

047/2016

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Viral replication within cells is inhibited by :
(A) IL-4 (B) IL-1
(C) IFN alpha (D) TNF alpha
2. A baby's first breath is facilitated by a special coating which is produced by lungs :
(A) Pyridoxine (B) Ferritin
(C) Carbon dioxide (D) Surfactant
3. Arrhenotokous parthenogenesis is exhibited by :
(A) Artemia (B) Daphnia
(C) Weevils (D) Bees
4. Colourless plastids which are found in embryonic and germ cells :
(A) Leucoplasts (B) Chromoplasts
(C) Elaioplasts (D) Sterinoplast
5. Most poisonous vertebrate on earth :
(A) Jelly Fish (B) Golden Dart Frog
(C) Brazilian wandering Spider (D) Puffer fish
6. A caudal fin that is asymmetrical internally, symmetrical superficially but vertebral column is shortened and slightly bent upward at the end is known as :
(A) heterocercal (B) homocercal
(C) protocercal (D) diphyccercal
7. In Philadelphia Syndrome :
(A) translocation between 8 and 14 chromosome occurs
(B) translocation between 9 and 22 chromosome occurs
(C) inversion between 5 and 9 chromosomes
(D) addition in between 9 and 22 chromosomes

8. DNA profiling technique to demonstrate the similarity between different animal species with reference to some specific protein coding DNA sequence is called :
- (A) Phylogenetic Blot (B) Zoo Blot
(C) Animal Blot (D) Animal profiling
9. If a gene product in Species A is 90% similar to gene product in Species B. Such genes are termed as :
- (A) Orthologous (B) Paralogous
(C) Allologous (D) Perilogous
10. Phlebotomus is commonly known as :
- (A) Rockfly (B) Sandfly
(C) Butterfly (D) Damselfly
11. Name a freshwater sponge :
- (A) Scypha (B) Leucosolenia
(C) Grantia (D) Spongilla
12. Which of the following is known as eye worm?
- (A) Loa (B) Entrobilus
(C) Dracunculus (D) Rhabditis
13. Caviar is prepared from :
- (A) Polypterus (B) Acipenser
(C) Polydon (D) Lepidosteus
14. Who named Archaeopteryx?
- (A) Von Euler (B) Andrew Wagner
(C) Charles Darwin (D) Von Meyer
15. How many molecules of ATP are formed when 1 mole of glucose is converted to Lactic Acid :
- (A) 2 ATP (B) 4 ATP
(C) 6 ATP (D) 8 ATP
16. Omega oxidation takes place in :
- (A) Plants (B) Yeast
(C) Fungi (D) Bacteria

17. Which of the following is a ketogenic amino acid?
- (A) Alanine (B) Glutamine
(C) Tyrosine (D) Asparagine
18. Name the amino nitrogen excreted by spiders :
- (A) Adenine (B) Guanine
(C) Cytosine (D) Xanthine
19. Phosphagens used in vertebrates are derived from :
- (A) Creatine (B) Ascorbic Acid
(C) Acetylcholine (D) Arginine
20. Which of the muscle is syncytial?
- (A) Flight Muscle (B) Catch Muscle
(C) Cardiac Muscle (D) Fibrillar Muscle
21. Field and Spiro theory emphasizes the involvement of following in blood coagulation :
- (A) Thrombokinase (B) Thrombin
(C) Thromboplastin (D) Calcium ions
22. Angiotensinogen is converted into Angiotensin by the enzyme :
- (A) Prorenin (B) Renin
(C) Rennin (D) Protease
23. Which of the following is the inhibitory mediator in the brain?
- (A) Acetyl choline (B) Noradrenaline
(C) Seratonine (D) GABA
24. Muscle tone is maintained in the muscle by :
- (A) Stretching (B) Relaxation
(C) Partial contraction (D) Flexion
25. Name the hormone which induces lactation in mammals :
- (A) Progesterone (B) Relaxin
(C) Oxytocin (D) Oestrogen

26. Name biochemical compound present in FSH :
- (A) Glycoprotein (B) Polypeptide
(C) Steroid (D) Aminoacid
27. Osteolysis is caused by :
- (A) Thyroxine (B) Calcitonin
(C) Triiodothyronine (D) Parathormone
28. Recognition and destruction of mutant cells is called :
- (A) Homeostasis (B) Surveillance
(C) Phagocytosis (D) Apoptosis
29. The main cell surface marker of NK cell is :
- (A) CD³ (B) CD⁴⁺
(C) CD⁵⁶⁺ (D) CD⁸⁺
30. Free linking immunoglobulin molecule chains :
- (A) S-H bond (B) H-H bond
(C) S-S bond (D) Peptide bond
31. Which of the following antibody is secreted by MALT?
- (A) IgA (B) IgD
(C) IgE (D) IgM
32. Protein of the alternate complement pathway factor D :
- (A) α globulin (B) β globulin
(C) ∞ globulin (D) delta globulin
33. MHC Class I antigens expressed on all cells except :
- (A) Monocytes (B) T-Lymphocytes
(C) B-Lymphocytes (D) Trophoblasts
34. HLA Antigen associated with Rheumatoid arthritis :
- (A) DR3 (B) DR4
(C) DR2 (D) DR7

35. Which T cell subset stimulate B-cell to produce antibody?
(A) T_H cell (B) T_{DTH} cell
(C) T_C cell (D) CTL cell
36. Name the target antibody of Myasthenia gravis :
(A) Insulin receptor (B) TSH receptor
(C) Ach receptor (D) Adrenergic receptor
37. Which of the following genetic markers are present in the highest numbers in the within the human genome?
(A) Minisatellite (B) Microsat
(C) SNP (D) RFLP
38. The unusual property of Taq Polymerase that is critical to the PCR is its :
(A) ability to use ddNTPs as substrate (B) ability to use dNTPs as substrate
(C) ability to use RNAs as template (D) thermostability
39. Which of the following is not characteristic of genomic libraries?
(A) They contain random fragments of genomic DNA
(B) They contain introns as well as exons
(C) They include cDNA copies
(D) They contain all the above
40. Which of the following enzyme activities has an RNA component?
(A) RNAase P (B) Peptidyl transferrase
(C) Telomaerase (D) All of the above
41. Among the following chemicals, which one is used for preserving pituitary gland meant for induced breeding?
(A) Formalin (B) Malachite Green
(C) Methylene Blue (D) Acetone
42. Indian state with the highest marine capture fisheries production as per the latest Indian Fisheries Statistics (2014) is:
(A) Andhra Pradesh (B) West Bengal
(C) Gujarat (D) Kerala

43. Groupers are :
- (A) Protandrous hermaphrodites (B) Protogynous hermaphrodites
(C) Gynogenetic (D) Androgenic
44. Which of the following, is not recommended for eradication of weed fish in ponds?
- (A) Dichlorvos (B) Ammonium sulphate and lime
(C) Tea seed cake (D) Mahua oil cake
45. Maximum recommended stocking density of *Litopenaeus vannamei* post-larvae for farming as per CAA guidelines in India is :
- (A) 40 PL/m² (B) 50 PL/m²
(C) 60 PL/m² (D) 80 PL/m²
46. Which method of stripping is most preferred in fish?
- (A) Hot (B) Cold
(C) Wet (D) Dry
47. Approved limit of total nitrogen (as N) in the waste water discharged from aquaculture facilities as recommended by CAA is :
- (A) 0 mg/L (B) 2 mg/L
(C) 4 mg/L (D) 6 mg/L
48. Normal season for prawn filtration in Pokkali fields of Kerala is :
- (A) June – November (B) August – January
(C) September – February (D) November – April
49. A strain of *Vibrio parahaemolyticus* causes the disease condition in shrimp called :
- (A) AHPND (B) White spot disease
(C) EHP (D) Luminescent disease
50. Zoea larvae of the marine shrimp *Penaeus monodon* feeds on :
- (A) Copepods (B) Artemia
(C) Algae (D) All of the above
51. All male seed production in freshwater prawns is brought about by :
- (A) Y-Y Super male technique (B) Testosterone therapy
(C) Andrectomy (D) Androgenesis

52. Ovaprim is :
- (A) FSH and LH (B) GnRH and dopamine blocker
(C) HCG (D) 17 beta-estradiol
53. Among the following, which is not true about the FAO Code of Conduct for Responsible Fisheries :
- (A) The Code is global in scope (B) The Code is non-voluntary
(C) Applies to fisheries and aquaculture (D) None of the above
54. Which of the following fish has the highest water content?
- (A) Anchovies (B) Sardine
(C) Mackerel (D) Bombay duck
55. About 65-70% of the protein in fish is composed of
- (A) Sarcoplasmic protein (B) Myofibrillar protein
(C) Collagen (D) Albumin and globulin
56. Effective inhibition of toxin producing *Chlostridium botulinum* in fish is by :
- (A) Packing in oxygen (B) Packing in ozone
(C) Packing in argon (D) Packing in ammonia
57. Which of the following is a common causative of off-flavour in farmed fish meat :
- (A) 8-iso-prostaglandin (B) 17 beta estradiol
(C) 2-methyl-isoborneol (D) 2-acetyl phenothiazine
58. Which of the following, if present, is a major quality indicator of canned tuna?
- (A) Lactic Acid (B) Histamine
(C) Tryptamine (D) Volatile fatty acids
59. Stiffening of muscle of fish after it is dead is called :
- (A) Denaturation (B) Gelatinization
(C) Rigor mortis (D) Hypertonia

60. Which of the following organisms if present in fish would reflect the degree of human contact?
- (A) *Salmonella* (B) *Pseudomonas*
(C) *Escherichia coli* (D) *Staphylococcus*
61. Ciguatera poisoning is caused by eating certain :
- (A) Copepods (B) Bivalves
(C) Reef fish (D) Sea cucumbers
62. Which of the following chemicals is not a regular component of synthetic seawater?
- (A) Sodium bicarbonate (B) Lithium chloride
(C) Potassium sulphate (D) Potassium bromide
63. Codex Alimentarius Commission was formed in 1963 by :
- (A) WHO (B) WTO
(C) FAO and WHO (D) FAO and WTO
64. Slipper lobster is :
- (A) *Thenus orientalis* (B) *Panulirus ornatus*
(C) *Panulirus polyphagus* (D) *Panulirus homarus*
65. *Caligus longipedis* is a :
- (A) Parasitic nematode (B) Parasitic copepod
(C) Protozoan parasite (D) None of the above
66. The protozoan parasite *Bonamia* infects :
- (A) Crustaceans (B) Molluscs
(C) Lung fish (D) Teleosts
67. Time taken by *Penaeus monodon* larvae from egg to reach PL-1 stage at ~30°C is :
- (A) 4-5 days (B) 8-9 days
(C) 12-13 days (D) 16-17 days
68. An organization primarily to empower fisher women in Kerala is :
- (A) MATSYAFED (B) SAF
(C) KAVIL (D) SIFFS

69. A major epidemic occurring in marine fish is :
 (A) Aggregated Transformed Microvilli (B) Ich disease
 (C) Viral Nervous Necrosis (D) Dropsy
70. From Mumbai to Ratnagiri coast, one of the most common fishing crafts is of :
 (A) Masula boat type (B) Dinghi type
 (C) Satpati type (D) Catamarans
71. For pelagic, scattered fish shoals, one of the most suitable gear types is :
 (A) Trawl net (B) Trap
 (C) Long lines (D) Purse-seine
72. Which one among the following is not a pelagic fish?
 (A) *Sardinella longiceps* (B) *Rastrelliger brachysoma*
 (C) *Paralichthys olivaceus* (D) *Thunnus thynnus*
73. Glochidium is an important larval stage of :
 (A) Shrimps (B) Molluscs
 (C) Crabs (D) Sea cucumbers
74. The major fishery of *Parapenaeopsis stylifera* in India occurs along :
 (A) Kolachel Coast (B) Kollam Coast
 (C) Karwar Coast (D) Malabar Coast
75. Which of the following is not among the Ramsar sites in India?
 (A) Periyar Lake (B) Ashtamudi Lake
 (C) Sasthamkotta Lake (D) Wular Lake
76. The latest FAO ranking of India among the world's top marine capture fish producers is :
 (A) Two (B) Three
 (C) Five (D) Seven
77. The highest capture fisheries contributing region of the world lies in :
 (A) Northwest and Western Central Pacific
 (B) Northeast Pacific
 (C) Southeast Pacific
 (D) Indian Ocean

78. Headquarters of NFDB is located in :
- (A) Chennai (B) Hyderabad
(C) Kochi (D) New Delhi
79. Which of the following fish is not included under Schedule I of the Indian Wildlife Act (1972)?
- (A) *Epinephelus lanceolatus* (Grouper)
(B) *Hippocampus trimaculatus* (Seahorse)
(C) *Charcharhinus hemiodon* (Shark)
(D) *Puntius denisonii* (Miss Kerala)
80. Which of the following kind of fish are most suited for stocking in open water cages?
- (A) Interspecific hybrids (B) All male population
(C) Triploid fish (D) None of the above
81. Which part of the Indian constitution is contained the emergency provisions?
- (A) XII (B) XV
(C) XVII (D) XVIII
82. When was the Environment (Protection) Act come into force?
- (A) 1986 (B) 1991
(C) 2001 (D) 2003
83. Who established the first printing press in Kerala in 1811?
- (A) Sir Charles Lawson (B) Rev. Benjamin Bailey
(C) Major Dow (D) Fr. Muller
84. Who introduced 'proverty' (village school) scheme in Travancore in 1871?
- (A) Dewan T Madhava Rao (B) A. Seshayya Sastri
(C) T. Rama Rao (D) K. Krishnaswamy Rao
85. Who was the first Government Inspector of Schools in Malabar and Canara?
- (A) Colonel Munroe (B) H.V. Connolly
(C) Dr. Herman Gundert (D) A.F.W. Dixon

86. Who was the first president of the Travancore Devaswom Board?
- (A) Kumaranasan (B) Mannath Padmanabhan
(C) M.P. Manmadhan (D) N. Parameswaran Pillai
87. When was Poyikayil Yohannan nominated to the Sree Mulam Praja Sabha for the first time?
- (A) 1921 (B) 1924
(C) 1931 (D) 1933
88. Who among the following rulers had announced that the lower castes including the Nadar Climber women have no right to wear upper clothes?
- (A) Karthika Tirunal Ramavarma
(B) Avittom Thirunal Balarama Varma
(C) Visakam Tirunal Ramavarma
(D) Moolam Thirunal Rama Varma
89. Which among the following organisations was founded in the year 1907?
- (A) Samathwa samajam
(B) Sri Narayana Dharma Paripalana Yogam
(C) Sadhujana Paripalana Sangham
(D) Vaala Samudaya Parishkarani Sabha
90. Which incident is associated with the Wagon Tragedy?
- (A) Paliyam Satyagraha (B) Kuttamkulam Satyagraha
(C) Malabar Rebellion (D) Civil Disobedience Movement
91. Who started the first Malayalam Newspaper 'Keralapatrika' from Malabar in the year 1884?
- (A) Chengulath Kunhirama Menon (B) Appu Nedungadi
(C) Vengayil Kunhiraman Nayanar (D) C.V. Raman Pillai
92. Who wrote the famous Malayalam novel 'Ushnamekhala'?
- (A) Nandanar (B) Kakkanadan
(C) M. Mukundan (D) S.K. Pottakkadu

93. Who among the following women freedom fighters is popularly called as the "Jhansi Rani of Travancore"?
- (A) Lakshmi Sehgal (B) A.V. Kuttimalu Amma
(C) Accamma Cheriyan (D) Ammu Swaminadhan
94. What is the original name of Brahmananda Sivayogi?
- (A) Kunhikannan (B) Nanu Asan
(C) Subbarayan (D) Karat Govindankutty Menon
95. Who founded Sree Narayana Vidyalaya at Payyannur for the education and all round progress of the Harijans of Kerala?
- (A) Mahatma Gandhi (B) Sree Narayana Guru
(C) Swami Anand Theerthar (D) Vagbhadananda
96. In which year the Government of India had conferred the title 'Rao Bahadur' to Oyyarathu Chandu Menon?
- (A) 1892 (B) 1895
(C) 1896 (D) 1897
97. Which city in Congo is identified as the perfect place for HIV to spread Africa and into wider world?
- (A) Kisangani (B) Kinshasa
(C) Lubumbashi (D) Katanga
98. Which prize is popularly known as the Nobel Prize in Mathematics?
- (A) Abel Prize (B) Vetlesen Prize
(C) Jean Nicod Prize (D) Tang Prize
99. Which tree is selected as the state tree of Karnataka?
- (A) Neem (B) Peepal
(C) Sandal (D) Mango
100. Which among the following years has been decided as the SAARC year for Cultural Heritage?
- (A) 2015-16 (B) 2016-17
(C) 2017-18 (D) 2018-19