# TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

**UNIVERSITY EXAMINATION FOR:**

DMLS

AML2308 : VECTOR BIOLOGY

END OF SEMESTER EXAMINATION

**SERIES:** DECEMBER 2016

**TIME:** 2 HOURS

**DATE:** 10 Dec 2016

**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.

**Circle the correct answer in section A.**

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Q1 A vector is described as

a) An insect
b) An arthropod
c) A gastropoda
d) An organism that harbors a pathogen and transmits the same

Q2 The pathogens tat are transmitted by mosquitoes include

a) Chagas
b) Leishmania
c) Plague
d) Westnile virus

Q3 The sub family of mosquitoes responsible for the transmission of Filarial worms is

a) Toxorynchitinae
b) Anophelinae
c) Culicinae
d) Haemagogus

Q4 Babesia microti is transmitted by:

a) Culex mosquito
b) Anopheles mosquito
c) Fleas
d) Exodid Ticks

Q5 The biology of egg, larvae, pupae and Imago is important for:

a) Research issues
b) Prevention mechanism
c) Control mechanism
d) Pathogen control strategies

Q6 The following mosquitoes do not transmit diseases:

a) Asian tiger
b) Aedes albopictue
c) Anopheles gambiae
d) Toxorynchite

Q7 Lymnea stagnalis is associated with:

a) Bilharzia
b) Fasciolopsis
c) Fasciola hepatica
d) Schistosomiasis

Q8 Water surface modulation cannot be used to control the larvae of:

a) Anopheles
b) Aedes
c) Mansonia
d) Asian tiger

Q9 Tha eggs which are laid with floats are those of:

a) Culex
b) Aedes
c) Sabethes
d) Anopheles

Q10 The presence of a siphone on the larvae of mosquito is characteristic feature of:

a) Culicinae
b) Hemagogus
c) Anophelinae
d) Sabebethes

Q11 The developmental stage of Plasmoduim found in the salivary gland of mosquito is:

a) Sporozoite
b) Zygote
c) Ookinet
d) Bradizoite

Q12 The mosquito egg fecundity depends on:

a) Rainfall
b) Human blood
c) Available surface water
d) Availability of wildlife

Q13The vectors which transmit mucocutaneous leishmaniasis are:

a) Sand flies
b) Triatomine bugs
c) Reduviid bugs
d) Ticks

Q14 Arthropods are attracted to their victims by:

a) Vapours
b) Gases
c) Oxygen
d) Carbondioxide

Q15 The ecology of Glossina morsitans is

a) Tropical rainforest
b) Wood land savanna
c) Marine ferest
d) Savana

Q16 The geographic Grid for Trypanosomes in Africa is

a) Latitude10$^{o}$ North to 15$^{o}$ south
b) Latitude 20$^{o}$ Noth to 40$^{o}$South
c) Latitude 15$^{o}$ North to 30$^{o}$ south
d) Latitude 15$^{o}$ North to 20$^{o}$ south

Q17 The larvae of Tsetse fly can be diagnosed using the following features:

a) Polyneutic lobes and 4 segments of the body
b) Polyneutic lobs and 8 segments of the body
c) Two polyneutic lobs and and two segments of the body
d) Four polyneutic lobs and 12 segments of the body

Q18 Chrysops are vectors of

a) Wuchereria bancrofti
b) Brugia malayi
c) Loa loa
d) Dipeterlonema streptocerca

Q19 The vectors which transmits intestinal flukes

a) Crabs
b) Frogs
c) Ants
d) Mosquitoes

Q20 Cyclops is a vector of

a) Strongyloides stercoralis
b) Tape worm
c) Broad fish tape worm
d) Taenia solium

Q21 Biomphalaria pfeifferi is a vector of

a) Fasciola hepatica
b) Fasciolopsis buski
c) Schistosoma m ansoni
d) Schistosoma japonicum

Q22 Schistosoma japonicum iss transmitted by

a) Bulinus globosus
b) Bulinus tranatus
c) Lymnea stagnalis
d) Onchomelania

Q23 Frogs can serve as accidental vectors of

a) Spirometra sperganum
b) Diphylobothrium latum
c) Trichinella spiralis
d) Dracunculus medinensis

Q24 Predaceous larvae which can contributeas biological control agent is that of:

a) Simulium naevai
b) Haemagogus
c) Toxorynchite
d) Aedes egypti

Q25 Culicine mosquitoes which do not transmit pathogens include

a) Aedes egypti
b) Bironella
c) Asian tiger
d) Culex fatigans

Q26 A mosquito which has sclerotized siphone is

a) Aedes egypti
b) Mansonia
c) Anopheles
d) Sabethes

Q27 The ecology of sand fly in Kenya requires

a) Savana-antihills
b) Forest mountains
c) Thickets and savanna dry land
d) First flowing rivers

Q28 The following features are diagnostic for female Anopheles mosquito

a) Non plumose antenaeand palps as long as proboscis
b) Non plumose antennae and palps are clubbed
c) Nn plumose antennae and pulps are short
d) Non plumose antennae and pulps are as long as the proboscis

Q29 The Mosquitoe eggs which are laid singly and do not have floats are those of:

a) Culex fatigans
b) Anopheles gambiae
c) Aedes egypti
d) Sorophora

Q30 The safe control methods of mature stage of mosquitoes are:

a) Use of insecticides
b) Use of prethroides
c) Use of surface water modulation and draining of submerged vegetation.
d) Use of mosquito net

Q31 Fleas are vectors of:

a) Tunger penetrant
b) Nematodes
c) Plague
d) Westnile virus

Q32 The genus of mosquito larvae which lies parallel to water surface is:

a) Sabethes
b) Mansonia
c) Chagasia
d) Anopheles

Q33 Molluscs are commonly known to transmit :

a) Malaria
b) Flukes
c) Cestodes
d) Nematodes

Q34 Culicine mosquitoes breath through

a) Cuticles
b) Nose
c) Hair brushes
d) Siphone

Q35 Salivary glands of Anopheles mosquitoes have:

a) One lob
b) Four lobes
c) Three lobs
d) Three lobs with a center shot lob

Q36 A tsetse fly can be identified using the following features:

a) Bushy antennae
b) A wing showing a hatchet cell
c) Large compound eyes
d) Cephalothorax

Q37 Brugia timori is transmited by

a) Tsetse fly
b) Tumbu fly
c) House fly
d) Mosquitoes

Q38 The vector for trichinella spiralis is

a) Cattle
b) Cats
c) Pigs
d) Mosquitoes

Q39 Fish can be a vector of

a) Taenia asiatica
b) Taenia solium
c) Taenia saginata
d) Ascaris lumbricoides

Q40 The best method to prevent mosquito bite is

a) Mosquito net
b) Mosquito proof window screen
c) Modulation of breeding places
d) Integrated method of mosquito control

Section B

Q31 Discus the biology of

a) Mosquito eggs----------5 marks
b) Mosquito larvae----------5 marks
c) Female mosquito----------5 marks
d) Tsetse fly larvae----------5 marks

Q32 Describe the physical features of the following

a) Onchomelania----------5 mrks
b) Biomphalaria----------5 marks
c) Bulinus globosus----------5 marks
d) Tsetse fly----------5 marks

Q33 Describe the life cycle of Anopheles gambiae---20 marks