

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2013.

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 of the 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. Jumping Gene is

(A) Poson	(B) Recon
(C) Transposon	(D) Operon

2. Balbiani Rings are associated with

(A) Giant Chromosome	(B) Xchromosome
(C) Cromatid	(D) Y chromosome

3. Holandric gene is presented in

(A) Autosome	(B) Y chromosome in male
(C) Movable gene	(D) Kinetochore

4. Bombay phenomenon is established in

(A) Anatomy	(B) Blood grouping
(C) Food chemistry	(D) Rh-factor

5. Klinefelter syndrome is

(A) Addition of chromosome	(B) Addition of sex chromosome
(C) Addition of sex chromosome X to male	(D) XXX chromosomes in female

6. Non disjunction is an error in

(A) Sexdetermination	(B) Chromosome multiplication
(C) In cell division	(D) In Meiosis

7. Thalasemia is due to

(A) Organ disorientation	(B) Genetic disorder in blood
(C) Aneamia	(D) Metabolic disorder

8. Haemoglobin has

(A) 2 alpha and 2 Beta chains	(B) 2 beta chains
(C) 1 alpha and 1 Beta chain	(D) 3 alpha and 1 Beta chain

9. Sickle cell aneamia favours individuals living in
- (A) Endemic area of Dengue (B) Endemic area of Measles
 (C) Endemic area of Filariasis (D) Endemic area of Malaria
10. Culprit aminoacid in sickle cell aneamia is
- (A) Glutamic acid (B) Phenylalanine
 (C) Aspartic acid (D) Valine
11. Polytene chromosomes found in mosquitoes are
- (A) Malphigealn tubules (B) salivary glands
 (C) Both of the above (D) Testes
12. Polytene chromosome in man is called
- (A) Balbiani chromosome (B) Acrocentric chromosome
 (C) Metacentric chromosome (D) Lamp brush chromosome
13. Cri-du-chat syndrome is
- (A) Trisomy in 5th pair of chromomes in man
 (B) Trisomy in 12th pair of chromomes in man
 (C) Trisomy in sex chromomes in man
 (D) None of the above
14. Saddle back fever is
- (A) Dengue fever (B) Malaria (C) Encephalitis fever (D) Q-fever
15. Kyasanur Forest Disease (KFD) is a
- (A) Vector borne disease (B) Airborne Disease
 (C) Waterborne disease (D) Zoonotic disease
16. Annual Blood smear Examination Rate (ABER) is an index to evaluate
- (A) Malaria Programme (B) Filaria Programme
 (C) Dengue Programme (D) Japanese Encephalitis programme
17. Expansion of NVBDCP is
- (A) National Vectorborne Disease Control Programme
 (B) National Visualborne Disorder Control Programme
 (C) National Vermiculture Disorder Control Programme
 (D) None of the above.

18. Okazaki fragments are linked by the enzyme
 (A) Helicase (B) Topoisomerase
 (C) Ligase (D) DNA-polymerase
19. Trisomy is represented is by
 (A) $2n-1$ (B) $2n+1$ (C) $02n+2$ (D) $2n-2$
20. Gibberellins is a
 (A) Sexchromosome (B) Protein
 (C) Plants' growth hormone (D) Hormone in man
21. The total amount of energy released from one molecule of glucose on oxidation is about
 (A) 1600 KJ (B) 2300 KJ (C) 2500 kJ (D) 2900..kJ
22. Sperms of a man stored in
 (A) Testes (B) Prostate gland
 (C) Epididymis (D) Seminal vesicle
23. Who initially developed the vaccine for Rabies?
 (A) Robert Koch (B) Joseph Lister
 (C) Louis Pasteur (D) None of the above
24. Dengue virus belongs to
 (A) Alpha virus (B) Casel B virus
 (C) Flavi virus (D) None of the above
25. The method which can give skeletal model of a protein from its results, on its atomic details
 (A) Electrophoresis (B) X-Ray crystallography
 (C) Chromatography (D) CT-scan
26. Ranvier Node is presented in
 (A) Somatic cell (B) Digestive cells (C) Endocrine cells (D) Nerve cell
27. Nissal bodies are presented in
 (A) Prokaryotes (B) Eukaryotes
 (C) Cell body of neuron (D) Ovarian follicles

28. Electrophoresis was discovered by
 (A) Davis (B) Mullis (C) Tselius (D) Brown
29. Ameabiosis is caused by
 (A) *Entameoba hystolytica* (B) *Plasmodium ovale*
 (C) *Bacillus thuringiensis* (D) *Leismania donovani*
30. Kala azar is caused by
 (A) *Trypanosoma gambiens* (B) *Entameoba gingivalis*
 (C) *Leismania donovani* (D) *Plasmodium vivax*
31. Oxentic cells of man secreting
 (A) Sulphuric acid (B) Hydrogen peroxide
 (C) Hydrochloric acid (D) Nitric acid
32. The daily requirement of protein is
 (A) 2gm/kg body weight (B) 1 gm/kg body weight
 (C) 3gm/kg body weight (D) 4gm/kg body weight
33. Trehalose is a
 (A) Monosaccharide (B) Disaccharide
 (C) Aminoacid (D) Protein
34. Marasmus and Kwashiorkar are due to
 (A) Carbohydrate malnutrition (B) Protein malnutrition
 (C) Iron deficiency (D) Calcium deficiency
35. PUFA is
 (A) Unsaturated fatty acid (B) Fatty acid
 (C) Unlimited fats (D) None of the above
36. Funk is associated with
 (A) Carbohydrate (B) Protein
 (C) Amino acid (D) Vitamins

37. Spermatheca is
 (A) A component in male reproductive system
 (B) A component in female reproductive system
 (C) A component in male reproductive system of Dipteran insect
 (D) A component in female reproductive system of Dipteran insect
38. Juvenil Hormone(JH) is a hormone of
 (A) Man (B) Insects (C) Cattles (D) Plants
39. Which fish keeps the fertilized eggs guarded in its mouth
 (A) Thilapia (B) Rohu (C) Mirgal (D) Platty
40. Kary Mullis is associated with
 (A) PCR (B) Electrophoresis
 (C) Electron Microscope (D) Chromatograph
41. Interferon is a
 (A) Protein (B) Fatty acids
 (C) Glycoprotein (D) Carbohydrate
42. The disease which reduces the oxygen carrying capacity of the blood and affects blood supply to various organs
 (A) Huntington Chorea (B) Leukemia
 (C) Sickle cell anaemia (D) A Gammaglobulinemia
43. Alkaptonurea is a
 (A) Genetic disorder (B) Physiological disorder
 (C) Metabolic disorder (D) None of the above
44. Phlebotomus argentipes is a vector of
 (A) Kala azar (B) Malaria (C) Filaria (D) Dengue
45. Mosquitoes are
 (A) Holometabolus insect (B) Hemimetabolus insect
 (C) Hemipteran insect (D) Dictyopteran insect
46. DDT is
 (A) An Organo chlorine compound (B) Organo phosphorous compound
 (C) Synthetic pyrethroid compound (D) None of the above

47. Vector of Scrub Typhus is
- (A) Tick (B) Trombiculid Mite
(C) Cockroaches (D) Sand fly
48. Silverfish is a kind of
- (A) An insect (B) Fish
(C) Dipteran insect (D) Hemipteran insect
49. *Thermus aquaticus* is
- (A) Bacteria (B) Virus
(C) Protozoan (D) Heat resisting Bacteria
50. Ivermectin is a choice of drug for
- (A) Malaria (B) Filariasis (C) Typhus (D) Dengue
51. Artesunate is a choice of drug for
- (A) *Plasmodium vivax* (B) *Plasmodium falciparum*
(C) *Plasmodium ovale* (D) *Plasmodium malariae*
52. Proboscis is a component of mouth parts in
- (A) Insects (B) Mosquitoes
(C) Cockroaches (D) None of the above
53. Loa loa is a
- (A) Filarial parasite (B) An annelid
(C) Arthropod (D) None of the above
54. 10^{10} meter is
- (A) A micron (B) Angstorm (C) Pico meter (D) Femtometer
55. JSB-I is used in microscopy for
- (A) Malaria and Filaria microscopy (B) Filarial parasite
(C) Dengue virus (D) Japanese Encephalitis

56. Polio myelitis could be spread by
 (A) An insect (B) Flies (C) Mosquito (D) Tsetse Fly
57. Current Japanese Encephalitis vaccine name is
 (A) Mouse brain killed vaccine (B) Oral JE vaccine
 (C) Live attenuated SA 14-14-2 vaccine (D) None of the above
58. Pulvilli is associated with
 (A) *Musca domestica* (B) Anopheles Species
 (C) *Culex quinquefasciatus* (D) None of the above
59. Ardeid Birds are the reservoir of
 (A) Japanese Encephalitis virus (B) Dengue Virus
 (C) Malaria parasites (D) Filarial parasites
60. Ecdysone is a
 (A) Moulting hormone (B) Sex hormone
 (C) Juvenile hormone (D) None of the above
61. Carl Von Linnaeus is associated with
 (A) Endocrinology (B) Entomology
 (C) Taxonomy and Systematics (D) None of the above
62. Life cycle of malaria parasite was discovered in the year of
 (A) 1888 (B) 1896 (C) 1897 (D) 1867
63. pH scale is used to measure
 (A) Acidic and alkalinity of a solution (B) Electrolytes of a solution
 (C) Dipole of a solution (D) None of the above
64. The vector of trypanosomiasis is
 (A) *Culex* species (B) Anopheles species
 (C) *Glossina palpalis* (D) Fleas
65. Fleas come under the order of
 (A) Siphonoptera (B) Thyasanura (C) Dictyoptera (D) Hemiptera

66. Reduvid Bug is a vector of
- (A) Kala-azar (B) Brucellosis
(C) Leptospirosis (D) Chagas disease
67. Ticks and Mites belong to class
- (A) Insect (B) Pisces (C) Reptiles (D) Arachinida
68. O₃ is
- (A) Trioxygen (B) Inert gas
(C) Ozone (D) None of the above
69. Soft Ticks transmit
- (A) Q-fever (B) Anthrax
(C) KFD (D) Sleeping sickness
70. Thermal Fog is space spray for
- (A) Adult mosquito control (B) Rodent control
(C) Cockroach control (D) None of the above
71. Azolla is a
- (A) Biofertilizer (B) Fertilizer
(C) Nitrogenous compound (D) Non nitrogenous compound
72. Sibling species in mosquitoes are
- (A) Morphologically identical and genetically varied
(B) Both morphologically and genetically varied
(C) Only morphological variation
(D) None of the above.
73. NS-1 antigen ELISA is diagnostic tool for
- (A) Leptospirosis (B) JE (C) Q-fever (D) Dengue fever
74. Splenomegaly is common among children in
- (A) Malaria (B) Filaria (C) Toxoplasmosis (D) Brucellosis

75. Breteau Index is one of the evaluating tools for
- (A) Dengue (B) Malaria
(C) ADD (D) None of the above
76. Essential amino acids are obtained from
- (A) Our own tissues (B) Supplemented food
(C) Water (D) All of the above
77. *Treponema pallidum* is a causative agent for
- (A) Yaws (B) Leprosy (C) Syphilis (D) Rabies
78. The communicable disease Yaws was prevalent in
- (A) America (B) Indian subcontinent
(C) Europe (D) Arctic region
79. Color Blindness is due to
- (A) Defective gene present in Y chromosome
(B) Defective gene present in X chromosome
(C) Defective gene present in somatic cells
(D) In Lamp brush chromosome
80. Cohort study is
- (A) An observational or descriptive analytic study
(B) Case study of a disease
(C) Clinical study
(D) None of the above
81. *Gambusia affinis* is a
- (A) Biological Control agent to abate mosquito larvae
(B) To control *Vibrio cholerae*
(C) A kind of edible fish
(D) Predator of cockroaches

82. Guinea worm transmission is through
(A) Unsafe drinking water (B) Air
(C) Mosquitoes (D) Annelids
83. Herpetology is the study about
(A) Fishes (B) Reptiles (C) Birds (D) Mammals
84. Hardy Weinberg Law is related to
(A) Number Theory (B) Population Genetics
(C) Cytology (D) Geology
85. RAPD is the molecular technique for
(A) A study of polymorphism (B) A study of RNA sequence
(C) A study of a Recon (D) None of the above
86. Standard deviation is
(A) A normal distribution
(B) A measure of the concentration of frequency about the mean
(C) Median deviation
(D) None of the above
87. Lambert Beer' Law is applied in
(A) Galvanometer (B) Perimeter
(C) Spectrophotometer (D) Ammeter
88. Forces acting on centrifuges
(A) Centripetal force (B) Centrifugal force
(C) Frictional force (D) All the above
89. Osmosis is
(A) Lower concentration to higher concentration
(B) Higher concentration to higher concentration
(C) Lower to the lowest concentration
(D) All the above
90. Archimedes principle applied to find primarily
(A) Volume (B) Density
(C) Specific gravity (D) All the above

91. Acoustic is the study of
 (A) Sound (B) Speed (C) Light (D) Heat
92. The energy available for muscular movement is
 (A) Kinetic energy (B) Potential energy
 (C) Metabolic energy (D) None of the above
93. Instrument which is used for humidity
 (A) Lactometer (B) Aneamometer (C) Hygrometer (D) Barometer
94. Plasmolysis is
 (A) Shrinkage of cell membrane (B) Shrinkage of protoplasm
 (C) Shrinkage of nucleus (D) None of the above
95. Oil placed between the objective and oil immersion lens of compound microscope
 (A) To adjust reflection (B) To adjust refraction
 (C) To adjust fine focus (D) All the above
96. DEC mass drug administration is associated with
 (A) Malaria (B) Filaria (C) Dengue (D) Goitre
97. Filarial parasite *Wuchereria bancrofti* is
 (A) Diurnal periodicity (B) Nocturnal periodicity
 (C) Crepuscular periodicity (D) None of the above
98. Chloroquine drug resistance established in
 (A) *Plasmodium vivax* (B) *Plasmodium falciparum*
 (C) *Plasmodium ovale* (D) *Plasmodium knowlesi*
99. Cane cutter disease is a synonym of
 (A) Filariasis (B) Plague
 (C) Leptospirosis (D) Toxoplasmosis
100. Anthracosis is a disease of
 (A) Sand dunes workers (B) Coal miners
 (C) Gold miners (D) Farmers