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University Examinations 2024/2025

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICAL LABORATORY SCIENCES

HML 3411: FORENSIC MEDICINE

DATE: JANUARY 2025

TIME: 3 HOURS

INSTRUCTIONS:

Answer *All* questions

Ensure that all your answers are properly numbered

Part I multiple Choice Questions (MCQ): Write the correct answer on the space provided in the answer booklet. Each MCQ is one mark

Part II: Short Answer Questions – Answer questions following each other on the answer booklet

Part III: Long Answer Questions – Answer each question on the answer booklet

SECTION A: MULTIPLE CHOICE QUESTIONS (20 marks)

1. Sagittal sutures closes at:

- a. Twenty years
- b. Thirty years
- c. Forty years
- d. Fifty years.

2. Presence of canine in a child indicates that the child is:

- a. Below 6 months
- b. Above 6 months and below 12 months

- c. Above 12 months and below 18 months
- d. Above 18 months

3. First permanent tooth appears at age of:

- a. 6 months
- b. 6 years
- c. 4 years
- d. 3 years

4. Age of 16 years old female is estimated by X-ray on:

- a. Ankle joint
- b. Humerus
- c. Wrist joint
- d. Elbow joint

5. Fusion of all parts of femur in males complete at age of:

- a. 18 years
- b. 21 years
- c. 15 years
- d. 12 years

6. Red color hypostasis is seen in death from

- a. CO poisoning
- b. Lead poisoning
- c. Alcohol poisoning
- d. Stab wounds

7. Yellow color in abrasions is due to

- a. Biliverdin in the 5th day
- b. Bilirubin in the 5th day
- c. Biliverdin in the 11th day
- d. Bilirubin in the 11th day

8. Rigor mortis first appears in the muscles of:

- a. Face
- b. Trunk
- c. Upper limb
- d. Lower limb

9. Reliable evidence of sex:

- a. Ovaries and testes
- b. External genitalia
- c. Sex hormones
- d. Hair distribution

10. Trans-sexuality means:

- a. Conflict between gender and physical sex
- b. Male hermaphrodite
- c. Female hermaphrodite
- d. None of the above

11. Which of the following is not a characteristic of abrasions:

- a. Hemorrhage
- b. Pressure
- c. Embolism
- d. Fractures

12. A person has heat cramps he will have

- a. Subnormal temperature
- b. Normal temperature
- c. Fever
- d. Hyperpyrexia

13. The shape of electrical burns depends on .

- a. Type of current
- b. Surface area
- c. Pathway of the current

- d. Site of the burn

14. Foot prints are most commonly used for:

- a. Trailing the enemies in desert.
- c. None mixing of infants in Hospitals.
- c. Solving of crimes.
- d. Identification of unconscious people

15. PM Identification is difficult in cases of:

- a. Severe burns.
- b. Severe putrefaction.
- c. Multiple stab wounds.
- d. Complete charring.
- e. Absence of the head (decapitation)

16. In death from hanging , the hypostasis will appear in .

- a. Face and abdomen
- b. Back
- c. Lower limb
- d. Mouth

17. Mummification occurs when the climate is :

- a. Dry and hot
- b. Dry and cold
- c. Moist and cold
- d. Moist and hot

18. Sure signs of death start to appear :

- a. At the moment of death
- b. After 1 hour
- c. After 2 hours
- d. After 4 hours

19. Rigor mortis is due to:

- a. Depletion of ATP
- b. Loss of muscle tone
- c. Loss of reflexes
- d. Loss of oxygen in blood

20. Adepocere occurs after submersion of body in water

- a. One week
- b. Two weeks
- c. Three weeks
- d. Two days

SECTION B: SHORT ANSWER ALL QUESTIONS (40 MARKS)

- a) Write short notes on;
 - (i) Battered baby syndrome (1 Marks)
 - (ii) True virginity and false virginity (4 Marks)
- b) Compare and contrast between incised wounds and stab wounds. (5 Marks)
- c) Describe anatomical sites and types of defense injuries. (5 Marks)
- d) Describe causes and changes occurring as a result of putrefaction. (5 Marks)
- e) Outline the postmortem examination in the case of drowning. (5 Marks)
- f) Analyze the toxicological findings in a 25 year-old male who succumbed to acid ingestion. (5 Marks)
- g) List five injuries that are confirmative of a sexual assault. (5 Marks)
- h) Compare two types of finger prints. (5 Marks)

SECTION C: LONG ANSWER TWO QUESTIONS (40 MARKS)

(i) Classify poisons and discuss the general management in the case of poisoning (10 Marks)

(ii) A young man was found dead in his house with multiple injuries. A pointed knife with double cutting edges and a vegetable knife were recovered from the scene. Autopsy revealed two stab wounds to the chest and three stab wounds on the abdomen. Two stabs of the chest showed bilateral acute angled ends. Two defects in the blood-stained shirt worn by the victim corresponded to size and shape to the stab wounds on the chest though they were at a significantly lower level than the stab wounds on the chest. Each stab wound on the abdomen had one acute and one squared off end. Discuss the elaborate opinions that you would express regarding the causation of these stab wounds. (10 Marks)

Question Two

(i) Define drunkenness; discuss the metabolism, clinical manifestations and diagnosis of alcoholic intoxication. (18 Marks)

(ii) True and false insanity (2 Marks)

Question Three

Discuss types and importance of trace evidence in a case of strangulation following suspected sexual assault (20 Marks)