MADURAI KAMARAJ UNIVERSITY

Entrance Test for Admission to Ph.D. (Full Time/Part Time) Programmes, 2020-2021

Biological Sciences

Part-II

Time: One hour Maximum: 50 marks

51. Amoeba generally reproduces by
    a) Binary fission b) Encystment
    c) Sporulation d) Locomotion

52. The infective stage of plasmodium to man
    a) Sporozoite b) Trophozoite
    c) Merozoite d) Gametocyte

53. Which one of the following is a protozoan disease?
    a) African sleeping sickness b) Measles
    c) Cholera d) Taeniasis

54. Sexual reproduction of plasmodium takes place in
    a) body of mosquito b) RBCs of man
    c) Plasma of man d) liver cells of man

55. Tumour inducing viruses are called
    a) Pathogenic viruses b) oncogenic viruses
    c) Para viruses d) variola viruses

56. The more promising chemotherapeutic agent for treating viral diseases is
    a) Tetracycline b) Interferon
    c) Ampicillin d) Anthramycin

57. Earthworm commonly employed in India for preparation of vermin composting is
    a) Apis indica b) Lampito mauritii
    c) Penaeus indicus d) Pinctada fucata

58. The common Indian honey bee is
    a) Apis dorsata b) Apis indica
    c) Apis florea d) all the above

59. The silk produced by *Bombyx morii* is
    a) tasar silk b) mulberry silk
    c) arandi silk d) muga silk

60. Who discovered the double helix DNA model?
    a) G.H. Khorana b) Mendel
    c) Watson and Crick d) T.H.Morgan

61. In which of the following disease, the man has an extra X-chromosomes?
    a) Turner syndrome b) Bleeder's syndrome
    c) Klinfelter's syndrome d) Down's syndrome

62. Haemophilia is due to
    a) Y chromosome b) X,Y Chromosome
    c) X chromosome d) Autosomal chromosomal

63. To obtain information about genetic characters in man which of the following helps?
a) Biochemical test b) Hybridization
c) Pedigree analysis d) Inbreeding

64. Sickle cell anaemia is due to
a) vitamin deficiency b) sex chromosomal gene
c) autosomal gene d) hormone imbalance

65. Molecular scissors refers to
a) Translation b) Transamination
c) Endonuclease d) Transcription

66. The relationship between the repressor protein and structural gene is maintained by
a) Operator gene b) Regulator gene
c) Promoter gene d) Effector gene

67. What is the name for mobile genetic elements
a) transposon b) pili
c) barr body d) plasmids

68. Gene libraries can be created by
a) RNA b) Histone
c) Proteins d) none

69. The name 'cell' was coined by
(a) Leeuwenhoeck (b) Robert Brown
(c) Robert Hook (d) Galileo

70. Prokaryotic cell does not have
a) Cell wall b) Cell membrane
c) Nuclear membrane and nucleolus d) Nucleoid

71. The function of RER is
a) Digestion b) Lipid synthesis
c) Protein synthesis d) Excretion

72. Respiratory organelles are
a) Glyoxisomes b) Lysosomes
c) Mitochondria d) Peroxisomes

73. Reduction cell division is
a) Mitosis b) Meiosis
c) Meiosis-I d) Mitosis

74. What are purines?
a) Adenine, Cystosine b) Guanine, Cytosine
c) Adenine, Guanine d) Thymine, Cytosine

75. In Z DNA each turn has ---------- base pairs.
a) 10 b) 13
c) 12 d) 14

76. A three dimensional image of the object can be produced using
a) compound microscope b) dark-field microscope
c) scanning electron microscope d) transmission electron microscope

77. In cytological technique Bouin's solution is used for
a) Embedding b) Dehydration
c) Cleaning d) Fixation

78. Which of the following molecules moves regularly from the nucleus to cytoplasm
a) DNA b) Lipids
c) Glycogen d) RNA

79. Cell eating is
a) Endocytosis b) Exocytosis
c) Pinocytosis d) Phagocytosis

80. Chiasmata formation takes place in----------.
a) Mitosis b) None of these
c) Interphase d) Meiosis

81. Zygotene is characterized by----------.
a) Chiasmata formation b) Crossing over
c) Tetrad formation d) Pairing of homologous chromosomes

82. The prokaryotic translation start with ---------- initiation codon.
a) UAG b) AUC
c) GUA d) AUG

83. Solid particles engulfed by plasma membrane are called as----------.
a) Exocytosis b) Endocytosis
c) Pinocytosis d) Phagocytosis.

84. The net gain ATPs in aerobic respiration
a) 34 b) 38
c) 2 d) 40

85. Ligases enzyme are also called as
a) Lysases b) Synthetase
c) Proteases d) Cellulase

86. The triplet of bases present on specific t-RNA molecules are
a) Synonyms b) anticodon
c) codon d) Stop codon.

87. The nuclear DNA-protein complex is called
a) Chromosome b) Chromatin
c) Nucleoprotein d) None

88. The non coding sequence present in m-RNA molecules are
a) Stop sequence b) Introns
c) Exon d) None.

89. The enzyme relaxes the supercolling of double stranded DNA molecule is
a) DNA Polymerase b) Topoisoemerase
c) DNA helicase d) DNA Ligase

90. Glycolysis is a ---------- process.
a) Anabolic b) Metabolic
c) Catabolic d) Both b & d

91. Crossing over is occure in ----------.

a) Pachytene b) Leptotene
c) Zygotene d) Diplotene

92. Mitotic cell division occurred in----------.

a) Somatic cell b) Germ cell.
c) Both a and b d) None of these.

93. G1 phase of Cell cycle involved ----------.

a) RNA synthesis b) DNA replication.
c) Division of cell d) None of these.

94. The normal blood glucose level during fasting is

a) 70 to 110 mg/dl b) 80 to 200 mg/dl
c) 100 to 150 mg/dl d) 200 to 250 mg/dl

95. The most abundant green house gas is

a) NO_2 b) CO_2
c) O_3 d) SO_2

96. Darwin supported the following concepts for evolution

a) arrival of the fittest b) survival of the fittest
c) The differentiation of germplasm d) genetic recombinations

97. The factor that enriches the gene pool with new modified genes

a) mutation b) somatic variation
c) decrease in chromosomes d) increase in cytoplasm

98. Ex situ conservation includes

a) Zoo b) Botanical garden
c) Germplasm bank d) All of the above

99. Red data book concerned with

a) Red pigmentation of plants b) Red algae
c) Endangered species d) Exotic species

100. Hot spots are regions of high

a) Endemism b) Ranity
c) Critically endangered population d) None

Qn. No.	Key	Qn. No.	Key
51	a	76	d
52	a	77	d
53	a	78	d
54	a	79	d
55	b	80	d
56	b	81	d
57	b	82	d
58	b	83	d
59	b	84	b
60	c	85	b
61	c	86	b
62	c	87	b
63	c	88	b
64	c	89	b
65	c	90	c
66	a	91	d
67	a	92	a
68	a	93	a
69	c	94	a
70	c	95	b
71	c	96	b
72	c	97	a
73	c	98	d
74	c	99	c
75	c	100	a