 hours
90. Several months
91. What is the usual timescale for haemostasis to occur after a ligament injury?
92. Several weeks
93. Several days
94. Several hours
95. Several months
96. What are the main cells involved in resolving the inflammatory phase?
97. Fibroblasts
98. White blood cells
99. Platelets
100. Fibrin
101. What are the main cells active in the proliferation phase?
102. Osteoblasts
103. Fibroblasts
104. Thrombocytes
105. Erythrocytes
106. What is the main function of fibroblasts in tissue repair?
107. Collagen production in the proliferative phase
108. Bone remodelling
109. To resorb collagen type 2
110. To lay down fibrinogen
111. What occurs in the remodelling phase of healing?
112. Connective tissue degeneration
113. Temporary collagen type 3 formation
114. Angiogenesis
115. None of the above
116. What is involved in clot formation?
117. Release of chemical mediators
118. Conversion of fibrinogen to fibrin
119. Adhesion and aggregation of platelets to damaged endothelium
120. All of the above
121. Which of these statements is true about phagocytosis?
122. Platelets perform phagocytosis
123. It involves apoptosis of debris
124. It occurs in the inflammatory phase
125. All of the above
126. Angiogenesis occurs as a results of:
127. Haemostasis
128. low tissue oxidation
129. high tissue oxidation
130. apoptosis
131. What are the potential outcomes of inflammation?
132. Fibrosis
133. Chronic inflammation
134. Resolution
135. All of the above
136. Inflammation of the tendon sheath is referred to as:
137. Tendinopathy
138. Tenosynovitis
139. Tendinitis
140. Tendon rupture
141. Which of the following is a symptom of tendinopathy?
142. Crepitus
143. Bruising
144. Pain in the morning
145. Swelling
146. What is the basic process of muscle healing?
147. Degeneration and remodelling
148. Necrosis, regeneration, remodelling and maturation
149. Inflammation, proliferation and regeneration
150. None of the above
151. What are the primary cells involved in muscle regeneration?
152. Fibroblasts
153. Osteoblasts
154. Satellite cells
155. White blood cells
156. What are the features of satellite cells?
157. Mononuclear
158. Normally quiescent
159. Precursors to myoblasts
160. All of the above
161. What is myositis ossificans?
162. A developmental disease of the bones
163. Boney growth within a joint
164. Calcification of muscle tissue
165. Muscle growth within bone
166. What is a fracture avulsion?
167. A mild strain
168. Follows Delayed Onset Muscle Soreness
169. A complete rupture of a tendon from the bone
170. None of the above
171. What is neuropraxia?
172. A severe nerve injury usually from severance of the nerve
173. A mild, transient nerve injury
174. The process of nerve regeneration
175. None of the above
176. Bone remodelling is dependent on:
177. Hormones
178. Vitamin D absorption
179. Loading
180. All of the above
181. What is the function of osteoblasts?
182. Hormonal control
183. To build bone
184. Bone resorption
185. All of the above
186. What is “FOOSH” clinical short hand for?
187. Fracture of origin of scaphoid in the hand
188. Fracture of open shaft of humerus
189. Fall on other side of hand
190. Fall on out stretched hand
191. Which of these are mechanisms of peripheral nerve damage?
192. Compression
193. Tension
194. Severance
195. All of the above
196. Axonotmesis is best described as:
197. A severe nerve injury
198. A severe muscle injury
199. A mild nerve injury
200. A severe ligament injury

**Section 2:**

Answer **ALL** of the questions.

1. Describe the 4 phases of the healing process (20)
2. Explain the timescales of each phase of healing (4)
3. What are the 3 N’s when referring to symptoms of a stroke? (3)
4. Give 3 potential red flags in relation to back pain. (3)
5. Explain the use of “SIN” in the subjective assessment when formulating a clinical impression. (10)
6. Describe the Munich grading system of muscle injury (12)
7. Explain the stages of the Tendinopathy Continuum(8)

**END OF EXAMINATION**