Student Name: Amir Akbar
" ID : 13736

(Section A)

1) Romans used baths for;
Ans: B (Hygine)

2) The goal of hydrotherapy is to improve the circulation and quality of blood, for getting this goal one needs?
Ans: C ([redacted] Hot water)

3) Regarding the physical properties of water movi
Water can transfer heat by;
Ans: [redacted] C (Convection)

4) The thermal Conductivity of water is approxima
_____ that of air;
Ans: D (25times)

5) _____ is the upward force generated by the volume of water being displaced.
Ans: C (Buoyancy)

6) 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?
Ans: B (Two repetitions of 10mints off and 10mint on)

7) IR rays are electromagnetic waves with wavelength of?
Ans: C (750nm - 400000nm)

8) Non-luminous generator provide ___
Ans: A(infra-red rays)

9) if you need both infra-red and UV rays the best option to use is?
Ans: A(Luminous generator)

10) Specific gravity of a person increases When?
Ans: D(None of the above)

11) The distance of infra-red lamp from the patient should be measured. it is usually ___ according to the output of the generator.
Ans: D(50-75cm)

12) The human body has a specific gravity of
Ans: C(0.87 - 0.97)

13) Regarding the duration of IR treatment for acute inflammation or recent injures and for the treatment of Wounds, an exposure of ___ is adequate.
Ans: D(10-15minutes)

14) All of the following are the therapeutic effect of local tissue heating except?
Ans: E(None of the above)

15) When a body part immersed in fluid is at rest, the fluid will exert equal pressure on all surface areas as at a given depth. This is ___
Ans: C (pascal's law)

16) Any condition in which increased metabolic rate, cell activity and local blood flow are beneficial could be appropriately treated by ____
Ans: C (Mild heating)

17) The Stimulation of Sensory heat receptors may activate the ____ for the relief of pain.
Ans: D(Pain gate mechanism)

18) ____ is a water bath in which the water is agitated by the electric turbine
Ans: C(Whirlpool)

19) Fungal infections which are difficult to control are sometimes treated with regular heats; what seems to be the effective factors of heating?
Ans: A(Through drying of the Skin Surface)

20) Regarding Short Wave, the electrodes are placed on the same side of the part to treat more Superficial Structure. This is called
Ans: B(Coplanar)

21) Viscosity is temperature dependent so raising the temperature in liquid will?
Ans: D(Both A and C)

22) UV lies B/w ____ and X-ray in the electromag -netic Spectrum.
Ans: A(Visible light)

23) Shortwave goes deep, its penetration is up to ?
Ans: B(5cm)

24) A PT assistant is discussing a topic with the students of DPT, giving the instruction that it may penetrate as far as the capillary loops in the dermis, what he is talking about ?
Ans: ~~A~~ C (UV-A)

25) Which of the following is not included in diathermy family?
Ans: D (infra-red)

26)
Ans: C (0.8mm)

27)
Ans: D(Depends on the Condition)

28)
Ans: C (osteoporosis)

29)
Ans: A (Traction)

30)
Ans: C (ultrasound)

31)
Ans: C(UV-B)

32)
Ans: B([redacted])

33)
Ans: B(Anterior horn cell)

34)
Ans: A(24-48 hours)

35)
Ans: D (none of the above)

36)
Ans: A(ice)

Section B

A). Musculoskeletal effects:

→ The Buoyancy of water unload the weight bearing of anatomical structures and allow patients to perform exercise with less trauma pain.

→ it can also help patients with:

- → Decrease weight bearing especially in the case of Arthritis.
- → it increase the blood flow towards the Muscles.
- → improve muscle Strengthening.
- → Decrease Ligamentous instability
- → it can also be used in other degenerative or traumatic conditions.

→ it is very useful in obese patients as their body has more subcutaneous fat so they have low center of gravity feels less weight and they can perform exercises easily them on dry hand while dry land exercises have more effect on them.

B) Cardiovascular effects:

→ if a person is immersed in the water, Hydrostatic pressure displaces the venous blood proximally and increases;
→ the Cardiac volume
→ increase the Storke Volume
→ and increase the Cardiac output,
→ So more blood will flow towards the body part and also muscles which can lead to increase metabolism and improve healing.

C) Respiratory Effects:

→ Whenever a whole body is immersed in water;
→ it increses the work of breathing.
→ Due to exersion of hydrostatic pressure on chest wall lead to increase resistance of lung expension.

→ Decrease the vital capacity and increase the workload on lung and increase the respiration
→ it decreases the chances of induced asthma B/c of no dust, no pollen in water.