



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BMLS

AML4302 : VECTOR BIOLOGY OF HUMAN PATHOGENS

SPECIAL/ SUPPLIMENTARY EXAMINATIONS

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

DATE: Pick Date Sep 2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **TWO** Section(s). Attempt All questions in section A and B and any two questions in section C.

Circle the correct answer in section A. paper 2

Section A

) A vector in vector biology is defined as:

- a) An insect
- b) An arthropod
- c) A mollusk
- d) An organism that harbors a pathogen
- e) An organism that transmits a pathogen from reservoir to the host.

Q2) The birth of medical medical entomology is associated with:

- a) Melnikoff In 1867
- b) Patric manson In 1877.
- c) Bilharz
- d) Chaga
- e) Fedtschenko In 1867

Q3) The following diseases are transmitted by mosquitoes

- a) sleeping sickness
- b) typhus
- c) plague
- d) relapsing fever.
- e) West Nile fever

Q4) Mosquitoes may transmit

- a) Leishmania
- b) Bilharzia
- c) guinea worm
- d) Trypanosomes
- e) Filaria worms.

Q5) Ticks are vectors of the following pathogens:

- a) Yellow fever
- b) Dengue
- c) Malaria
- d) Plague
- e) Babesia.

Q7) The biology of the eggs, larvae pupae are important components of:

- a) Research
- b) Control mechanism
- c) Control strategies
- d) Pathogen control strategy
- e) Prevention mechanisms

Q8) The following mosquitoes are not transmitters of diseases.

- a) Toxorynchites
- b) Anopheles
- c) Asian Tiger
- d) Aedes mosquito
- e) Culex mosquito

Q9) Molluscs are commonly known to transmit

- a) Malaria
- b) Flukes
- c) Cestodes
- d) Nematodes
- e) Echinococcus

Q10) The larvae of the following mosquitoes cannot be controlled by water surface modulation

- a) Toxorynchite
- b) Aedes
- c) Mansonia
- d) Culex
- e) Psorophora

Q11) The following mosquito eggs have floats

- a) Aedes
- b) Asian Tiger
- c) Toxorynchites
- d) Anopheles.
- e) Sabethes

Q12) The Culicine mosquito larvae breathe through:

- a) Their mouths
- b) Cuticles
- c) Nose
- d) Hair brushes
- e) Siphone.

Q13) Salivary glands of Anopheles mosquitoes

- a) Have one lobe
- b) Have four lobes
- c) Have three lobes
- d) Are lobless
- e) Have three lobes with a short middle lobe.

Q14) The average egg production of a female mosquito in her life time is

- a) 300-900 eggs
- b) 3-9 eggs
- c) 30-90 eggs
- d) 20-40 eggs
- e) 3000-9000 eggs

Q15) The lifespan of a mosquito in a conducive environment is

- a) Two days
- b) 20 days
- c) 30 days.
- d) Six days
- e) Two months

Q16) Ordors which attract anthropophilic insects to their hosts include:

- a) Nitrogen
- b) Oxygen
- c) Carbondioxide
- d) Formalin
- e) Vapour

Q17) The eggs of mosquitos which are laid in rafts include those of:

- a) Mansonia
- b) Sabethes
- c) Psorophora
- d) Anopheles
- e) Toxorynchites

Q18) The best environment for *Glossina morsitans* is:

- a) Desert
- b) Marine
- c) Woodland
- d) Forest areas.
- e) Savanah

Q19) The geographic grid where African trypanosomes are found is:

- a) Latitude 10° north to 15° south
- b) Latitude 20° north to 40° south
- c) Latitude 15° north to 30° south.
- d) Latitude 15° north to 20° south
- e) Latitude 30° north to 15° south

Q20) Tsefly can be identified by using the following features:

- a) A wing showing a hatchet cell.

- b) Bushy antenna
- c) Large eyes
- d) Cephalothorax
- e) Abdominal segments

Q22) Lymphatic filariasis is caused by

- a) *Brugia timori*.
- b) *Loa loa*
- c) *O. Volvulus*
- d) *Mansonella perstans*
- e) *Mansonella ozzardi*

23) The following nematodes exhibit both heterogonic and homogenic life cycles

- a) *Enterobius vermicularis*
- b) hookworm
- c) *Ascaris lumbricoides*
- d) *Ancylostoma duodenale*
- e) *Strongiloides stercoralis*

24) The cell which carry the trichina larvae in the host tissue is

- a) Nurse cell
- b) Monocyte
- c) basophil
- d) Neutrophil
- e) T. cell

25) The Vector for *Faciola hepatica* is.

- a) *Bulinus globosus*
- b) *Biomphalaria pfeifferi*
- c) *Lymnea stagnalis*
- d) *Onchomelania*
- e) Ant (formica)

26) The *Taenia* that is contacted through ingestion of under cooked fish include

- a) *Taenia solium*
- b) *Taenia saginata*
- c) *Taenia. pisiformis*
- d) *Taenia taeniaformis*
- e) *Taenia asiatica*

27) Examples of lung flukes include

- a) *Metagonim yokogawai*-
- b) *Heterophyes heterophyes*
- c) *Fasciolopsis buski*
- d) *Paragonimus westermani*
- e) *Echinostoma ilocanum*

28) The blood flukes which inhabit vesicle plexus of the bladder is

- a) *Schistosoma mansoni*
- b) *Schistosoma japonicum*
- c) *Schistosoma haematobium*
- d) *Schistoma intercalatum*
- e) *Schistosoma bovis*

29) The infective stage of Schistosomes is

- a) *Miracidium*
- b) *Coracidium*
- c) *Metacercaria*
- d) *Cercaria*
- e) *Plerocercoid*

30) The Digeanian trematodes which undergo through radiae stage in their life cycle include:

- a) *Schistoma mansoni*
- b) *Schistosoma japonicum*
- c) *Schitosoma intercalatum*
- d) *Schistosoma bovis*
- e) *Heterophyes heterophyes*

Section B

Q31) Write in detail the general biology of Mosquitoes-----20 marks

Q32a) explain the complete identification of adult tsetse fly ----- 10marks

Q32b) State the control measures which are needed for tsetse flies-----10 marks

Section B

