

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2011.

Ph.D. (ENTOMOLOGY)

COURSE CODE : 135

Register Number :

*Signature of the Invigilator
(with date)*

COURSE CODE : 135

Time : 2 Hours

Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each question carefully and shade the relevant answer (A) or (B) or (C) or (D) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.

1. Find the Arthropod borne disease from the following.
(A) AIDS (B) Rabies (C) KFD (D) Hepatitis
2. Identify a disease pathogen from the following.
(A) Wolbachia (B) Xenopsylla (C) Copepode (D) Leishmania
3. _____ is an ectoparasite.
(A) Tick (B) Taenia (C) Wuchereria (D) Diphillidium
4. Who among the following reported the role of mosquito in filariasis transmission?
(A) Robert Kotch (B) Patrick Manson (C) Kilbowine (D) Theobald
5. Who discovered trypanosome parasite in blood?
(A) David Bruce (B) Ronald Ross
(C) Walter Reed (D) Carlos Chagas
6. The vector of plague is
(A) Anopheles (B) Fleas (C) Ticks (D) Black Flies
7. One of the following is a major vector of malaria
(A) *Anopheles subpictus* (B) *Anopheles gambiae*
(C) *Culex tarsalis* (D) *Anopheles varuna*
8. In the world, there are about _____ mosquito species described
(A) 1500 (B) 5500 (C) 9500 (D) 3500
9. Vertical transmission means that the pathogens
(A) pass from animals to man
(B) are airborne
(C) pass from the vector to its next generation via eggs
(D) are transmitted from man to man via a vector

10. One of the following diseases is caused by a flagellate protozoan
(A) kala-azar (B) malaria
(C) dengue (D) river blindness
11. Rickettsiae are caused by
(A) Gram positive bacteria (B) Sporozoan protozoa
(C) Gram negative bacteria (D) Retro viruses
12. Identify the zoonotic disease from the following.
(A) Malaria (B) Dengue (C) Filariasis (D) KFD
13. Oocysts of malarial parasite develop in _____ of the mosquito
(A) gut wall (B) salivary gland
(C) thoracic muscle (D) stomach
14. _____ is the vector of Leishmaniasis
(A) Glossina (B) Triatoma (C) Simulium (D) Phlebotomus
15. Cutaneous leishmaniasis is caused by
(A) Leishmania tropica (B) L. braziliensis
(C) L. donovani (D) L. infantum.
16. Zoological name of tse-tse fly is
(A) Glossina palpalis (B) G. papatasi
(C) G. salahi (D) G. longipes
17. Name the insect causing direct injury
(A) Pediculus (B) Drosophila (C) Musca (D) May fly
18. Larval stages of certain flies invading the vertebrate tissues result in a condition called
(A) leprosy (B) psychosis (C) myiasis (D) phobias

19. _____ discovered malarial parasite in the blood
- (A) Blacklock (B) Laveran
(C) Ronald Ross (D) Walter Reed
20. Cerebral malaria is caused by
- (A) *Plasmodium malariae* (B) *P. ovale*
(C) *P. falciparum* (D) *P. vivax*
21. _____ is the most severe form of leishmaniasis
- (A) Cutaneous (B) Visceral
(C) Muco-cutaneous (D) Sub-cutaneous
22. _____ is a sandfly genus
- (A) Aedes (B) Cimex (C) Xenopsylla (D) Lutzomyia
23. Among the following, the vector of Japanese encephalitis is
- (A) *Culex quinquefasciatus* (B) *Cx. tritaeniorhynchus*
(C) *Cx. whitmorei* (D) *Cx. pipiens*
24. One of the following has no amplifying host
- (A) Filariasis (B) Leishmaniasis
(C) Japanese encephalitis (D) Plague
25. Which of the following vectors is almost restricted to continental Africa?
- (A) Phlebotomines (B) Glossina (C) Aedes (D) Lutzomyia
26. 'Trap Out' is highly effective to control
- (A) Trypanosomiasis (B) River blindness
(C) Malaria (D) Kala-azar

27. Which is the vector of Chagas disease?
 (A) Cimex (B) Tse-tse fly (C) Triatoma (D) Culex
28. One of the following is not the causative agent of any kind of filariasis
 (A) Onchocerca (B) Wuchereria (C) Brugia (D) Rhodococcus
29. One of the following combinations is wrong
 (A) Onchocerca - Simulium
 (B) Wuchereria - Culex
 (C) Loa loa - Aedes
 (D) Brugia - Mansonia
30. Which is the vector of the mansonella infection in Africa?
 (A) Culicoides (B) Culicines (C) Anophelines (D) Simulids
31. _____ is the causative agent of chagas disease in man.
 (A) *Trypanosoma cruzi* (B) *T. brucei*
 (C) *T. suis* (D) *T. vivax*
32. In the pathology of filariasis what is ADL?
 (A) Adenolymphangitis (B) Adenolympholaryngitis
 (C) Adenolaryngolymphatis (D) Adenolymphaticliver
33. Name the vector of *Brugia malayi* in India
 (A) *Culex quinquefasciatus* (B) *Culex pipiens*
 (C) *Mansonina annulifera* (D) *Anopheles sinensis*
34. What is ABR in epidemiology?
 (A) Annual Biting Ratio (B) Annual Biting Rate
 (C) Annual Bloodsmear Rate (D) *Anopheles* Biting Rate

35. Name the drug employed for filariasis chemotherapy
 (A) Chloroquine (B) Artemisinin (C) DEC (D) DCC
36. Name the place in Kerala with *Brugia malayi* cases
 (A) Cherthala (B) Kalpatta (C) Panthalam (D) Kottayam
37. What is the other name for Onchocerciasis?
 (A) Elephentiasis (B) Nyctalopia
 (C) Night Blindness (D) River blindness
38. Colorado tick fever virus is a member of the genus
 (A) Alpha virus (B) Coltivirus (C) Rota virus (D) Retrovirus
39. The vector of equine encephalitis virus is
 (A) Simulium (B) Glossinia (C) Tabanus (D) Culicoides
40. Which of the following is a viral disease?
 (A) Bluetongue (B) Anthrax (C) Loa loa (D) Rickettsia
41. Find the disease for which no vaccine is available now.
 (A) Yellow fever (B) Japanese encephalitis
 (C) Dengue (D) Lyme
42. Which of the following is related to *Chrysanthemum* based insecticide?
 (A) DDT (B) Pyrethroids
 (C) Benzene hexachloride (D) Dieldrin
43. Name a disease transmitted by louse
 (A) Typhus (B) Plague (C) Chagas (D) Anthrax
44. Acaridae includes
 (A) Fleas (B) Flies (C) Mites (D) Hoppers

45. ULV stands for
 (A) ultra light volume (B) ultra liquid version
 (C) use low volume (D) ultra low volume
46. Ivermectin is an effective
 (A) Filaricide (B) Mosquito larvicide
 (C) Mosquito adulticide (D) Acaricide
47. Name the vector of KFD
 (A) Haemaphysalis (B) Boophilus
 (C) Amblyomma (D) Dermacentor
48. Dr. Manuel Patarroyo developed _____ vaccine.
 (A) dengue vaccine (B) JE vaccine (C) spf66 (D) msp-3
49. Point out art antigen of plasmodium
 (A) PFS 40 (B) MPP (C) Falhesin I (D) Falhesin II
50. Name the plague bacillus.
 (A) Yersinia (B) Pneumococcus
 (C) Diplococcus (D) Rickettsia
51. _____ is the reservoir of KFD in Karnataka
 (A) cattle (B) pigs (C) birds (D) monkeys
52. Name the etiological agent of Scrub typhus
 (A) *Rickettsia typhi* (B) *Pediculus humanus*
 (C) *Rickettsia prowazekii* (D) *Oriente tsutsugamushi*
53. Which is the pathogen of Tularemia?
 (A) virus (B) protozoan (C) bacteria (D) fungus

54. One of the following is a zoonosis
 (A) malaria (B) dengue (C) plague (D) chikungunia
55. *Bartonella quintana* causes
 (A) Tularemia (B) Q fever
 (C) Trench fever (D) Anaplasmosis
56. Identify the tick-borne disease from the following
 (A) Lyme (B) Relapsing fever
 (C) Plague (D) Bartonellosis
57. One of the following is not a tick
 (A) Ixodes (B) Haemaphysalis
 (C) Amblyomma (D) Simulium
58. Which is the vector of O'Nyong virus?
 (A) Anopheles (B) Culex (C) Aedes (D) Lutzomyia
59. Alphavirus has _____ as the genetic material
 (A) single stranded RNA (B) single stranded DNA
 (C) double stranded DNA (D) both DNA and RNA
60. What is Sindbis?
 (A) virus (B) symptoms (C) place (D) a scientist
61. Find the disease transmitted by Culex tarsalis.
 (A) Chikungunia (B) JE (C) WEE (D) Dengue
62. Name the scientist associated with studies on yellow fever
 (A) Walter Reed (B) Patrick Manson
 (C) Lumsden (D) Gubher
63. Name a disease with dengue-like illness in man
 (A) West Nile virus (B) Anthrax
 (C) KFD (D) Yellow fever
64. Find the Aedes borne viral disease
 (A) JE (B) MVE (C) SLE (D) YF

65. Name a disease where man is the dead-end host
 (A) Malaria (B) Japanese encephalitis
 (C) KFD (D) Plague
66. Dengue virus has _____ serotypes
 (A) one (B) four (C) three (D) two
67. KFD was discovered from _____ district of Karnataka
 (A) Shimoga (B) Karwar (C) Chitradurga (D) Gulbarga
68. One of the following is fatal in both animals and man
 (A) Japanese encephalitis (B) Leishmaniasis
 (C) Blue tongue (D) Rift valley fever
69. Find the disease which spreads due to mechanical transmission
 (A) Anaplasmosis (B) Babesiosis
 (C) Theileriosis (D) KFD
70. Disease caused by Theileria is known as
 (A) Corridor fever (B) Summer disease
 (C) West coast disease (D) Terrace disease
71. Name the infective stage of malarial parasite in mosquito
 (A) Gametocyte (B) Merozoites (C) Ookites (D) Sporozoites
72. Point out the organophosphate pesticide from the following
 (A) Malathion (B) Carbofuran (C) Allethrin (D) BHC
73. What is methoprene?
 (A) Ecdysone mimic (B) Mosquito repellent
 (C) Mosquito oil (D) Growth regulator
74. What is SIT?
 (A) small insect trap (B) sterile insect technique
 (C) sterile insecticide technique (D) sterility induction technique

75. One of the following has ability to impair reproduction in mosquito
- (A) *Tectona grandis* (B) *Allium sativum*
 (C) *Cinchona sp.* (D) *Terminalia indica*
76. Name the compound derived from Neem tree
- (A) Pyrethrin (B) Azadirachtin (C) Curcumin (D) Capsicin
77. Name the fish employed in biological control of mosquitoes
- (A) Aphanis (B) Ophiocephalus
 (C) Anabas (D) Rohu
78. Which of the following is employed as bait in mosquito traps?
- (A) SO₂ (B) O₂ (C) Methane (D) CO₂
79. Find the wrong combination from the following
- (A) Simulium-Onchocercians (B) Ticks-KFD
 (C) Triatomid bugs-Lyme (D) Glossina - Trypanosomiasis
80. Select the scientist who worked on mosquito from the following
- (A) Lewis (B) Curtis (C) Muller (D) Mc. Kelvey
81. One of the following is a synthetic mosquito repellent
- (A) BHC (B) Dimethyl phthalate (DMP)
 (C) DET (D) Chloramphenicol
82. Which of the following is used against malaria?
- (A) Pentamidine (B) Nifurtimox
 (C) Mefloquine (D) DEC
83. Oenocytes are in association with _____ of insects.
- (A) thoracic muscles (B) haemolymph
 (C) salivary gland (D) mouth parts
84. Parous rate in mosquitoes refers to
- (A) swarming (B) longevity (C) wing beat (D) egg laying

85. The process of yolk synthesis in the insect is called
 (A) vitellogenesis (B) sclerotisation (C) melanisation (D) oviposition
86. Find the holometabolous insects from the following
 (A) Triatomid bug (B) Phlebotomus (C) Periplanata (D) Xenopsylla
87. PTTH stands for
 (A) Prothoracicotrophic hormone (B) Perithoracicotrophic hormone
 (C) Parathoracicotrophic hormone (D) Postthoracicotrophic hormone
88. Ticks and mites have
 (A) Open circulatory system (B) Closed circulatory system
 (C) No haemolymph (D) No moulting
89. Find the apterygote from the following
 (A) mayflies (B) cockroaches (C) fleas (D) springtails
90. Sucking lies belong to the order
 (A) Hemiptera (B) Anoplura (C) Siphonaptera (D) Diptera
91. Identify the vector of Anthrax from the following
 (A) Simulium (B) Tabanus (C) Culicoides (D) Hipobosea
92. State the frequency of wing beats in mosquitoes per second
 (A) over 1000 times (B) about 100 times
 (C) about 600 times (D) over 1500 times
93. One of the following molecular methods is employed in mosquito systematics
 (A) Chromosome banding (B) Chromosome walking
 (C) Karyotyping (D) Bar coding
94. Transgenic mosquito research is mainly focussed on
 (A) *Anopheles maculipennis* (B) *A. gambiae*
 (C) *A. stephensi* (D) *A. Culicifacies*

95. _____ Louse feeds on pigs
(A) *Haematopinus asini* (B) *H.eurysternusi*
(C) *Haematopinus suis* (D) *H. Villus*
96. What is the zoological name of kissing bug?
(A) *Rhodnius* (B) *Sarcoptes* (C) *Demodex* (D) *Dermanyssus*
97. Name the filarial worm affecting scrotum and breast
(A) *Brugia malayi* (B) *Wucheria bancrofti*
(C) *Brugia timori* (D) *Onchocerca volvulus*
98. Gonotrophic cycle in mosquito refers to
(A) mating to feeding (B) egg laying to adult emergence
(C) feeding to egg-laying (D) feeding to adult emergence
99. One of the following is a cue for mosquito attraction to man
(A) hairy body (B) lactic acid in the sweat
(C) wounds on the skin (D) fat body
100. River blindness is related to
(A) Taking bath in river (B) Cooking with river water
(C) Vector breeding in river (D) Polluted river
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