



60815

ROLL No.

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

TEST BOOKLET No.

108

TEST FOR POST GRADUATE PROGRAMMES

FISHERIES

Time: 2 Hours

Maximum Marks: 450

INSTRUCTIONS TO CANDIDATES

1. You are provided with a Test Booklet and an Optical Mark Reader (OMR) Answer Sheet to mark your responses. Do not soil the Answer Sheet. Read carefully all the instructions given on the Answer Sheet.
2. Write your Roll Number in the space provided on the top of **this page**.
3. Also write your Roll Number, Test Code, and Test Subject in the columns provided for the same on the **Answer Sheet**. Darken the appropriate bubbles with a **Ball Point Pen**.
4. The paper consists of 150 objective type questions. All questions carry equal marks.
5. Each question has four alternative responses marked **A, B, C** and **D** and you have to **darken** the bubble corresponding to the correct response fully by a **Ball Point Pen** as indicated in the example shown on the Answer Sheet.
6. Each correct answer carries **3** marks and each wrong answer carries **1** minus mark.
7. Space for rough work is provided at the end of this Test Booklet.
8. You should return the Answer Sheet to the Invigilator before you leave the examination hall. However, you can retain the Test Booklet.
9. Every precaution has been taken to avoid errors in the Test Booklet. In the event of any such unforeseen happening, the same may be brought to the notice of the Observer/Chief Superintendent in writing. Suitable remedial measures will be taken at the time of evaluation, if necessary.



60815

1

FISHERIES

1. Which is the fastest growing Indian major carp?
(A) *Cirrhinus mrigala* (B) *Cirrhinus reba*
(C) *Cyprinus carpio* (D) *Catla catla*
2. Which one is an ornamental fish?
(A) Common carp (B) Tilapia
(C) Gold fish (D) Murrel
3. This fish is found in inundated paddy fields during monsoon seasons
(A) Red tilapia (B) Rohu
(C) Catla (D) Cat fish
4. Which state is more popular for eating fresh water carps?
(A) Kerala (B) Karnataka
(C) Maharashtra (D) West Bengal
5. All Fisheries Colleges come under the preview of
(A) Deemed Fisheries University
(B) University Grants Commission
(C) Indian Council of Agricultural Research
(D) Department of Science and Technology
6. Central Institute of Fisheries Technology is located at
(A) Bengaluru (B) Kochi
(C) Chennai (D) Mumbai
7. Which ingredient is used in poultry feed manufacture?
(A) Rice (B) Fish protein concentrate
(C) Fish meal (D) Fish sausage



8. Which one is mostly exported to overseas market?
- (A) Catfish (B) Carps
(C) Pomfrets (D) Shrimps
9. Which is the Oceanic fish?
- (A) Pearl spot (B) Tuna
(C) Prawn (D) Ladyfish
10. Which processing method is used for export shrimps?
- (A) Canning (B) Freezing
(C) Smoking (D) Chilling
11. Which of the following is not a fish?
- (A) Jelly fish (B) Seer fish
(C) Lady fish (D) White bait
12. Which one is banned for culture in India?
- (A) Catla (B) Lobster
(C) Cuttle fish (D) Tilapia
13. Largest brackish water lake in India is
- (A) Chilka (B) Govind Sagar
(C) Hoogly estuary (D) Methu dame
14. The first Fisheries College in India established and functioning at
- (A) Tuticorin (B) Panangad, Cochin
(C) Ratnagiri (D) Mangalore



60815

15. Most of the exporting fish processing plants in India are expected to meet the guidelines of
- (A) ICAR (B) DST
(C) HACCP (D) Chinese
16. Which organisation is responsible for promotion of sea foods for overseas markets?
- (A) State Government
(B) Department of Biotechnology
(C) Agriculture Universities
(D) MPEDA
17. Which one is located within the territory of India?
- (A) Colombo island (B) Singapore
(C) Dubai (D) Andaman
18. Who is considered as 'Father of Indian Fisheries?'
- (A) M.G.K. Menon (B) S.Z. Qasim
(C) V.G. Jhingran (D) E.G. Silas
19. Largest Sewage fed farm is located at
- (A) Vembanad lake (B) Godavary estuary
(C) Narmada estuary (D) Hoogly-Mutla estuary
20. Rich source of Vitamin A is
- (A) Fish muscle (B) Pituitary glands
(C) Shark skin (D) Cod liver oil
21. Scale pattern in common carp is controlled by
- (A) Mutation (B) Epistasis
(C) Mutagenesis (D) hypostasis



22. In integrated fish farming the following one is most popular
- (A) Ducks (B) Sheep
(C) Camel (D) Goats
23. Lobsters belong to
- (A) Mollusca (B) Echinodermata
(C) Crustacea (D) Cnidarians
24. Seaweeds are good source in the manufacture of
- (A) Fish protein concentrate (B) Pharmaceuticals
(C) Vitamin A (D) Fatty acids
25. Identify the common refrigerant used in the plate freezing.
- (A) CO₂ (B) NO₂
(C) Freon (D) H₂SO₄
26. What is IQF?
- (A) Instant Quick Frozen (B) Individual Quotient Factor
(C) Individually Quick Frozen (D) Intelligent Quotient Factor
27. What is the average salinity of sea water?
- (A) 15 ppt (B) 100 ppt
(C) 66 ppt (D) 35 ppt
28. Gulf Stream is a
- (A) River (B) Glacier
(C) Ocean current (D) Cold water stream
29. Global warming is attributed periodically to occurrence of
- (A) Ocean heating (B) Land heating
(C) Heavy showers (D) El Niño phenomenon



60815

5

30. The best indicator organisms of pollution
- (A) Prawn (B) Fish
(C) Mussels (D) Carps
31. Heavy nutrient influx and over fertilization in a lake is referred as
- (A) Eutrophication (B) Putrification
(C) Limnophilic (D) Oxidation
32. The predominant compound/mineral present in sea water is
- (A) $MnSO_4$ (B) $CaCO_3$
(C) Mg (D) NaCl
33. Coral reef fishes are abundant around
- (A) Lakshadweep (B) Gujarat coast
(C) Odisha coast (D) Tamil Nadu coast
34. Which is the maritime state?
- (A) Assam (B) Meghalaya
(C) West Bengal (D) Bihar
35. Catching of which of the following animals is prohibited?
- (A) Crabs (B) Turtles
(C) Lobsters (D) Shrimps
36. Which of the following fish is migratory in nature?
- (A) Catfish (B) Hilsa fish
(C) Catla (D) Common carp



60815

37. Centre of Advanced Study in Marine Biology at Parangipettai comes under
- (A) Madras University
 - (B) Kerala University
 - (C) Annamalai University
 - (D) Cochin University of Science and Technology
38. Ocean Pearls were usually collected by
- (A) Boating
 - (B) Hook and line
 - (C) Pumping seawater
 - (D) SCUBA diving
39. Quick maturation in penaeid shrimps is achieved by
- (A) Removal of legs
 - (B) Eye stalk ablation
 - (C) Ablation of telson
 - (D) Ablation of chelepedes
40. Sovereign rights for the countries over their continental shelves is up to a depth (in meters) of
- (A) 100
 - (B) 200
 - (C) 50
 - (D) 500
41. Fish eating helps to
- (A) increase risk of cardiac arrest
 - (B) decrease muscular pain
 - (C) decrease risk of cardiac arrest
 - (D) increase cholesterol
42. Maximum freshwater aquaculture production comes from
- (A) Salmons
 - (B) Catfish
 - (C) Carps
 - (D) Prawns
43. The gonadotropins are produced in
- (A) Hypothalamus
 - (B) Pituitary
 - (C) Gonads
 - (D) Pancreas



60815

44. Quality of feed is judged by
(A) FCR (B) SGR
(C) Size of fish (D) Feeding nature of fish
45. Natural food production in ponds could be enhanced by
(A) Lime (B) Feeds
(C) Fertilization (D) Aeration
46. Gynogenesis in common carp leads to production of
(A) all male population (B) all female population
(C) all sterile populations (D) all stunted population
47. First successful induced breeding of major carps in India was achieved by
(A) Chaudhary and Alikunhi (B) Swingle
(C) V.G. Jhingran (D) Ahamad Khan
48. In *Macrobrachium rosenbergii*, larval stages are subdivided in to
(A) 6 stages (B) 11 stages
(C) 3 stages (D) 14 stages
49. Solubility of oxygen in water has inverse relation with
(A) Nitrogen (B) Temperature
(C) Height (D) p^H
50. Gas bubble disease is normally associated with super saturation of
(A) Carbon dioxide (B) Nitrous oxide
(C) Oxygen (D) Ammonia
51. What form of lime is quick in its action and efficiency?
(A) Calcium carbonate (B) Calcium oxide
(C) Calcium hydroxide (D) Calcium chloride



60815

52. Based on the breeding habit, gold fish is a
- (A) Viviparous fish (B) Parthenogenesis fish
(C) Oviparous fish (D) Ovoviviparous
53. Harmful algal bloom is frequently caused by
- (A) Chlorella (B) Euglena
(C) Spirogyra (D) Microcystis
54. Seaweeds are
- (A) Macro algae (B) Microscopic algae
(C) Terrestrial plants (D) Freshwater plants
55. Hard substrates such as rocks or plates are required for settlement of
- (A) Shrimp seed (B) Lobster seed
(C) Echinoderm seed (D) Mussel spat
56. Spawning in oysters can be induced by rising
- (A) Turbidity (B) Temperature
(C) Circulation (D) Dissolved oxygen
57. *Ulva lactuca* is
- (A) Agar yielding seaweed (B) Algino yielding seaweed
(C) Edible seaweed (D) All the above
58. Cultured pearls can be produced by using
- (A) *Pinctada fucata* (B) *Mutilus edulis*
(C) *Patinopecten yessoensis* (D) All the above
59. Nacre in pearl oysters is called as
- (A) Gonad (B) Mantle
(C) Mother of pearl (D) Foot



60815

60. The fastest growing edible oyster in India is
- (A) *Crossostrea cuculata* (B) *Crossostrea gryphoides*
(C) *Crossostrea madrasensis* (D) *Ostrea edulis*
61. The culture technique developed for culture of edible oysters in India is
- (A) Rack and tray (B) Raft culture
(C) Long line culture (D) Bottom culture
62. Marine fish oil is rich in
- (A) Highly unsaturated fatty acids
(B) Saturated fats
(C) Cholesterol
(D) Saturated fatty acids
63. Rainbow trout belongs to family
- (A) Channidae (B) Ictaluridae
(C) Salmonidae (D) Cyprinidae
64. Incubation period of *Macrobrachium rosenbergii* eggs is
- (A) 9-10 days (B) 29-30 days
(C) 19-21 days (D) 5-10 days
65. *Pistia* is a
- (A) Emergent weed (B) Submerged weed
(C) Floating weed (D) Marginal weed
66. Most part of fish seed for stocking in ponds and tanks comes from
- (A) Riverine collection (B) Bund breeding
(C) Induced breeding (D) Reservoir collection



67. Which of the following is a migratory fish?
- (A) Salmon (B) Catla
(C) Tilapia (D) Sea bass
68. *Anguilla sp* is commonly known as
- (A) Herring (B) Oil sardine
(C) Mackerel (D) Eel
69. Which one is used for measurement of light penetration?
- (A) Nanson bottle (B) Peterson grab
(C) Secchi disc (D) Oxygen meter
70. Which fish is used for manufacture of best quality fish meal?
- (A) Squid (B) Carps
(C) Seer fish (D) *Peruvian anchovies*
71. Which bacteria should not be found in the processed and exported sea food?
- (A) *Lactobacillus* (B) *Salmonella*
(C) *Nitrobactor* (D) *Azatobactor*
72. Best nursery grounds for brackishwater fish and shrimps is
- (A) Open sea (B) Coastal waters
(C) Mangrove forest (D) Rivers
73. Free swimming organisms which are under the mercy of water currents are
- (A) Crustaceans (B) Molluscs
(C) Plankton (D) Fish



74. Name the instrument used for sampling of bottom sediments.
- (A) Nanson water bottle (B) Secchi disc
(C) Peterson grab (D) Plankton Net
75. Which of the soil is ideal for fish culture?
- (A) Sandy soil (B) Clay soil
(C) Loamy soil (D) Muddy soil
76. What is the required water pH range for carp culture?
- (A) 5-7 (B) 7.5-9
(C) 9-12 (D) 3-6
77. Short term preservation of fish can be done by
- (A) Drying (B) Icing
(C) Canning (D) Smoking
78. Yellow head virus is specific to
- (A) *Penaeus indicus*
(B) *Penaeus monodon*
(C) *Macrobrachium rosenbergii*
(D) *Catla catla*
79. Soon after hatching shrimp nauplius feeds on
- (A) *Artemia nauplii* (B) Zooplankton
(C) Unicellular algae (D) Cladocerans
80. Identify a floating weed.
- (A) *Azolla* (B) *Nymphaea*
(C) *Colocasia* (D) *Hydrilla*



60815

81. A chemical fertilizer supplying both N and P
- (A) Urea (B) Muriate of potash
(C) Diammonium phosphate (D) Ammonium sulphate
82. Which is an ideal protein rich algae?
- (A) Spirulina (B) Microcystis
(C) Euglena (D) Spirogyra
83. Biofilters bring about
- (A) Reduction of nitrogen (B) Oxidation of ammonia
(C) Fermentation of ammonia (D) Hydrolysis of ammonia
84. What is the major nitrogenous metabolite in the excretion of fish?
- (A) Creatinine (B) Ammonia
(C) Uric acid (D) Urea
85. Age of fish can be determined by using
- (A) Gill rakers (B) Scales
(C) Fins (D) Blood count
86. Fish absorb calcium through
- (A) Skin (B) Gill
(C) Lateral line (D) Scales
87. Sea horse is a
- (A) Marine ornamental fish (B) Horse living in sea
(C) Dolphin (D) Whale
88. Identify the basic unit of heredity
- (A) Bone marrow (B) DNA
(C) Ribosome (D) Chromosomes



89. Jelly fish is
- (A) Fin fish (B) Coelenterate
(C) Crustacean (D) Mollusc
90. Post stocking management of a carp nursery pond consists of
- (A) Artificial feeding (B) Water quality management
(C) Disease management (D) All the above
91. Pearl spot is the common name of
- (A) *Rastreliger canagurta* (B) *Sardinella longiceps*
(C) *Eutroplus suratensis* (D) *Peneaus monodon*
92. The most important hormones involved in the maturation of fish gonads are produced by
- (A) Pituitary (B) Liver
(C) Brain (D) Thyroid
93. Which of the following is an air breathing fish?
- (A) Gold fish (B) Anabas
(C) Prawn (D) Carp
94. Which one is the toxicant used in the eradication of weed fish and predatory fish?
- (A) Mahua oil cake (B) Ground nut oil cake
(C) Cotton seed cake (D) Rice bran
95. The following fish contain red meat.
- (A) Catfish (B) Pomfret
(C) Tuna (D) Mackerel



96. Shrimps come under the group
- (A) Pelagic (B) Benthic
(C) Oceanic (D) Planktonic
97. High and low tides of the sea are synchronized by
- (A) Solar eclipse movement (B) Lunar eclipse
(C) Winds (D) River water
98. *Pokkali* field culture is practiced in the State of
- (A) Karnataka (B) Tamil Nadu
(C) West Bengal (D) Kerala
99. *Agar agar* is manufactured predominantly from
- (A) Fish meat (B) Terrestrial plants
(C) Sea weeds (D) Molluscs
100. Usual rate of lime application per hectare pond in carp culture is
- (A) <500 Kg (B) 1000 Kg
(C) 1500 Kg (D) 2000 Kg
101. Cartilaginous fishes are characterised by
- (A) Homocercal tail (B) Heterocercal tail
(C) Terminal mouth (D) Ventral mouth
102. The teeth of shark are
- (A) Thecodont (B) Pleurodont
(C) Homodont (D) Heterodont



103. Mermaid purse is
- (A) Beautiful fish
 - (B) Egg case of skate fish
 - (C) Brood pouch of sea borne fish
 - (D) A colony of baby sharks
104. Bony plate or scutes are present in
- (A) *Anabas*
 - (B) *Scoliodon*
 - (C) *Hippocampus*
 - (D) *Synaptura*
105. Which one of the following is a Catadromous fish?
- (A) *Hilsa*
 - (B) *Anguilla*
 - (C) *Salmon*
 - (D) *Labeo*
106. Prehensile tail is found in
- (A) Rays
 - (B) Sharks
 - (C) Sea horse
 - (D) Flying fish
107. Which one of the following is a scale less fish?
- (A) *Amia*
 - (B) *Labeo*
 - (C) *Loricaria*
 - (D) *Scoliodon*
108. Intestine of fish is shorter in
- (A) Carnivores
 - (B) Herbivores
 - (C) Sharks
 - (D) Omnivores
109. The relation between shark and sucker fish is
- (A) Phoresis
 - (B) Commensalism
 - (C) Parasitism
 - (D) Mutualism



110. The type of Kidney in Sharks
- (A) Pronephric (B) Mesonephric
(C) Metanephric (D) Nephridial
111. Typhlosole of fish intestine is
- (A) Lengthwise folds (B) Finger like projections
(C) Transverse folds (D) Spiral folds
112. In fish, the oxygenated blood is sent to all body parts from
- (A) Auricles (B) Ventricles
(C) Bulbus arteriosus (D) Gills
113. Stomach is modified into grinding organ in
- (A) Mugil (B) Esox
(C) Silurus (D) Scyllium
114. RBC of fishes is generally
- (A) Oval and nucleated (B) Oval and anucleated
(C) Round and nucleated (D) Round and anucleated
115. True external gills are present in the young ones of
- (A) *Lepidosiran* (B) *Anguilla*
(C) *Periophthalmus* (D) *Polypterus*
116. Which of the following are absent in all fishes?
- (A) Nictitating membrane (B) Colored lens
(C) True eye lids (D) Pupil
117. Telescopic eyes are present in
- (A) *Zygena* (B) *Scoliodon*
(C) *Idiacanthus* (D) *Opisthoproctus*



118. In fishes legena is a part of
- (A) Ice (B) Nasal sacs
(C) Inner ear (D) Taste organs
119. Accessory respiratory organs, "labyrinthine organs" are found in
- (A) Clarius (B) Anabas
(C) Heteropneustes (D) Catla
120. Culturing different species of fishes in the same pond is called
- (A) Integrated fish culture (B) Composite fish culture
(C) Mixed Culture (D) Mono culture
121. Which one of the following is an exotic carp?
- (A) *Labeo rohita* (B) *Cirrhinus mrigala*
(C) *Labeo kalabaru* (D) *Cyprinus carpio*
122. *Lernaeasis* in fish is caused by
- (A) Monogenea (B) Copepods
(C) Isopods (D) Digenea
123. One of the following is not fish by-product
- (A) Ising glass (B) Leather
(C) Shagreen (D) Cheese
124. The male fish is parasitic on the female fish in
- (A) Bitterling (B) Photocorynus
(C) Echinus (D) Protopterus
125. Migration of fish is an example for
- (A) Instinct behaviour (B) Innate behaviour
(C) Learning behaviour (D) Acquired behaviour



60815

126. Cartilage of fishes is developed from embryonic
- (A) Ectoderm (B) Endoderm
(C) Mesoderm (D) Neuroderm
127. Which of the following group consists of all extinct fishes?
- (A) Holocephali (B) Dipnoi
(C) Euselachii (D) Placodermi
128. The fish culture in which the feed is given in a limited way is
- (A) Traditional culture (B) Extensive culture
(C) Semi-intensive culture (D) Intensive culture
129. Tail rot disease is caused by
- (A) Virus (B) Bacteria
(C) Protozoa (D) Copepods
130. The Head office of CIFA is present in
- (A) Bhubaneswar (B) Chennai
(C) Hyderabad (D) Kochi
131. *Argyroteleus*, a deep sea fish is known for its
- (A) Parental care (B) Parasitism
(C) Mimicry (D) Bioluminescence
132. The scales of polypterid are
- (A) Ganoid (B) Placoid
(C) Cosmoid (D) Cycloid
133. Electric organs of fish are modified
- (A) Bone cells (B) Muscle cells
(C) Scales (D) Fins



60815

134. The fish known as living fossil is
- (A) Latimeria (B) Chimaera
(C) Protopterus (D) Pristis
135. "Golden age of fishes" is the period of
- (A) Devonian (B) Cambrian
(C) Pennsylvanian (D) Permian
136. Fish liver oil is rich in
- (A) Vitamin C (B) Vitamin D
(C) Calcium (D) Iron
137. Amphibians are evolved from the fishes of the group
- (A) Dipnoi (B) Osteolepids
(C) Amioidea (D) Apodes
138. Hag fishes resemble lampreys in having
- (A) Direct development
(B) Absence of rays
(C) Single semicircular canal
(D) Eel like body without scales
139. Which of the following is the scientific name of a lung fish?
- (A) *Chirolophis* (B) *Protopterus*
(C) *Batrachus* (D) *Cynoglossus*
140. The periodic, predictable rise and fall of sea level over a given time of interval is called
- (A) Current (B) Wave
(C) Tide (D) Tsunami



141. The organisms living at the bottom of the sea are called as
- (A) Benthos (B) Nekton
(C) Pelagic (D) Plankton
142. Primary producers are
- (A) Zooplankton (B) Aquatic plants
(C) Phytoplankton (D) Benthic organisms
143. The cleaning behavior of a small fish to big fish is often seen in
- (A) Deep sea fish (B) Coral reef fishes
(C) Nekton (D) Estuarine fishes
144. Mud skipper occurs in
- (A) Deep sea bottoms (B) Intertidal zones
(C) Mangroves (D) Muddy shores
145. Ammocoetus is the larva of
- (A) Myxine (B) Bdellostoma
(C) Cephalaspis (D) Petromyzon
146. Air bladder is completely absent in
- (A) Teleosts (B) Elasmobranchs
(C) Dipnoi (D) Coelacanth
147. Ising glass is obtained from fish's
- (A) Skin (B) Fins
(C) Air bladder (D) Tail
148. *Hilsa ilisha* belongs to
- (A) Cypriniformes (B) Anguilliformes
(C) Clupeiformes (D) Cyprinodontiformes



60815

149. Head is asymmetrical in

- (A) Flying fish
- (B) Fresh water Eels
- (C) Puffer fish
- (D) Flat fishes

150. Parental care exhibited by Tilapia is by

- (A) Nest building
- (B) Mouth brooding
- (C) Coiling round the egg mass
- (D) Carrying eggs on its body
