

60812



ROLL No.

--	--	--	--	--

TEST BOOKLET No.

105

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 fully by a **Ball Point Pen** corresponding to the correct response 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. Please do your rough work only on the space provided for it 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 such unforeseen happenings 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.

SEAL

**FISHERIES**

1. By-catch of fishing boats comprises of
  - (A) caught target fish
  - (B) caught shrimps
  - (C) caught low value fish and discarded into sea
  - (D) recovered fish
  
2. Which organisation is involved in off shore marine fish stock assessment?
  - (A) ICAR
  - (B) Mangalore Fisheries College
  - (C) Fishery Survey of India
  - (D) Central Inland Fisheries Research Institute
  
3. Which is the maritime state?
  - (A) Assam
  - (B) Meghalaya
  - (C) West Bengal
  - (D) Bihar
  
4. Which one is an ornamental fish?
  - (A) Common carp
  - (B) Tilapia
  - (C) Gold fish
  - (D) Murrel
  
5. Which state is more popular for eating fresh water carps?
  - (A) Kerala
  - (B) Karnataka
  - (C) Maharashtra
  - (D) West Bengal
  
6. Longest brackish water lake in India is
  - (A) Chilka
  - (B) Govind Sagar
  - (C) Hoogly estuary
  - (D) Methur dam
  
7. Central Institute of Fisheries Technology is located at
  - (A) Bangalore
  - (B) Cochin
  - (C) Chennai
  - (D) Mumbai



8. Icing glass is prepared from
- (A) shark fin rays (B) fish eggs  
(C) shark skin (D) fish air bladder
9. Which ingredient is used in poultry feed manufacture?
- (A) Rice (B) Fish protein concentrate  
(C) Fish meal (D) Fish sausage
10. Which one is mostly exported to overseas market?
- (A) Catfish (B) Carps  
(C) Pomfrets (D) Shrimps
11. Which is the Oceanic fish?
- (A) Pearl spot (B) Tuna  
(C) Prawn (D) Ladyfish
12. Which one is not a fish?
- (A) Jelly fish (B) Seer fish  
(C) Lady fish (D) White bait
13. Which water body is under-utilised in India?
- (A) Tanks (B) Reservoirs  
(C) Ponds (D) Wells
14. Deep sea fishing is mostly carried out by
- (A) State Government owned boats (B) private boats  
(C) permitted foreign vessels (D) Government of India boats
15. Where the first Fisheries College in India was established and functioning?
- (A) Tuticorin (B) Panangad, Kochi  
(C) Ratnagiri (D) Mangalore



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. Central Institute for Freshwater Aquaculture (CIFA) is located at
- (A) Chennai (B) West Bengal  
(C) Bhubaneshwar (D) Mangalore
18. Largest Sewage fed fish farm is located at
- (A) Vembanad lake (B) Godavary estuary  
(C) Narmad estuary (D) Hoogly-Mutla estuary
19. Building blocks of protein molecules are
- (A) fatty acids (B) amino acids  
(C) vitamins (D) lipoproteins
20. Rich source of Vitamin A is
- (A) fish muscle (B) pituitary glands  
(C) shark skin (D) cod liver oil
21. What is the salinity of standard sea water?
- (A) 15 ppt (B) 35 ppt  
(C) 66 ppt (D) 100 ppt
22. In integrated fish farming the following one is most popular
- (A) ducks (B) sheep  
(C) camel (D) goats
23. Pokkali field culture is practiced in the state of
- (A) Karnataka (B) Tamil Nadu  
(C) West Bengal (D) Kerala



24. In aquaculture production point of view, India ranks
- (A) first (B) fourth  
(C) third (D) second
25. Lobsters belong to
- (A) mollusca (B) echinodermata  
(C) crustacea (D) ceolenterates
26. Agar agar is manufactured predominantly from
- (A) fish meat (B) terrestrial plants  
(C) sea weeds (D) molluscs
27. Seaweeds are good source in the manufacture of
- (A) fish protein concentrate (B) pharmaceuticals  
(C) Vitamin A (D) fatty acids
28. Common refrigerant used in the plate freezing is
- (A) CO<sub>2</sub> (B) NO<sub>2</sub>  
(C) Freon (D) H<sub>2</sub>SO<sub>4</sub>
29. Ocean Pearls were usually collected by
- (A) boating (B) hook and line  
(C) pumping seawater (D) diving
30. Heavy nutrient influx and over fertilization in a lake is referred as
- (A) eutrophication (B) putrefication  
(C) limnophilic (D) oxidation
31. Degradation of ammonia in to nitrate in water is carried out in
- (A) chemical reactors (B) asphyxiation  
(C) biofiltration (D) mechanical filtration



32. The predominant compound/mineral present in sea water is
- (A)  $MnSO_4$  (B)  $CaCO_3$   
(C) Mg (D) NaCl
33. Pearl spot (*Etroplus suratensis*) is a
- (A) oceanic fish (B) freshwater fish  
(C) brackishwater fish (D) deep sea fish
34. Common name for freshwater prawn *Macrobrachium rosenbergii* is
- (A) cod (B) rock perch  
(C) scampi (D) mullet
35. Centre of Advanced Study in Marine Biology in Parangipettai comes under
- (A) Madras University  
(B) Kerala University  
(C) Annamalai University  
(D) Cochin University of Science and Technology
36. Gulf Stream is a
- (A) river (B) glazier  
(C) ocean current (D) cold water stream
37. Marine ornamental fish are abundant in
- (A) Gulf of Mannar (B) Gulf of Kutch  
(C) Lakshadweep (D) Chilka lake
38. There is always a low level of principal nutrients in surface water of the sea because
- (A) animals absorb them during respiration  
(B) regeneration is very slow  
(C) plants absorb them during photosynthesis  
(D) mixing due to water current



39. Long elevation of the deep sea floor with steep sides and irregular topography is called
- (A) ridge (B) rise  
(C) plateau (D) trenches
40. Sediments in any area of the sea bed when the overlying waters are stagnant are
- (A) black (B) white  
(C) yellow (D) brown
41. Quick maturation in penaeid shrimps is achieved by
- (A) removal of legs (B) eye stalk ablation  
(C) ablation of telson (D) ablation of chelelped
42. 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
43. Maximum freshwater aquaculture production comes from
- (A) salmons (B) catfish  
(C) carps (D) prawns
44. *Nelumbo* is a
- (A) marginal weed (B) floating weed  
(C) emergent weed (D) submerged weed
45. Usual rate of lime application per hectare pond in carp culture is
- (A) < 500 Kg (B) 1000 Kg  
(C) 1500 Kg (D) 2000 Kg
46. The gonadotropins are produced in
- (A) hypothalamus (B) pituitary  
(C) gonads (D) pancreas



47. Most preferred food of spawn of Indian major carp is
- (A) artificial food (B) phytoplankton  
(C) zooplankton (D) benthos
48. Quality of feed is judged by
- (A) FCR (B) SGR  
(C) size of fish (D) feeding nature of the fish
49. Natural food production in ponds could be enhanced by
- (A) lime (B) feeds  
(C) fertilization (D) aeration
50. The abundant marine fish in the coastal areas of Konkan coast is
- (A) Bombay duck fish (B) lobsters  
(C) polynemids (D) sardines
51. Fish eating helps to
- (A) increase risk of cardiac arrest (B) decrease muscular pain  
(C) decrease risk of cardiac arrest (D) increase cholesterol
52. Limited amount of crude protein in fish feed is
- (A) useful (B) harmful  
(C) not required (D) negligible
53. Solubility of oxygen in water has inverse relation with
- (A) nitrogen (B) temperature  
(C) height (D) pH
54. Gas bubble disease is normally associated with super saturation of
- (A) carbon dioxide (B) nitrous oxide  
(C) oxygen (D) ammonia





55. White spot disease of penaeid shrimps is caused by
- (A) virus (B) bacteria  
(C) fungus (D) algae
56. What form of lime is quick in its action and efficiency?
- (A) Calcium carbonate (B) Calcium oxide  
(C) Calcium hydroxide (D) Calcium chloride
57. The culture technique developed for culture of edible oysters in India is
- (A) rack and tray (B) pen culture  
(C) long line culture (D) bottom culture
58. Seaweeds are
- (A) macro algae (B) microscopic algae  
(C) unwanted aquatic plants (D) freshwater plants
59. India has rich seaweed resources in
- (A) Lakshadweep (B) Karnataka  
(C) Andhra Pradesh (D) Goa
60. Hard substrates such as rocks or plates are required for settlement of
- (A) shrimp seed (B) lobster seed  
(C) echinoderm seed (D) mussel spat
61. Spawning in oysters can be induced by rising
- (A) turbidity (B) temperature  
(C) circulation (D) dissolved oxygen
62. *Ulva lactuca* is
- (A) agar yielding seaweed (B) algino yielding seaweed  
(C) edible seaweed (D) All of the above



63. Cultured pearls can be produced by using
- (A) *Pinctada fucata* (B) *Mytilus edulis*  
(C) *Patinopecten yessoensis* (D) All of the above
64. Nacre in pearl oysters is called as
- (A) gonad (B) mantle  
(C) mother of pearl (D) foot
65. The fastest growing edible oyster in India is
- (A) *Crossostrea cuculata* (B) *Crossostrea gryphoides*  
(C) *Crossostrea madrasensis* (D) *Ostrea edulis*
66. Based on the breeding habit, gold fish is a
- (A) viviparous fish (B) parthenogenesis fish  
(C) oviparous fish (D) none of the above
67. The group of molluscs listed under CITES is
- (A) green mussels (B) pearl oysters  
(C) giant clams (D) flat oysters
68. Which of the following plants is a biofertilizing agent?
- (A) Azolla (B) Eichorina  
(C) Pistia (D) Lemna
69. Pistia is
- (A) an emergent weed (B) a submerged weed  
(C) a floating weed (D) a marginal weed
70. 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



71. Which one is a migratory fish?
- (A) Salmon (B) Catla  
(C) Tilapia (D) Sea bass
72. *Anguilla sp.* is commonly known as
- (A) herring (B) oil sardine  
(C) mackerel (D) eel
73. Which one is commonly used for the measurement of light penetration?
- (A) Nanson bottle (B) Peterson grab  
(C) Secchi disc (D) Oxygen meter
74. Which fish is used for the manufacture of best quality fish meal?
- (A) Squid (B) Carps  
(C) Seer fish (D) *Peruvian anchovies*
75. Which bacteria should not be found in the processed and exported sea food?
- (A) *Lactobacillus* (B) *Salmonella*  
(C) *Nitrobactor* (D) *Azatobactor*
76. Best nursery grounds for brackishwater fish and shrimps is
- (A) open sea (B) coastal waters  
(C) mangrove forest (D) rivers
77. Free swimming organisms which are under the mercy of water currents
- (A) crustaceans (B) molluscs  
(C) plankton (D) fish
78. This instrument is used for sampling of bottom sediments
- (A) nanson water bottle (B) secchi disc  
(C) peterson grab (D) plankton net



79. Critical element in aquatic production is
- (A) nitrogen (B) phosphorous  
(C) calcium (D) carbon
80. Which of the soil is ideal for fish culture?
- (A) Sandy soil (B) Clay soil  
(C) Loamy soil (D) Muddy soil
81. Required water pH range for carp culture
- (A) 5-7 (B) 7-9  
(C) 9-12 (D) 3-6
82. Short term preservation of fish can be done by
- (A) drying (B) icing  
(C) canning (D) smoking
83. Which determines specificity in DNA hybridization?
- (A) pH (B) Temperature  
(C) Alkalinity (D) Dissolved oxygen
84. Soon after hatching shrimp nauplius feeds on
- (A) *Artemia nauplii* (B) zooplankton  
(C) unicellular algae (D) cladocerans
85. Rainbow trout belongs to the family
- (A) *Channidae* (B) *Ictaluridae*  
(C) *Salmonidae* (D) *Cyprinidae*
86. An ideal protein rich algae is
- (A) spirulina (B) microcystis  
(C) euglena (D) spirogyra



87. Biofilters work by
- (A) formation of ammonia                      (B) oxidation of ammonia  
(C) fermentation of ammonia                (D) hydrolysis of ammonia
88. Major nitrogenous metabolite in the excretion of fish is
- (A) creatinine                                      (B) ammonia  
(C) uric acid                                        (D) urea
89. Age of fish can be determined by using
- (A) gill rakers                                      (B) scales  
(C) fins    (D) blood count
90. Yellow head virus is specific to
- (A) *Penaeus indicus*                              (B) *Penaeus monodon*  
(C) *Macrobrachium rosenbergii*                (D) All of the above
91. Sea horse is
- (A) marine ornamental fish                      (B) horse living in sea  
(C) dolphin                                         (D) whale
92. Basic unit of heredity is
- (A) bone marrow                                      (B) DNA  
(C) ribosome                                         (D) chromosomes
93. Jelly fish is
- (A) fin fish    (B) coelenterate  
(C) crustacean                                        (D) mollusc
94. Coral reef fishes are abundant around
- (A) Lakshadweep                                      (B) Gujarat coast  
(C) Orissa coast                                      (D) Tamilnadu coast



95. The most important hormones involved in maturation of fish gonads are produced by
- (A) pituitary (B) liver  
(C) brain (D) thyroid
96. Which is an air breathing fish?
- (A) Gold fish (B) *Anabas testudineus*  
(C) Prawn (D) Carp
97. Phosphorous content is more in
- (A) poultry manure (B) cow dung  
(C) pig manure (D) sheep manure
98. 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
99. Which of the following fish contains red meat?
- (A) Catfish (B) Pomfret  
(C) Tuna (D) Mackerel
100. Pearl spot is the common name of
- (A) *Rastreliger canagirta* (B) *Sardinella longiceps*  
(C) *Eutroplus surretensis* (D) *Sardinella jonsii*
101. *Pangasius* a
- (A) cat fish (B) murrel  
(C) carp (D) None of the above
102. The location of thyroid gland in teleost fishes
- (A) ventral aorta (B) heart  
(C) kidney (D) spleen



103. Neuromast cells in fishes are associated with
- (A) nervous system (B) lateral line system  
(C) skeletal system (D) muscular system
104. In fishes, from which tissue electric organs originate?
- (A) Liver tissue (B) Head organ  
(C) Muscle fibre (D) Skin
105. Branchiomycosis is a
- (A) systemic disease (B) skin disease  
(C) gill disease (D) fin rot
106. The technique of ablation involves
- (A) removal of eye and eye stalk (B) removal of kidneys  
(C) removal of only eyestalks (D) removal of only eyes
107. The following is known as banana shrimp
- (A) *P. monodon* (B) *P. indicus*  
(C) *P. merguensis* (D) *P. semisulcatus*
108. The scientific name of giant fresh water prawn is
- (A) *Macrobrachiumacanthurus* (B) *Macrobrachiumrosenbergii*  
(C) *Macrobrachiumcarcinus* (D) *Macrobrachiummalcomsoni*
109. *P. monodon* is a ..... species
- (A) stenohaline (B) euryhaline  
(C) freshwater (D) marine water
110. Kolleru Lake is a
- (A) brackish water lake (B) fresh water lake  
(C) salt lake (D) None of the above
111. The common name of *Harpadon* is
- (A) mackerel (B) sole  
(C) trout (D) Bombay duck



112. Commercially important species of Sole belongs to the genus
- (A) *Solea* (B) *Pseudorhombus*  
(C) *Cynoglossus* (D) *Psettodes*
113. In natural waters the fish can withstand sudden temperature changes for short duration without any problem. It is called
- (A) thermal adaptability (B) thermal endurance  
(C) thermal withstanders (D) thermal capability
114. Monoculture is commonly practiced for culturing
- (A) carps (B) catfishes  
(C) trouts (D) tilapia
115. Monosex culture is practiced in the case of
- (A) tilapia (B) catla  
(C) clarias (D) channa
116. The common name of Myxine
- (A) lamprey (B) dog-fish  
(C) saw-fish (D) hag-fish
117. Fishes belonging to Holocephali are
- (A) fresh water (B) brackish water  
(C) marine water (D) none of the above
118. The scientific name of grey mullet is
- (A) *Etroplus suratensis* (B) *Mugil tade*  
(C) *Liza macrolepis* (D) *Mugil cephalus*
119. The common name of *Lates calcarifer*
- (A) sea lion (B) sea bass  
(C) milk fish (D) ribbon fish





120. Which of the following are known as hardy fish?
- (A) Murrels (B) Mulletts  
(C) Carps (D) Catfishes
121. What is the limit of EEZ?
- (A) 300 nautical miles (B) 100 nautical miles  
(C) 50 nautical miles (D) 200 nautical miles
122. Spawning can be artificially induced by
- (A) drugs (B) chemicals  
(C) hypophysation (D) cryopreservation
123. Spawning is influenced by
- (A) organic matter (B) pH  
(C) salinity (D) temperature
124. Hapas are used for
- (A) hatching eggs (B) spawning  
(C) collecting eggs (D) None of the above
125. Sonar is a kind of instrument used to detect
- (A) ships (B) boats  
(C) fishes (D) None of the above
126. Long term preservation of gametes is achieved by
- (A) preservation in formalin (B) cryopreservation  
(C) free drying (D) air drying
127. Masculinisation can be induced by
- (A) oestrogen (B) methyl testosterone  
(C) oestroidol (D) ovaprin



128. Treatment of fish with salt is known as
- (A) brining (B) smoking  
(C) canning (D) drying
129. Highest content of Vitamin A is seen in the liver of
- (A) cod fishes (B) shark fishes  
(C) heilibuts (D) tunas
130. In fish, high protein content is present in
- (A) muscle (B) heart  
(C) liver (D) head
131. The pH in acid sulphate soils is
- (A) 4 (B) 7  
(C) 8 (D) 6
132. What is commonly used as a green manure in pond fertilisation?
- (A) Leguminosa plants (B) Chlorella  
(C) Artemia (D) Spirulina
133. Which fishery is represented by a single species?
- (A) Sole fishery (B) Bombayduck fishery  
(C) Mackerel fishery (D) Sardine fishery
134. Sea weed culture is done at
- (A) Madapam, CMFRI (B) CIBA, Chennai  
(C) CEFA, Bhubaneswar (D) CIFE, Mumbai
135. *Gelidium micropterum* is used in the manufacture of
- (A) iodine (B) agar  
(C) bags (D) coir ropes



136. Which chemical is used for preserving pituitary gland extract?
- (A) Formalin (B) Iodine  
(C) Glycerine (D) Alcohol
137. Bheri culture is common in
- (A) Andhra Pradesh (B) West Bengal  
(C) Orissa (D) Kerala
138. Narakkal in Kerala is famous for the culture of
- (A) mullets (B) carps  
(C) sea bass (D) murrels
139. Cross Breeding results in
- (A) Drop in Viability (B) Hybrid Vigour  
(C) Infertility (D) Homozygosity
140. Which of the following is used as a disinfectant to treat ponds?
- (A) Iodophores (B) Chlorine  
(C) Bleaching powder (D) All the three
141. Argulosis is caused by
- (A) dactylogyrus (B) argulus  
(C) diplostomus (D) ergasilis
142. The golden anchovy is
- (A) *Coilia dussumeri* (B) *Coilia ramcarti*  
(C) *Hilsai lisha* (D) *Stolephorus indicus*
143. Corslet in tunas is
- (A) respiratory system (B) arrangement of fins  
(C) arrangement of scales (D) lateral line system



144. *Saurida tumbil* is
- (A) lizard fish (B) lung fish  
(C) sardine (D) cuttlefish
145. Sand lobster is
- (A) *Thenus orientalis* (B) *Palunirus polyphagus*  
(C) *Penacus monodon* (D) *Scilla serrata*
146. Antarctic krill is
- (A) deep water prawn (B) rock lobster  
(C) euphasiid (D) pelagic crab
147. The increase in concentration of a pollutant from one link in a food chain to another is
- (A) bio-accumulation (B) bio-magnification  
(C) bio-synthesis (D) None of the above
148. The physiological reaction of organisms to the length of day or night is
- (A) photo accumulation (B) photo magnification  
(C) photoperiodism (D) None of the above
149. Administration of medication for the purpose of preventing diseases or infection is
- (A) chemotherapy (B) chemoprophylaxis  
(C) chemoreception (D) chemotoxis
150. Reproductive behaviour of *Etroplus suratensis* indicates that it is
- (A) protandric (B) protogynic  
(C) monogamous (D) polygamous