



TECHNICAL UNIVERSITY OF MOMBASA
Faculty of Applied & Health Sciences

DEPARTMENT OF MEDICAL SCIENCES

CERTIFICATE IN MEDICAL LABORATORY SCIENCES
(CMLS 14S)

AML 1212: VECTOR BIOLOGY

SPECIAL/SUPPLEMENTARY EXAMINATIONS

SERIES: FEBRUARY 2015

TIME: 2 HOURS

INSTRUCTIONS:

– Answer All questions. Circle the correct answer in Section A.

This paper consists of Eight printed pages.

SECTION A

1. Which one of the following is a species of schistosoma folicid in the coastal region of Kenya
 - A. Schistosonea Mansoni
 - B. Schistosoma japonicual
 - C. Schistosoma haematobium
 - D. Schistosoma melcongi
2. What is the function of proboscis in insects
 - A. Used to detect change in temperature
 - B. Used as a locomotive organ
 - C. Used as feeding organ
 - D. Used to detect chemicals
3. Which larvae instars are retain in the uterus of tsetseflies
 - A. 1st and 2nd instar larvae
 - B. 2nd and 3rd instar larvae
 - C. 4th and 3rd instar larvae
 - D. All instars
4. Which of the following is not a tsetse transmitted parasite
 - A. Trypanosoma crazi
 - B. I. Congolense
 - C. I. rhodosiense
 - D. T. vivax
5. Which of the following is an environmental control of tsetseflies
 - A. Sterile male technique
 - B. Use of natural enemies
 - C. Bush clearing
 - D. Tradiation method
6. Tsetse belong from family_____
 - A. Insecta
 - B. Glossinidae
 - C. Morsitans
 - D. Diptera
7. Which of the following insects can also transmit trypanosomiasis mechanically
 - A. House fly
 - B. Sand fly
 - C. Horse fly
 - D. Mosquitoes

8. Which of the following malaria species is the most dangerous
- A. Plasmodium falciparum
 - B. P. ovale
 - C. P. vivax
 - D. P. malaria
9. How is malaria transmitted man
- A. By mosquito bites
 - B. By contamination
 - C. By eating sugary substances
 - D. Non of the above
10. Between male and female mosquitoes which one has the longest proboscis
- A. Females
 - B. Males
 - C. Both
 - D. Non of the above
11. Which one of the following is a common symptom of Wucheleria bancrofti
- A. Swelling of limbs
 - B. Sleeping all the time
 - C. Low appetite
 - D. Increased heart beat
12. The mosquitoes body which part do they undergo their development
- A. Salivary glands
 - B. Head
 - C. Crop
 - D. Gut
13. Which one is not a benefit from bees
- A. Horney
 - B. Pollination
 - C. Wax
 - D. Stinging
14. How are locusts important agriculturally
- A. They feed on crop leaves
 - B. Can be a source of food
 - C. Can attack animals
 - D. Non of the above

15. Which of the following diseases can be mechanically transmitted by cockroaches
- A. Cholera
 - B. Malaria
 - C. Bilhazia
 - D. Yellow fever
16. Which developmental stage of butterflies can cause agricultural losses
- A. Adults
 - B. Purpae
 - C. Larvae
 - D. Non of the above
17. How are birds important in control of insects
- A. They harbor some insects
 - B. They feed on them
 - C. They provide them with protection
 - D. They fear them
18. The method control where an organism is set to control another organism is
- A. Cultural method
 - B. Biological method
 - C. Chemical method
 - D. Environmental method
19. Pheromones can be impregnated into traps so as to
- A. Attract insects
 - B. Deter insects
 - C. Allow air circulation
 - D. To make them seen from far
20. How many pairs of legs do insects posse:
- A. Two pairs
 - B. Three or four pairs
 - C. One pair
 - D. Many pairs
21. Which of the following is not a tick borne disease
- A. Fever
 - B. Babesiosis
 - C. Colorado fever
 - D. Surva disease

22. Which of the following is not a family of ticks
- A. Acari
 - B. Argasidae
 - C. Ixodidae
 - D. Nuttalliellidae
23. Capitulum also means
- A. Head
 - B. Thorax
 - C. Hallers organ
 - D. Tick leg
24. How many pairs of legs are present in ticks larvae
- A. Non
 - B. Three
 - C. Four
 - D. Non of the above
25. How many host will ixodidae tick need to complete its life cycle
- A. One
 - B. Two
 - C. Three
 - D. More than three
26. Which will the last pair of legs develop in life cycle of ticks
- A. Adult
 - B. Larvae
 - C. Pupa
 - D. Nymph
27. Which one is the first step when you want to use chemicals to control insects
- A. Determine the direction of wind
 - B. Read the manufacturers instruction
 - C. Determine the speed of wind
 - D. Conciter the time of the day
28. Which area will you not find midges larvae
- A. Water
 - B. Manure
 - C. Rocks
 - D. Ground

29. Which of the following diseases can be transmitted by midges.
- A. Fever
 - B. Babesiosis
 - C. Yellow fever
 - D. Katayama fever
30. Which of the following is used in controlling vectors
- A. Meal
 - B. Diethylcabamizine
 - C. DDT
 - D. Fausider
31. The “Rock” of assassin bugs is short composed of _____ segments.
- A. Four
 - B. Three
 - C. Five
 - D. Six
32. Which one is not a specie of kissing bugs
- A. Bamisia tabasai
 - B. Dipeta logaster Maximus
 - C. Rhodnius Prolixels
 - D. Triatoma infestans
33. Mosquitoes have antennae have _____ segments
- A. 13 Segments
 - B. 24 Segements
 - C. 15 Segments
 - D. 16 Segments
34. Which one of the following insects belong to family Reduvildae
- A. Black flies
 - B. Sand flies
 - C. Kissing bugs
 - D. Bed bugs
35. Lesisumaniasis is transmitted by
- A. Sand flies
 - B. Snails
 - C. Black flies
 - D. Biting midges

36. Which of the following control method is not suitable in control of vector borne diseases
- A. Chemical methods
 - B. Quarantine methods
 - C. Biological methods
 - D. Cultural method
37. A mosquito larvae has ____ number of segments
- A. Ten
 - B. Nine
 - C. Eight
 - D. Seven
38. Insects belong from the kingdom
- A. Animalia
 - B. Animals
 - C. Insect
 - D. diptera
39. Which one of the following is a biotic factor
- A. Mates
 - B. Rainfall
 - C. Soil factor
 - D. Humidity
40. Which of the following means death rate
- A. Mortality
 - B. Natality
 - C. Emigration
 - D. Immigration

SECTION B

1. a) Give **THREE** differences between midges and mosquitoes. **(6 marks)**
 - b) Give **FOUR** control methods of midges you know. **(4 marks)**
 - c) State any **FIVE** diseases that mosquitoes and midges transmit to humans. **(5 marks)**
 - d) Give life cycle of midges. **(5 marks)**
2. a) Discuss the economic importance of bees and locusts. **(10 marks)**
 - b) How have they affected man. **(10 marks)**
3. Discuss general control of insects in your area. **(20 marks)**