Asst., Inspector of Fisheries  
Basic Fisheries and Applied Fisheries  

Initial Key  

1. Fishes with narrow salinity tolerance are called as …………..  
   
   Stenohaline  

2. Transparency in pond water can be measured easily by using which of the following?  
   
   Secchi Disk  

3. The total volume of water used, directly or indirectly to produce a product or service at different stages of production is called ………………….  
   
   Water footprint  

4. Denaturation of double helical DNA structure can be observed spectrophotometrically by the absorbance of light at ……………………….wavelength.  
   
   260nm  

5. Chemical deterioration of lipids is called as……………………  
   
   Rancidity  

6. Albumin and globulin are the major serum proteins in fish, then which of the following statement is true?  
   
   Albumins are soluble in water, globulins are not.  

7. The process of isomerisation does not involve which one of the following interconversion?  
   
   acyl-glycosyl  

8. Ascorbic acid (vitamin C) is a ………………..  
   
   Water soluble vitamin but with no coenzyme function.  

9. Inosine is commonly found in which of the following?  
   
   tRNA
10. Which one among the following is not a one-to-one method of fisheries extension communication
   Radio broadcast

11. Property or resource, owned by individuals, who have right to exclude others from accessing it, is referred as ………….
   Private property

12. Which among the following is not a function of extension?
   Technology generation

13. The process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels is called…………
   Gender mainstreaming

14. Value of a commodity when expressed in terms of money is called as
   Price

15. The level of fishing effort in which the sustainable net return from the fishery is maximum is ……..
   MEY

16. In which year the National Cooperative Development Corporation (NCDC) amended its act to cover fisheries within its purview?
   1974

17. What is meant by breakeven point in economics?
   Total cost and total revenue are equal

18. Which among the following is the highest fish producing country.
   China

19. Those habitats which are necessary for satisfying biological requirements of fishes are called …………….
   Essential fish habitats

20. Which of the following is an anadromous migratory fish.
   Tenualosa ilisha (Hilsa or Pulasa)

21. Small reservoirs are those having ………….. area.
22. Which of the following rivers is not a west coast river system

   **Cauvery**

23. Which among the following is a non-penaeid shrimp?

   **Acetes indicus**

24. Fishes which give birth to young ones are called as ............

   **Live bearers**

25. Where is the Andhra Pradesh Shrimp Seed Production and Research Centre located at?

   **Visakhapatnam**

26. Normally how many moults nauplius larvae of shrimp take to become Protozoea stage?

   **Six**

27. Which of the following is not considered as fish seed in aquaculture?

   **Sperms**

28. A secondary sexual character that originates from the posterior thoracic sterna of mature female shrimps, especially penaeidsis called as ............

   **Thelycum**

29. What is the full form of GMAD in Fisheries

   **Global Marine Aquarium Database**

30. Which among the following is a marine aquarium fish?

   **Dascyllus aruanus**

31. Allowing population of nitrifying bacteria to grow in the filter media of aquaria to remove ammonia and nitrites is called as ............

   **Maturing**

32. Which among the following is the ornamental fish ‘Neon Tetra’

   **Paracheirodon innesi**
33. Which among the following is Gangetic leaf fish
   
   *Nandus nandus*

34. What is the protein requirement for Indian Major Carp spawn in artificial feeds.
   
   **35 to 40%**

35. Which among the following *spp* is not a live food for fishes
   
   *Pseudochromis spp*

36. Which among the following do not affect ingestion of food by fish larvae?
   
   *Nutrients*

37. Which among the following is not an important nutritional factor affecting larval rearing success?
   
   *LHRH*

38. Which among the following is co-feeding?
   
   **Simultaneous use of inert and live diets**

39. Which organ produces gonad inhibitor hormone (GIH) in shrimps?
   
   *X-organ*

40. Which organ of shrimps produce moulting hormone?
   
   *Y-organ*

41. Which hormone regulates carbohydrate metabolism in crustaceans?
   
   *CHH*

42. Which of the following is the key regulator of vertebrate homeostasis?
   
   *Hypothalamus*

43. Which of the following is known as time-keeping molecule in vertebrates enabling synchronization of physiological processes, metabolism, and behaviour with variations in environmental conditions?
   
   *Melatonin*

44. Process by which message from the DNA in coded form is transferred to mRNA is called
   
   **Transcription**
45. RNA is different from DNA due to presence of ...........
   **Uracil**

46. During cell division chromosomes are most clearly visible at what stage?
   **Metaphase**

47. Who discovered ‘Jumping genes’
   **McClintock**

48. The total aggregate of alleles in a population is referred to as........
   **Gene pool**

49. On the basis of which of the following ratios, one can prove law of independent assortment
   **9:3:3:1**

50. Which Indian state has the maximum area under shrimp farming?
   **Andhra Pradesh**

51. Pen culture in inland waters have been developed in India by which of the following Institutes?
   **CIFRI**

52. Which of the following is an organic fertilizer used in aquaculture?
   **Cow dung**

53. Which among the following is a common predatory fish in aquaculture ponds?
   **Channa striatus**

54. Which among the following is commonly called as brine shrimp?
   **Artemia salina**

55. Which among the following consumes lowest amount of water for fish farming?
   **Re-circulatory systems**

56. What is the general term that refers to all equipment/gear used by anglers for fishing?
Fishing tackle

57. For gill nets, what is the term for ‘length of head rope or float line divided by the stretched length of netting’?

Hanging coefficient

58. Which among the following is not an important factor that influences fishing efficiency of a gear?

Food of fish

59. The length of a fishing vessel, from the foreside of the foremost fixed permanent structure to the aft side of the aftermost fixed permanent structure is called ………

Overall length

60. The primary control surface built in to the fishing boats that help steer the vessel is called ……………

Rudder

61. Which among the following is not used for fishing ……………

Cane trawl

62. Which among the following increases with increase in population density?

Competition

63. Individuals in a population may not be distributed according to one among the following broad patterns

Temporal

64. Theoretically, populations of two species may interact in how many basic ways?

Six

65. Interaction of two organisms striving for the same thing is called as ……………

Competition

66. Which among the following is not a food chain?

Phosphatic chain

67. Organisms which complete their entire life cycle as plankton are called?

Holoplankton
68. Which among the following is not a form of water loss in aquaculture ponds?

**Transpiration**

69. To reduce bank erosion and water seepage, the pond soil should normally contain how much clay?

30-40%

70. What is green water principle in freshwater pond aquaculture?

**Indicator of plankton growth**

71. If dissolved oxygen depletion is detected in ponds, which of the following to be adopted?

**Decrease feeding rate**

72. Which among the following is not used for mussel farming?

**Raceways**

73. An output from one farming subsystem becomes an input to another farming subsystem resulting in a greater efficiency of output of desired products from land/water under human control is called ...........

**Integrated farming**

74. Which one the following is correctly matched?

**Cyprinus carpio**-Common carp

75. What is the normal level of Saponin content in Mahua oil cake.

5-6%

76. Which among the following weeds is most suitable for egg laying in hatchery for common carp?

**Hydrilla**

77. Which among the following explains feed conversion ratio of fishes?

**Quantity of feed required for unit weigh gain**

78. Infectious dropsy in fishes is caused by which of the following?

**Motile Aeromonas hydrophila**
79. Which of the following antibiotic is approved for aquaculture use?
   
   Oxytetracycline

80. Bacterial gill disease in freshwater fish is caused by ............... 
   
   Flavobacterium columnare

81. Which organ of teleost fish is bone-marrow equivalent of mammals? 
   
   Kidney

82. White to reddish cyst in gill of carps is caused by 
   
   Myxobolus

83. Which of the following has distribution in water, fish, other animals, soil etc.? 
   
   Edwardsiella tarda

84. Allowing normal fertilization and then forcing retention of the second polar body in the eggs is called ............... 
   
   Polyploid Induction

85. Allowing karyokinesis while blocking cytokinesis produce....... progeny. 
   
   Tetraploid

86. The analysis of mtDNA variation is an alternative for studying ........ in fishes. 
   
   Population genetics

87. Domestication and farming ........ genetic variability in fish. 
   
   Reduces

88. Most gene transfer research in aquaculture has focused on which gene? 
   
   Growth hormone (GH) gene

89. Hybrid vigor is also known as ........ 
   
   Heterosis

90. Induced breeding of fin fishes is called ............... 
   
   Hypophysation
91. The release of mature oocytes from ovarian follicles is called ………

**Ovulation**

92. Visible distinguishing characters of fishes are called ………

**Phenotype**

93. Which of the following results due to inbreeding?

**Loss of vigour**

94. The stage of meiosis in which chromosomes pair and cross over is called ………

**Prophase**

95. The ideal ratio for fish to ice in proper preservation of fish in tropical conditions is 1:1

96. Freezing the fish products and subliming the ice under low pressure is named as..

**Freeze drying**

97. Extrusion in fish processing combines shear …………… and temperature

**Pressure**

98. Canning of fishes involves cooking, blanching ……….. and sterilization.

**Pasteurization**

99. Retortable pouch for packaging fish products consists of how many layers of materials.

**Three**

100. Pulse light technology is an emerging …………. fish processing method.

**Non thermal**

101. Which among the following is the most commonly used type of pump to supply water to ponds?

**Centrifugal pumps**

102. Which among the following is not a method used for particle removal from water in aquaculture?
Chemical filtration

103. Aerator stones commonly used in aquaria is example of which of the following type of aerator?

**Diffusion aerator**

104. Which among the following is not an important criteria for site selection for aquaculture pond construction?

**Light intensity**

105. During the process of designing ponds, decisions on which of the following is not important?

**Fish marketability**

106. Which among the following is the most important part of aquaculture pond that helps retention of water and reduces seepage?

**Hearting and Core**

107. In aquaculture systems the acid death point is reached when the water pH falls below.

4

108. To avoid dissolved oxygen depletion in aquaculture systems, which of the following is used?

**Use aerators**

109. For amelioration of aquaculture pond soil pH of 4 to 4.5, what is the general dose of lime to be applied?

1000kg/ha

110. Which among the following is commonly used for flocculation and coagulation to remove clay turbidity in water?

**Alum**

111. Which among the following is ideal for removing ammonia from aquaculture ponds?

**Zeolite**

112. Which among the following is not a micro nutrient element for fish feed?

**Nitrogen**
113. What is the respective energy (kcal/g) level present in protein, lipid and carbohydrate

5.6, 9.4, 4.1

114. How do fishes generally utilize dietary protein?

**Breaking digesting in to amino acids**

115. Metabolic energy is available to fish from proteins, .......... and carbohydrates

**Lipids**

116. Vitamin B2 is also called .................

**Riboflavin**

117. Which of the following systems are comparatively new in Indian aquaculture?

**HDPE based floating cage culture**

118. Based on the production cycle, the carp culture is not classified in to which of the following?

**Multiple stocking-single harvest**

119. Breeding and seed production technologies are not standardized for which of the following fish species?

**Tenualosa ilisha**

120. Which species among the following is most successful in freshwater cage culture in terms of maximum biomass production?

**Pangasianodon hypophthalmus**

121. Trout farming systems in India are mostly practiced in which of the following systems?

**Race way systems**

122. What is the normal duration of nursery phase of Indian Major carps for fry production.

**15 to 20 days**
123. Which among the following is an initiative by Government of India to ensure quality of hatchery produced fish seeds?

**Certification and accreditation**

124. Which among the following is the best available biotechnological tool for induced breeding of fish?

**GnRH**

125. The process of animal development with exclusive maternal inheritance is known as ..........

**Gynogenesis**

126. Introduction of exogenous gene/DNA into host genome resulting in its stable maintenance, transmission and expression is called .............

**Transgenics**

127. Materials used to enhance both internal and external microbial environment in aquaculture is collectively called as ............

**Probiotics**

128. Long term preservation and storage of biological material at very low temperatures are known as ............

**Cryopreservation**

129. Which organelle in cells are called powerhouses of the cell? ............

**Mitochondria**

130. Genetic approach to sex manipulation for production of all male or all female or all sterile populations are through the induction of ............

**Ploidy**

131. What is the full form of GPS used in marine navigation

**Global Positioning System**

132. What is the full form of ECDIS, which is a navigation system using vector charts?

**Electronic Chart Display and Information System**
133. The speed of acoustic waves in seawater varies with which of the following combinations of factors?

**Temperature, pressure and salinity**

134. Very High Frequency (VHF) radio waves fall in which of the following range?

30–300MHz

135. A carefully constructed device for the reception or transmission of radio energy into the air is called ……….

**Antenna**

136. A propagated radio wave that travels in a straight line, used for point-to-point communication is called ……….

**Space wave**

137. Which among the following environmental parameters is commonly used for predicting Potential Fishing Zones (PFZ’s) through satellite images?

. **Sea Surface Temperature**

138. The means of acquiring information about the Earth's surface without actually being in contact with it is called ……….

**Remote sensing**

139. Which of the following is an ICT application in fisheries?

**Potential fishing zone advisory**

140. What is the aim of Kissan Call Centres established by Department of Agriculture & Co-operation?

Deliver extension services to the farming community

141. ICT based ‘Aqua Choupal’ is established in which of the following States of India

**Andhra Pradesh**

142. Which of the following is an ICT based e-Governance portal –cum –web enabled workflow based application system?

**FISHNET**
143. What is 'ReALCraft', an ICT based web enabled work flow based online application system used for?

**Issuing vessel registration**

144. The use of electronics, computers, telecommunication infrastructure, software platforms to convert, store, protect, transmit, retrieve, generate information from anywhere, any time to achieve strategic goals are collectively called as ………….  

**Information Communication Technology**

145. A closed circuit aquaculture system in which aquaculture and hydroponic system are used together and agriculture and fish production operates in an integrated manner is known a……….  

**Aquaponics**

146. A polyculture system based on the production of living species which absorb the nutrient waste from aquaculture is abbreviated as ………….  

**IMTA**

147. Which among the following is a new species in Indian aquaculture?

*Litopenaeus vannamei*

148. Which among the following is frequently used to produce monosex tilapia.

**Methyl testosterone**

149. Enhancing water quality in aquaculture through balancing carbon and nitrogen through aggregates of algae, bacteria, protozoans, and particulate organic matter is known as …………. technology  

**Biofloc**

150. The myofibrillar protein concentrate produced by repeated washing of fish mince to remove water soluble nitrogenous matter and flavour compounds is called ………….  

**Surimi**