***IQRa NATIONAL UNIVERSITY***

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***Department of Allied Health Sciences***

***FINAL TERM EXAM:-***

***Program:*** *Doctor of Physical Therapy*

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***I’d:*** *13769 (6th Semester)*

***Subject: Manual Therapy***

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**SECTION-A: MULTIPLE CHOICE QUESTIONS (MCQs)**

1. Romans used baths for:
   1. Immersion
   2. Hygiene
   3. Pleasure
   4. None of the above

1. The goal of hydrotherapy is to improve the circulation and quality of blood, for getting this goal one needs?
   1. Proper circulation
   2. Cold water
   3. Hot water
   4. Food on time
2. Regarding the physical properties of water moving water can transfer heat by\_\_\_\_\_\_\_\_\_\_\_\_
3. Water cannot transfer heat
4. Conduction
5. Convection
6. Radiation
7. The thermal conductivity of water is approximately \_\_\_\_\_\_\_\_\_\_\_\_that of air
8. 4 times
9. 16 times
10. 2.5 times
11. 25 times
12. \_\_\_\_\_\_\_\_\_\_\_ is the upward force generated by the volume of water being displaced.
13. Resistance
14. Hydrotherapy
15. Buoyancy
16. Torque
17. Kevin, a 34 years old football player, comes to your clinic with an acute sprain injury. Your clinical supervisor tells you to control the swelling and pain with ice, on the basis of the evidence (studies) you have what will be the right application of ice?
18. Single 20-minute
19. Two repetitions of 10 minutes off and 10 minutes on
20. Four repetitions
21. I will refer this patient to medical doctor
22. Infrared rays are electromagnetic waves with wavelengths of?
23. 75 nm- 4000 nm
24. 7.5 nm- 4000 nm
25. 750 nm- 400000 nm
26. 600 nm- 400000 nm
27. Non- luminous generator provide \_\_\_\_\_\_\_\_\_\_
28. Infra-red rays
29. UV rays
30. Visible light
31. All of the above
32. If you need both infra-red and UV rays the best option to use is?
33. Luminous generator
34. Non- luminous generator
35. Both can be used
36. Direct current
37. Specific gravity of a person increases when?
38. Bone mass is decreased
39. Muscle mass is decreased
40. Increase in adipose tissue
41. None of the above
42. The distance of Infra-red lamp from the patient should be measured. It is usually\_\_\_\_\_\_\_\_\_\_\_ according to the output of the generator.
43. 5-17 cm
44. 50-555 cm
45. 5.0-7.5 cm
46. 50-75 cm
47. The human body has a specific gravity of\_\_\_\_\_\_\_\_\_\_\_\_\_\_
48. 8 – 0.9
49. 00.80 – 00.90
50. 0.87 – 0.97
51. 0.40 – 0.90
52. Regarding the duration of infrared treatment for acute inflammation or recent injuries and for the treatment of wounds, an exposure of \_\_\_\_\_\_\_\_\_\_\_\_\_is adequate.
53. 1-2 days
54. 1-2 weeks
55. 1-2 months
56. 10-15 minutes
57. All of the following are the therapeutic effect of local tissue heating Except?
58. Healing
59. Control of infection
60. Relief of pain
61. Both A and B
62. None of them
63. When a body part immersed in fluid is at rest, the fluid will exert equal pressure on all surface areas at a given depth. This is \_\_\_\_\_\_\_
64. Buoyancy
65. Archimede’s Principle
66. Pascal’s law
67. Force law
68. Any condition in which increased metabolic rate, cell activity and local blood flow are beneficial could be appropriately treated by\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
69. Cold water
70. Ice
71. Mild heating
72. Increased heating
73. The stimulation of sensory heat receptors may activate the\_\_\_\_\_\_\_\_\_\_\_ for the relief of pain.
74. Muscles contractures
75. Ligands gate mechanism
76. Primitive reflexes
77. Pain gate mechanism
78. \_\_\_\_\_\_\_\_\_\_is a water bath in which the water is agitated by the electric turbine
79. Hubbard tank
80. Heating tank
81. Whirlpool
82. Hot bath
83. Both B and C
84. Fungal infections which are difficult to control are sometimes treated with regular heat; what seems to be the effective factors of heating?
85. Thorough drying of the skin surface
86. Local vasodilatation
87. Systemic vasoconstriction
88. Both A and B
89. Regarding shortwave, the electrodes are placed on the same side of the part to treat more superficial structure. This is called \_\_\_\_\_\_\_\_
90. Contra-planar
91. Coplanar
92. Cross-fire
93. Longitudinal
94. Viscosity is temperature dependent so raising the temperature in liquids will?
95. Increase fluid movement
96. Decrease fluid movement
97. Increase viscosity
98. Both A and C
99. Ultra-violet lies between \_\_\_\_\_\_\_\_\_\_\_\_\_\_and X-ray in the electromagnetic spectrum
100. Visible light
101. Infra-red
102. Microwave
103. Ultraviolet
104. Shortwave goes deep, its penetration is up to?
105. 4cm
106. 5cm
107. 6cm
108. 8cm
109. A physical therapist assistant is discussing a topic with the students of DPT, giving the instructions that it may penetrate as far as the capillary loops in the dermis, what he is talking about?
110. UV-C
111. UV-B
112. UV-A
113. UV-D
114. Which of the following is not included in diathermy family?
115. Microwave
116. Ultrasound
117. Shortwave
118. Infrared
119. Direct penetration of the HeNe laser at 1mW is said to be about approximately \_\_\_\_\_\_\_\_
120. 0.2mm
121. 0.5mm
122. 0.8mm
123. 12mm
124. Being a physical therapist if you are using UV light for a condition, what will be the optimum course of treatment?
125. 4 weeks
126. 6 Weeks
127. 4 months
128. Depends on the condition
129. All of the following are the Indications for Spinal Traction Except?
130. Disk herniation
131. Muscle strain
132. Osteoporosis
133. Degenerative joint diseases
134. Process of drawing or pulling apart of a body segment is?
135. Traction
136. Spinal traction
137. Compression
138. Spinal compression
139. \_\_\_\_\_\_\_\_\_\_\_waves have been reported to penetrate as deep as 4-6 cm into the tissues
140. Infra-Red
141. Micro
142. Ultrasound
143. None of them
144. To treat an infected Ulcer with UV-radiations, which one will be the best treatment option?
145. UV-D
146. UV-A
147. UV-B
148. UV-C
149. As a physical therapist you have much more knowledge about skin receptors, the following will reflect it, which one is true statement regarding skin receptors?
150. Warm receptors are several times more numerous than cold receptors
151. Cold receptors are several times more numerous than warm receptors
152. Cold and warm receptors are equal in quantity
153. Cold receptors sometimes work as warm receptors
154. When cold is applied in an appropriate way on the skin, it increases the excitatory bias around the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
155. Posterior horn cell
156. Anterior horn cell
157. Lateral horn cell
158. Basically around the ganglion
159. Regarding treatment of jaundice in babies with UV light, how long will it take to correct jaundice?
160. 24-48 hours
161. 24-72 hours
162. 24-48 hours
163. 72 hours only
164. In general use of UV light treatment, a target distance of skin from lamp is\_\_\_\_\_\_\_\_\_\_\_\_ assuming an angle of incidence of 90°.
165. 24-48 inches
166. 24-72 inches
167. 2-4 cm
168. None of the above
169. A patient presented to you after an hour of acute sprain injury; while your first goal is to decrease pain and swelling via cold therapy what will you use for the referenced therapy?
170. Ice
171. Cold water
172. Hot packs
173. All of the above can be used

**SECTION – B**

**Q1. Briefly explain how hydrotherapy produces:**

* 1. Musculoskeletal effects
  2. Cardiovascular effects
  3. Respiratory effects
  4. **Musculoskeletal effects**

It depends on the water’s property which is buoyancy

Those anatomical structures of patient which are Sensitive to Weight bearing joint due to buoyancy, patient feels low weight in the water

Due to auricular and periarticular degeneration due to trauma we use hydrotherapy to these type of patients

**E.g** If we immersed a patient 80% in the water then he will feel his weight less then 80% of weight because of buoyancy effect

In water these patients can walk with proper pattern easily without any assistant.It is also helpful to fatty patient

* + 1. **Cardiovascular effects**

When we immersed body in the water Due to hydrostatic pressure on lower extremities the venous blood will flow proximally which increase blood volume in the heart Which Increases stroke volume and at the result Cardiac Output will also increases.

* + 1. **Respiratory effects**

If we immersed patient’s full body in the water Work for breathing will increase due venous blood return to the heart which increases circulation at chest cavity and water will also exert pressure on the chest due to this pressure lungs will not expend completely and will show resistance So the lungs will not able to work properly due to low vital capacity.