

FISHERIES SCIENCE – I INITIAL KEY

1. Which is the causative agent of Black spot disease in carps?

Diplostomum

2. How many segments a freshwater prawn body comprised of?

19

3. What cells are targeted when sGnRH is injected in fish for induced breeding?

Gonadotrophs

4. Which is primary causative agent of EUS disease?

Aphanomyces invadans

5. Which institute in India has been established for the development of fish database?

National Bureau of Fish Genetic Resources

6. *Tenulosa ilisha* belongs to which of the following family?

Clupeidae

7. What is the action of domperidone in induced breeding of fish?

It stops release of dopamine.

8. Which of the organism caused 'Ich' disease in fishes?

Ichthyophthirias

9. Which amongst the following is not a live bearer fish?

Tilapia

10. *Wallago attu* belongs to which of the following family?

Siluridae

11. Which molecular methodology from the following is used for species identification?

DNA barcoding

12. Which of the following group of fishes did not observe parental care?

Mollies

13. Which fish observe anadromous migration.

Hilsa

14. Lung fishes belong to which sub-class?

Dipneustei

15. Anabas has which type of accessory respiratory organs?

Labrithine

16. Which hormone is involved in the osmo-regulation?

Adrenalin

17. Sea Urchin belong to the Class?

Echinoidea

18. Pectoral fins are exceptionally large for gliding over the water surface in

Exocoetus

19. Which one of the following is a murrel species?

Channa striatus

20. Which of the following family is Viviparous?

Poeciliidae

21. White gill spot disease is caused by

Myxosporidia

22. Which protozoan parasites are commonly found in larval rearing of freshwater prawn?

Epistylis

23. Which chemical/medicine is largely used for the treatment of protozoan parasites in aquaculture?

Formalin

24. Who is the founder of modern taxonomy?

Carl Linnaeus

25. Which one is not a morphometric character in fish?

Number of scales

26. Which one is not a meristic character in fish?

Diameter of eye

27. Identify the main character of Cyprinidae Family?

All of them

28. How many barbels are present in *Sperata seenghala*?

Four pairs

29. Which of the snakehead fish is endemic to North-east India?

Channa barca

30. Which of the following fish did not observe parental care?

Heteropneutes fossilis

31. Which parasite cause maximum economic loss in carp farming in India?

Argulus

32. Which one is a single host disease?

Argulosis

33. Which one is not a crustacean parasite?

Dactylogyrus

34. Identify fish blood parasite from the following.

Schistosoma

35. How many pairs of gill arches found in teleost fishes?

3 pairs

36. What is the function of gill rakers?

Helps in filtering water and retention of food items.

37. Pouched type of gills are found in

Lamprey

38. What is Weberian ossicle?

A part of auditory system

39. In how many years a female Rohu attains first full maturity?

Two years

40. In which species of fish Proterandrous hermaphroditism is found.

Asian seabass

41. In which species comparatively males grow much faster than the females?

Tilapia

42. Parental care in snakeheads is dominantly undertaken by

Male

43. Of the following species, which fish lay eggs under the gravels?

Golden mahseer

44. Which of the following fish made bubble-nest for egg laying?

Blue gorami

45. Which fish lay eggs at river bottom in deep pit for guarding?

Sperata seenghala

46. Viviparity is not observed in one of the following fish?

Angel fish

47. Ovo-viviparity is observed in one of the following fish.

Nurse shark

48. Young ones of which fish feed on the parent body?

Angel fish

49. Which of the following fish observe longest migration?

Eel

50. Migration in Tuna is mainly related to

Search for food

51. In case of Eel migration, which statement is correct?

Only female elvers migrate to rivers.

52. Ductless gonads are found in which of the following fish?

Hagfish

53. Which fish emits spermatozoa through cloaca?

Sharks

54. What is fractional spawner?

Eggs are produced continuously, spawn frequently

55. Single pair mating is not observed in which of the following fishes.

Rohu

56. Who first coined the word 'Systematics'?

Linnaeus and Bauhin

57. What is the role of dopamine in fish reproduction?

It inhibits release of gonadotropins.

58. Which is not the antagonist of dopamine?

Catecholamine

59. Osmo-regulation in freshwater fish is mainly maintained under the influence of

Prolactin

60. TSH is secreted by

Pituitary gland

61. Where is Chromaffin tissue located in fish?

Head kidney

62. Which of the following parameter is defined by meristic characters?

Parameters related to counts

63. The word karyotype defines

Number of chromosome

64. What is the full form of ICZN in taxonomy?

International Code of Zoological Nomenclature

65. What is standard length?

Length from snout to end of caudal peduncle.

66. What is the function of Nares in fish?

Water circulation

67. How many gill rows are present on each gill arch?

Two

68. Which one is the main sensory organ for body equilibrium

Lateral line

69. Identify the teleost who rear their young ones in brood pouch.

Tilapia

70. What are the functions of lateral line?

All of the given options

71. What are mesenteries?

Soft tissues that support location of internal organs.

72. Pancreatic juices digest

All of them

73. Which of the following statement is wrong?

Herbivorous fishes have large stomach than carnivorous fishes.

74. Which hormone is most responsible for parental care in fishes?

Prolactin

75. Which type of fishes observes greater number of parental care?

Freshwater fishes

76. Terminology hyperplasia means

Undesired multiplication of cells.

77. What is filial cannibalism?

Consuming part or all of the larvae during parental care

78. Presence of large number of vomer teeth indicates.

Fish is macrophyte feeder

79. Parental care is observed in maximum number of fish species in the following group.

Cichlids

80. What happens in case of dropsy disease in fish?

Fish abdomen highly swollen.

81. What is epibiont disease in prawn?

Carapace is covered with a mix of bacteria, protozoan, algae and debris.

82. Most venomous fish from the following is

Stone fish

83. Which of the following species lay floating eggs between macro-vegetation for parental care?

All of them

84. Which of the following fish has the largest alimentary canal?

Mullet

85. In which part of the body, cholesterol is produced in fish?

Liver

86. Which of the following fish has the highest GSI during maturity?

Common carp

87. Amylase helps in the digestion of

Carbohydrates

88. Cellulase is secreted by

Gut bacteria

89. Which one is not the part of catabolism in fish?

Use of ATP

90. Which of the following fish possess ganoid scales?

Gars

91. Define osmo-regulation from one of the following.

Controlled movement of solutes between internal fluids and external environment.

92. In which of the following ecosystems fish drink water?

Marine

93. Actinopterygii defines

Fishes with ray fins

94. What is the function of Chloride cells?

Secrete salts out of fish body.

95. *Puntius sarana* belongs to which of the following Family?

Cyprinidae

96. Pheromones mark

All of the given options

97. Vitellogenin is synthesised by

Liver

98. Which hormone is secreted by Beta Cells (β cells)

Insulin

99. Identify functions of insulin from the following

All of the given options

100. Which one is a glycoprotein class of hormone

Leutinizing hormone

101. Which of the following is not a tropic hormone.

Prolactin

102. Synthesis of sex hormones is controlled by

Both FSH and LH

103. How much is the current global fish diversity?

Over 30,000

104. How much global fish diversity is contributed by India?

Over 9%

105. Age and growth study is useful in determining

All of them

106. Who published the book 'Origin of Species'?

Charles Darwin

107. In which city, the Zoological Survey of India is located?

Kolkata

108. What is the full form of IUCN?

International Union for Conservation of Nature.

109. Opercular fold serves as accessory respiratory organ in which of the following fish

Anguilla

110. Labyrinthine organ supports

Respiration

111. Branchial air tube serves as accessory respiratory organs in

Singi

112. Bioluminescence is emitted by the following cells.

Photophores

113. Which of the following is known as needle fish?

Xenentodon cancella

114. In which of the following fish, male lives as a parasite in female body?

Deep sea Anglers fish

115. Which part better describes the age of a fish?

Otolith

116. How many maturity stages are found in the ovary of bony fishes?

Seven

117. Elasmobranchs remove sodium chloride through

Rectal glands

118. Major osmoregulatory organ in fish is

Gill

119. While assessing ageing in a four year old fish through scale growth rings, the inner most ring represent growth in

First year

120. In Length-weight relation formula $W = aL^b$, the factor 'b' defines

Growth Coefficient

121. Which of the following fish does not have air bladder?

Sharks

122. Which of the following is not a warm-water chordate?

Shark

123. Which of the following zones has highest percentage of marine habitats?

Epipelagic

124. Caudal fin of salmon is

Forked

125. Cetaceans include

All of them

126. Who has written the book 'Fishes of the World'?

Nelson

127. Which of the following fish has semelparous nature of reproduction?

Coho salmon

128. 'The Freshwater fishes of the Indian Region' book is written by

K.C. Jayaram

129. Number of living species of actinopterygians is

25

130. Members of Class Myxini feeds on

Soft bodied organism

131. Number of pharyngeal slits in class 'cephalaspodomorpha' is

7

132. Only surviving 'coelacanth' is

Latimeria

133. Characteristics of 'gnathostomata' is

All of them

134. Sharks, ratfishes and rays are included in class

Chondrichthyes

135. Tail fin with only 'upper lobe' is called

Heterocercal

136. Function of swim bladder in class 'osteichthyes' is carried out by

Pneumatic sacs

137. 'Lungfishes' are included in class

Osteichthyes

138. Natural selection occurs

During one organism's life cycle

139. Member of 'agnatha' lacks

Jaws

140. Sucking mouth with teeth and rasping tongue is characteristics of class

Cephalaspidomorphi

141. What is the size of nano plankton?

2-20µm

142. Identify a detritivorous fish from the following.

Mullet

143. Neoteny refers to

Retention of larval characteristics in adult

144. How many larval stages are found in freshwater prawn?

11

145. How many larval stages found in the tiger shrimp?

12

146. Which statement is wrong in context to parental care in fishes?

Rate of parental care is more in female fishes than the male.

147. Amphibius fishes belong to which of the following Order?

Gobiiformes

148. In which type of interaction do both species benefit?

Mutualism

149. The disappearance of all members of a species is called

Extinction

150. Teleost fishes are characterized by the presence of

Air bladder