



**AMREF INTERNATIONAL UNIVERSITY  
SCHOOL OF MEDICAL SCIENCES  
DEPARTMENT OF REHABILITATIVE MEDICINE  
BACHELOR OF SCIENCE IN PHYSIOTHERAPY  
END OF TRIMESTER EXAMINATIONS SEPTEMBER TO DECEMBER 2022**

**UNIT NAME: PHT 329: INTEGUMENTARY IN PHYSIOTHERAPY**

**INSTRUCTIONS**

- 1. All students will have two (2) hours to complete the examination**
- 2. Attempt all questions as per the instruction**
- 3. It is the student's responsibility to report any page and number missing in this paper.**
- 4. Check that the paper is complete**
- 5. Total number of pages is 10 including the cover.**
- 6. Read through the paper quickly before you start.**
- 7. The exam is has a total of 50 questions.**

**Multiple choice & T/F questions are worth one (1) point for each correct answer**

1. The typical appearance of a wound due to chronic venous insufficiency is one which has:
  - a. Even wound edges on and/or around the lateral malleolus
  - b. Uneven wound edges with a shallow wound base in and around the ankle/lower leg
  - c. A red granulated bases with scant drainage
  - d. Brown eschar with a shiny periwound skin

ANSWER: B

2. Arterial wounds are most often located:
  - a. Above the ankle in the ankle/lower leg
  - b. Over bony prominences
  - c. Any location where small vessels are occluded
  - d. On the distal digits, interdigital spaces or lateral malleoli

ANSWER: D

3. A patient presents to wound clinic with a round deep wound on her lateral malleolus. This wound is painful, dry and the wound bed is made up of 50% slough. An in-clinic ABI was found to be 0.7. The patient does not know how it was caused, what is the most likely etiology of this wound?
  - a. Diabetic ulcer
  - b. Arterial insufficiency
  - c. Venous insufficiency
  - d. Pressure Ulcer

ANSWER: B

4. A patient presents to clinic with an irregularly shaped wound on the posterior calf. It is draining large amounts of sanguineous fluid and is not painful. The periwound skin is stained brown/black and the skin of the lower leg is hard to the touch. An ABI was found to be 1.1. What is most likely the etiology?
  - a. Pressure ulcer
  - b. Diabetic ulcer
  - c. Venous insufficiency
  - d. Arterial insufficiency

ANSWER: C

5. For the above patient, what is the best plan of care?
  - a. Sharp debridement
  - b. Compression therapy
  - c. Moist wound healing

ANSWER. C

6. Arterial wounds that do not have sufficient blood flow to support healing should not be aggressively treated until the extremity is revascularized.
- a. True
  - b. False

ANSWER: A

7. Acute cellulitis of the lower leg is differentiated from chronic venous insufficiency by the presence of:
- a. Erythema
  - b. Edema
  - c. Serous drainage.
  - d. Palpable pulses

ANSWER: A

8. Which of the following is the most critical factor in determining the prognosis for healing of an ischemic wound?
- a. Adequate debridement
  - b. Nutritional status
  - c. Perfusion status
  - d. Topical agents
  - e. Maintaining a moist environment

ANSWER: C

9. Which of the following treatments would decrease microbial load in a wound without damaging tissue?
- a. Betadine
  - b. Silver
  - c. Iodine
  - d. Petroleum jelly

ANSWER: B

10. Which of the following types of wounds presents with generalized edema?
- a. Pressure ulcer
  - b. Arterial Insufficiency
  - c. Venous Insufficiency
  - d. Diabetic (neuropathic) ulcer

ANSWER: C

11. In patients with arterial insufficiency, which of the following positions causes increased symptoms (such as pain) in their lower leg wound?
- a. Legs elevated
  - b. Legs dependent (hanging down)
  - c. With exercise
  - d. Both A and C
  - e. Both B and C
  - f. None of the above

ANSWER: D

12. Normal capillary refill time is \_\_\_\_\_.
- 1 second
  - 2 seconds
  - 3 seconds
  - 4 seconds
  - 5 seconds

ANSWER: C

13. Family history and a history of occupational prolonged standing are risk factors for developing a venous wound.
- True
  - False

ANSWER: A

14. A fistula is a tunnel that connects two or more different wounds.
- True
  - False

ANSWER: B

15. Which of the following is a factor in skin graft failure?
- Poorly vascularized wound bed
  - Skin pigmentation
  - Wound bed contamination

ANSWER: A

16. Autolytic debridement is safe, selective and fast.
- True
  - False

ANSWER: B

17. A hydrogel type of wound dressing materials is a good choice for wounds that are dry and require moisture.
- True
  - False

ANSWER: A

18. A pressure ulcer is found on the heel of a patient with a spinal cord injury. The periwound skin is bright red but is firm/normal to palpation. There is some thick purulent drainage and the wound appears shallow but is 100% covered in eschar. How would you stage it?
- Stage I
  - Stage II
  - Stage III
  - Stage IV
  - Unstageable

- f. Suspected deep tissue injury

ANSWER: E

19. For the patient in the above question, which of the following dressing types would be most appropriate?

- a. Occlusive
- b. Silver Impregnated negative pressure wound therapy
- c. Permeable
- d. A & B Only

ANSWER: C

20. When considering the 3 zones of a thermal injury in which of the following zones would anticipate the tissue damage to be fully reversible?

- a. Zone of coagulation
- b. Zone of hyperemia
- c. Zone of stasis

ANSWER: B

21. When using the “Rule of nines” assessment tool, what is the percentage of the body affected attributed to the head?

- a. 1%
- b. 5%
- c. 9%
- d. 18%

ANSWER: C

22. Your patient presents to OP PT clinic for a follow up appointment. She has been taking sulfa-based antibiotics for a UTI and mentions that she now has a rash that has been itching and burning. When you perform your integumentary screen, you see wheals with erythema and blanching. Which of the following words would you use to document the findings from your integumentary screen?

- a. Onchylosis
- b. Petechiae
- c. Urticaria
- d. Xeroderma

ANSWER: C

23. Which of the following is/are contraindication(s) for sharp debridement?

- a. Ischemic ulcers (arterial insufficiency)
- b. Wound that are 100% granulation
- c. Dry stable eschar covering a heel wound
- d. Patient is on anti-coagulant medication
- e. All of the above

ANSWER: E

24. In the scenario in above question, what is the best plan of care?

- a. Debridement
- b. Compression therapy
- c. Moist wound healing with absorptive dressing
- d. Larval therapy
- e. Vacuum assisted wound closure
- f. A and C
- g. B and C

ANSWER: G

25. What is the best plan of care for a patient with Arterial Insufficiency?
- a. Aggressive sharp debridement and vigilance for signs of infection
  - b. Conservative moist wound healing, vigilance for signs of infection and referral to a physician to address circulation
  - c. Compression therapy and vigilance for signs of infection
  - d. No treatment is required
  - e. All of the above

ANSWER: B

26. The enzymatic agents used in enzymatic debridement are purely selective and cannot damage viable tissue.
- a. True
  - b. False

ANSWER: B

27. Burns characterized by fluid-filled blisters are categorized as:
- a. Superficial
  - b. Superficial partial thickness
  - c. Deep partial thickness
  - d. Full thickness

ANSWER: B

28. Today, you are working in the hospital with a 67 yo female who has diabetes and was admitted after falling in her apartment. She states that her right calf is really sore but attributes it to landing on her R shin when she fell. Being the astute PT that you are, you lift up the sheet to assess the skin of the R LE. You notice that it has slight erythema and is swollen. When you touch her calf, she tells you it is very tender and it feels warm. Which of the following conditions would you suspect this patient has?
- a. Atopic Dermatitis
  - b. Cellulitis
  - c. Impetigo
  - d. Stasis Dermatitis

ANSWER: C

29. Untreated lymphedema can lead to:
- a. Lymphatic valve failure

- b. Increased risk of infection
- c. Fibrosis
- d. Delayed wound healing
- e. All of the above

ANSWER: E

30. Which of the following are factors that impair wound healing in patients with diabetes?
- a. Increased blood glucose levels interfere with the structural integrity of collagen
  - b. Neuropathy
  - c. Immuno-compromise
  - d. Poor circulation
  - e. All of the above
  - f. B, C, & D only

ANSWER: F

31. Which of the following occurs first in the process of a successful skin graft “take”?
- a. Inosculation
  - b. Revascularization
  - c. Plasma imbibition

ANSWER: C

32. Which of the following **does not apply** to a full thickness skin graft?
- a. Provides a better cosmetic appearance
  - b. Can be re-harvested in 21 - 28 days
  - c. Donor site is relatively small
  - d. “Takes” faster than a split thickness skin graft
  - e. All of the above

ANSWER: D

33. The onset of secondary lymphedema may occur several years after the initial surgical/radiation treatment for cancer (breast or prostate).
- a. True
  - b. False

ANSWER: A

34. Which of the following is not a common feature of herpes zoster (shingles)?
- a. Presents with papules
  - b. Presents with vesicles
  - c. Dermatomal distribution
  - d. Unilateral

ANSWER: A

35. Sharp debridement should be terminated by the clinician in all of the following circumstances except \_\_\_\_.
- a. The clinician or the patient is fatigued
  - b. The wound has bleeding that requires prolonged pressure

- c. An unidentifiable structure is exposed
- d. It is determined that the patient has osteomyelitis

ANSWER: D

36. Scoring eschar is a technique of sharp debridement that is used to facilitate autolytic debridement, but is not used when utilizing an enzymatic agent.
- a. True
  - b. False

ANSWER: B

37. A skin graft that includes all of the epidermis and just a small portion of dermis is called \_\_\_\_.
- a. A thin split thickness skin graft
  - b. A thick split thickness skin graft
  - c. A full thickness skin graft

ANSWER: A

38. Which of the following best describes the movement of water and metabolites from the capillaries to the interstitial tissues?
- a. Absorption
  - b. Diffusion
  - c. Hydrostatic pressure
  - d. Reabsorption
  - e. Ultrafiltration

ANSWER: E

39. Lymphatic fluid contains lymphocytes and water; which of the following. Does lymphatic also contain?
- a. Cellular debris
  - b. Lymphaglobin
  - c. Protein
  - d. Fat
  - e. All of the above
  - f. All except A
  - g. All except B
  - h. All except C
  - i. All except D

ANSWER: G

40. Osmotic pressure gradients draw water from a lower osmotic concentration to a higher osmotic concentration.
- a. True
  - b. False

ANSWER. A

41. Manipulating \_\_\_\_\_ is a key interventional strategy in the treatment of lymphedema.



- a. Hydrostatic pressures
- b. Osmotic pressures
- c. Protein loads
- d. Edema

ANSWER. A

42. The majority of reabsorption occurs at the arterial end of the capillary.
- a. True
  - b. False

ANSWER. B

43. Manual lymphatic drainage should begin distally and progress proximally.
- a. True
  - b. False

ANSWER. B

44. A thick split thickness skin graft includes the entire epidermis and dermis, but is missing hair follicles and sebaceous glands
- a. True
  - b. False

ANSWER. B

45. An infected wound with heavy purulent drainage will typically be dressed with which of the following dressing types?
- a. Permeable (e.g., Gauze)
  - b. Semipermeable (e.g., Telfa)
  - c. Occlusive (e.g., Duoderm)

ANSWER. A

46. Which dressing type is appropriate for facilitating autolytic debridement?
- a. Permeable (e.g., Gauze)
  - b. Semipermeable (e.g., Telfa)
  - c. Occlusive (e.g., Duoderm)

ANSWER. C

47. Stemmer's sign, the inability to grab a pinch skin at the distal foot which is indicative of a decrease in the skin's mobility and elasticity as a result of chronic lymphedema.
- a. True
  - b. False

ANSWER. A

48. Hyperpigmentation or hemosiderin staining is associated with chronic venous insufficiency and differentiates it from chronic arterial insufficiency; what is it?
- a. Is a result of the chronic inflammatory response associate with the disease
  - b. Is a result of phagocytosis of dead red blood cells
  - c. Occurs primarily in the peri wound tissues

- d. Is a by-product of lysed red blood cells deposited in the subcutaneous tissues

ANSWER. D

49. A classic observation of the peri wound area of an arterial wound is “pale, dry and hairless”.

- a. True
- b. False

ANSWER. A

50. In general, normal saline and/or sterile water is the preferred wound-cleansing agent.

- a. True
- b. False

ANSWER. A

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