

**KARNATAKA VETERINARY, ANIMAL AND FISHERIES SCIENCES
UNIVERSITY, BIDAR**

Post Graduate Entrance Examinations : 2021-22

PhD in Fisheries Resources & Management

Subject Code: P14

HALL TICKET NO:

Date: 10th May 2022

Max Marks : 100

Duration : 2 Hrs.

Choose the correct answer from the four options given under each question and fill the relevant circle with black ball point pen in the OMR Sheet.

Note: 1) Do not use pencil for marking on the OMR Sheet.

2) Marking on the OMR sheet for more than one option for a question will be rendered invalid.

1. Chumming is a process associated with which fishing method
 - A. Long line
 - B. Pole and line
 - C. Troll
 - D. Purse seine
- 2 A group of interbreeding organisms that represents the level of organization at which speciation begins
 - A. Population
 - B. Recruitment
 - C. Selectivity
 - D. Genus
3. In Chilika lake a special type of gill net used for catching crab called
 - A. Mori Jal
 - B. Sahalo Jal
 - C. Patua Jal
 - D. Noli jal

4. A gear that captures few species other than the targeted species is
- A. Selective gear
 - B. Pole and line
 - C. Non-selective gear
 - D. Fish traps
5. The narrowest continental shelf of Indian subcontinent is located
- A. Off Karnataka coast
 - B. Off Tamil Nadu Coast
 - C. Off Cape Comorin Coast
 - D. Off Maharashtra Coast
6. The stipulated Cod end mesh size for trawlers is
- A. 20 mm
 - B. 25 mm
 - C. 30 mm
 - D. 35 mm
7. Majumdar Committee model Marine Fisheries Regulations Bill was circulated to all maritime states and Union territories in the year
- A. 1978
 - B. 1977
 - C. 1979
 - D. 1980
8. Padu fishing is practiced in the lake'
- A. Pulicat
 - B. Vembanad
 - C. Chilka
 - D. Loktak
9. Beels / ox bow lake are mostly distributed in
- A. Tamil Nadu
 - B. Gujarat
 - C. Himachal Pradesh
 - D. Assam

10. The territorial water of a country extends up to
- A. 12 nautical miles
 - B. 200 nautical miles
 - C. 24 nautical miles
 - D. 36 nautical miles
11. The harvestable potential of marine fishery resources in the EEZ has been estimated at about
- A. 4.41 million tonnes
 - B. 2.88 million tonnes
 - C. 3.55 million tonnes
 - D. 1.64 million tonnes
12. The fishery management problems of Ganga river system is mainly concerned with
- A. Habitat deterioration
 - B. Over exploitation
 - C. Construction of dams
 - D. Juvenile fishing
13. According to the Govt. of India classification of reservoirs, the large reservoirs will have an area of
- A. > 5000 ha
 - B. < 5000 ha
 - C. 1000 – 5000 ha
 - D. < 1000 ha
14. Two populations in the same habitat breed in different times of a year
- A. Geographical isolation
 - B. Habitat isolation
 - C. Temporal isolation
 - D. Gametic isolation

15. Degree of “saturation” is also known as
- A. Forage ratio
 - B. Index of selection
 - C. Index of fullness
 - D. Index of preponderance
16. The eggs which can withstand dry and harsh environmental condition are known as
- A. Ostracophils
 - B. Xerophils
 - C. Aerophils
 - D. Pelagophils
17. Occurrence of senile fish indicates
- A. Overfishing
 - B. Underfishing
 - C. Migration
 - D. Moderate exploitation
18. The mean number of eggs per unit or weight of fish is known as
- A. Absolute fecundity
 - B. Relative fecundity
 - C. Population fecundity
 - D. Reproductive potential
19. Organism attached or clinging to water plants
- A. Nekton
 - B. Benthos
 - C. Periphyton
 - D. Plankton
20. Which of the following group of fishes select food particles by size but not by type/kind
- A. Carnivore
 - B. Omnivore
 - C. Detrivore
 - D. Plankton feeder

21. The magnitude of natural mortality in the sea depends on
- A. Salinity
 - B. Pollution
 - C. Predation
 - D. Temperature
22. Of the various processes occurring in a population, from management point of view, the most important one is
- A. Recruitment
 - B. Growth
 - C. Natural mortality
 - D. Fishing mortality
23. From the biological resource point of view, the best yield from a population should be near its
- A. MEY
 - B. MSY
 - C. SOY
 - D. OAC
24. Majority of tropical fishes are short lived because of
- A. Unknown factors
 - B. Environmental fluctuation is more
 - C. Environmental fluctuation is less
 - D. Food availability is less.
25. The word “virtual population” concept was introduced by
- A. Fry
 - B. Gulland
 - C. Munro
 - D. Graham
26. The fishery resource is unique because of
- A. Many species have wide spatial distribution
 - B. Several species show wide temporal variations in abundance
 - C. The resource cannot be seen visually
 - D. All of the above

27. Pauly's method for estimation of natural mortality holds good for
- A. Crustaceans
 - B. Molluscs
 - C. Finfish
 - D. All the above
28. Biologically t_0 has no meaning and is usually will have negative value.
- A. Growth starts before birth
 - B. Growth starts after birth
 - C. Mathematical error
 - D. None of these
29. In scale method of age determination, the scales are taken from
- A. Below the dorsal fin, above the lateral line
 - B. Above the caudal fin, below the lateral line
 - C. Near the caudal peduncle region
 - D. Near the anal fin region
30. Exploitation level is the ratio of
- A. Z/M
 - B. Z/F
 - C. M/Z
 - D. F/Z
31. Sea surface temperature data are used in remote sensing to find out
- A. Coral reef cover
 - B. Molluscan resource
 - C. Pearl oyster bed
 - D. Potential fishing zone
32. Elasmobranchs attain very large size and live longer because,
- A. Their growth rate is high
 - B. Their growth rate is slow
 - C. They are internal bearers
 - D. They inhabit marine waters

33. Banning of the fishing in a particular time to protect brood fishes is called
- A. Growth overfishing
 - B. Recruitment overfishing
 - C. Biological overfishing
 - D. Ecological overfishing
34. Probabilistic model is not favoured as a useful theoretical model because
- A. It requires voluminous data and more computational effort
 - B. It is applicable in the case of small sized fishes
 - C. It is applicable in the case of large sized fishes
 - D. It is applicable in the case of slow growing fishes
35. In fisheries biology L_{MAX} indicates
- A. The maximum size of the fish recorded in the commercial catch
 - B. The maximum theoretical length a fish can grow
 - C. The average length at which the fish attains maturity
 - D. The maximum length of immature fish
36. Stomach is large and sac like in
- A. Herbivorous fishes
 - B. Omnivorous fishes
 - C. Carnivorous fishes
 - D. Detritivorous fishes
37. The fundamental part of studies of the life history of fish
- A. Length estimation
 - B. Weight estimation
 - C. Growth estimation
 - D. Age estimation
38. World most comprehensive inventory of the global conservation status of biological species is
- A. Red data book
 - B. Biodiversity board
 - C. FAO
 - D. IUCN red list

39. The initial fertility of reservoir lasts for about
- A. 1-2 Years
 - B. 2-3 Years
 - C. 3-4 Year
 - D. 4-5 Years
40. Under Marine Fishing Regulation Act, area reserved for Mechanized craft is
- A. 12 nautical miles
 - B. 10 nautical miles
 - C. 24 nautical miles
 - D. 6 nautical miles
41. Government of India legislated biodiversity Act and biodiversity rules in the year
- A. 2002 & 2004 respectively
 - B. 2000 & 2002 respectively
 - C. 2004 & 2006 respectively
 - D. 1998 & 2000 respectively
42. Closure of mechanized vessel along east and west coast is one of the restriction being followed under
- A. Indian fisheries Act 1897
 - B. Costal Aquaculture Authority
 - C. Code of conduct for responsible fisheries
 - D. Marine fishing regulation Act 2004
43. Exploitation of fish stock at right age is called as
- A. Underfishing
 - B. Overfishing
 - C. Eumetric fishing
 - D. Virgin stock
44. If abundance of a stock is above the MSY the stock is considered as
- A. Underexploited
 - B. Overexploited
 - C. Virgin stock
 - D. Moderately exploited

45. Species that can produce only 1 type of gametes are called
- A. Monocious
 - B. Dioecious
 - C. Triocious
 - D. Parthenogenic
46. Vulnerable species means suspected reduction of
- A. 20% in last 10years
 - B. 50% in last 10 years
 - C. 80% in last 10 years
 - D. 90% in last 10 years
47. Shanon-Weiner Index incorporates
- A. Both the number of species and richness
 - B. Number of individuals
 - C. Number of species
 - D. Number of individuals and dominance
48. Sustainable fishing mean
- A. Catch may be good in one year and decline subsequently
 - B. Catch may go on decline over the years.
 - C. Catch would more or less remain stable for a long period of time.
 - D. Wide fluctuations of catch over a long period of time
49. Coastal Regulation Zones are notified by the Govt. of India in.
- A. 1991
 - B. 1993
 - C. 1995
 - D. 2001
50. 'Physostomous' condition of gas bladder refers to
- A. Connection with oesophagus
 - B. No connection with oesophagus
 - C. Connection with Weberian apparatus
 - D. Alternated

51. The optimal temperature range of high-altitude waters supporting cold water fisheries in India

- A. 0 to 15 °C
- B. 15 to 18 °C
- C. 10 to 12 °C
- D. 12 to 16°C

52. The distribution of the Cod *Gadus morhua* is restricted to

- A. Pacific Ocean
- B. Atlantic Ocean
- C. Antarctic Ocean
- D. Indian Ocean

53. Costal Regulation Zone is being replaced by

- A. CBZ
- B. CMZ
- C. RCZ
- D. SEZ

54. Schaefer model estimates

- A. Mortality
- B. Yield
- C. Gear selectivity
- D. Recruitment

55. In India, the state having highest brackishwater resources is

- A. Karnataka
- B. West Bengal
- C. Kerala
- D. Gujarat

56. The place which is commonly called as 'Biological Paradise'
- A. Gulf of kutch
 - B. Gulf of mannar
 - C. Gujarat
 - D. Goa
57. Gular plate is present in
- A. *Sardinella longiceps*
 - B. *Katsuwonus pelamis*
 - C. *Elops machnata*
 - B. *Leiognathus splendens*
58. India is being home for more than -----per cent of global fish biodiversity
- A. 13.50
 - B. 11.72
 - C. 14.50
 - D. 10.55
59. The first United Nations conference on the Law of Sea (UNCLOS I) was held in Geneva in the year.
- A. 1950
 - B. 1954
 - C. 1956
 - D. 1958
60. Fish stocks occur both inside the Exclusive Economic Zone (EEZ) and on the High Seas.
- A. Virtual population
 - B. Unit stock
 - C. Cohort
 - D. Straddling

61. A catch quota from a particular stock, allocated to a company is referred to as

- A. Enterprise Allocation
- B. Allowance
- C. Individual Quota
- D. Total tonnage of fish

62. First country to introduced Individual Transferable Quota system is

- A. Canada
- B. England
- C. Norway
- D. New-Zeland

63. The distinguishing feature of marine resource exploitation is

- A. Non exclusivity in the harvesting
- B. Open access and externality in harvesting
- C. Excess of fishing effort
- D. All of above

64. Annealing is also called as

- A. Hybridization
- B. Sequence
- C. Allele
- D. Isozymes

65. A short synthetic oligonucleotide

- A. Primer
- B. Plasmid
- C. Chromosome
- D. DNA

66. The length of the shorter arm of a chromosome

- A. Arm ratio
- B. Centromeric index
- C. Relative length of the chromosome
- D. Metacentric

67. The distance from the anterior tip of the snout to the caudal base is
- A. Pre-dorsal length
 - B. Total length
 - C. Standard length
 - D. Postorbital length
68. The length of the shorter arm of a chromosome
- A. Arm ratio
 - B. Relative length of the chromosome
 - C. Metacentric
 - D. Centromeric index
69. Bottom dwelling fishes are characterized by
- A. Filiform
 - B. Dorso-ventrally flattened
 - C. Laterally compressed
 - D. Taeniform body
70. Which ELEFAN system is used to study length frequency data
- A. ELEFAN 5
 - B. ELEFAN 4
 - C. ELEFAN 3
 - D. ELEFAN 0
71. Chlorophyll estimation forms a major input data in
- A. Logistic model
 - B. Box model
 - C. Stochastic model
 - D. Analytical model
72. Mud banks from along the coast of
- A. Andhra
 - B. Tamil Nadu
 - C. Kerala
 - D. Orissa

73. The respiratory pigment in prawn is
- A. Haemoglobin
 - B. Haemocyanin
 - C. Haemoerythrin
 - D. Bilurubine
74. The migration performed by eel is known as
- A. Catadromous
 - B. Anadromous
 - C. Local
 - D. Patamodromous
75. The effects of dam on fishery can be
- A. Obstructional and ecological
 - B. Social and Ecological
 - C. Management and planning
 - D. Management and conservation
76. Which of the constant is referred as growth coefficient
- A. t_0
 - B. K
 - C. ω
 - D. L_t
77. Tagging to separate different populations is not successful because
- A. It is difficult to tag fish
 - B. Tag recovery is poor
 - C. Tagged fishes escape
 - D. Tagged fishes may die
78. Group of organisms interacting and competing for the same resource
- A. Ecosystem diversity
 - B. Species diversity
 - C. Genetic biodiversity
 - D. Interacting diversity

79. Most polluted river among the tributary of Indus river system is
- A. Rabi
 - B. Sutlej
 - C. Jhelum
 - D. Chenab
80. A conical bag net operated in shallow waters and estuaries where tidal currents are strong
- A. Trap settings
 - B. Stow net
 - C. Fyke nets
 - D. Aerial traps
81. The most efficient method of catching demersal fish seasonally is
- A. Bottom trawl
 - B. Midwater trawl
 - C. Gill netting
 - D. Long line
82. Heavy chain attached to foot rope of trawl net is known as
- A. Anchor chain
 - B. Otter chain
 - C. Buoy chain
 - D. Trickler chain
83. The most dominant group of inland fish in India is
- A. Carps
 - B. Cat fishes
 - C. Feather backs
 - D. Prawns

84. Floods can be prevented by
- A. Afforestation
 - B. Cutting the forest
 - C. Tilling the land
 - D. Removing the top soil
85. Elasmobranchs store a product in the tissues. This is called
- A. EDTA
 - B. TMAO
 - C. Urea
 - D. Ammonia
86. In a virgin stock of fish, Z is equal to
- A. Natural mortality
 - B. Fishing mortality
 - C. Both natural mortality and fishing mortality
 - D. Fishing intensity
87. Strong acid is secreted in the stomach of
- A. Herbivorous fishes
 - B. Omnivorous fishes
 - C. Carnivorous fishes
 - D. Detritivorous fishes
88. A rare crustacean which does not moult is
- A. Pea crab
 - B. Spider crab
 - C. Hermit crab
 - D. Cross crab

89. Adaptive radiation in mollusca is most dominant in the class
- A. Gastropoda
 - B. Scaphopoda
 - C. Bivalvia
 - D. Cephalopoda
90. Which of the following is not a quantitative method of gut content analysis?
- A. Numerical
 - B. Volumetric
 - C. Tritrimetric
 - D. Gravimetric
91. Catch per unit effort is the
- A. Total number
 - B. Total weight
 - C. Total number and weight
 - D. Total weight per recruitment of fish caught in unit time where the crafts and gear employed are similar in all respect.
92. The first Indian marine park was set up at
- A. Malvan
 - B. Sundarbans
 - C. Tuticorin
 - D. Jamnagar
93. Southern ocean is dominated by which fisheries
- A. Whale fishery
 - B. Krill fishery
 - C. Clupeoids fishery
 - D. Percoids fishery

94. Area which remains under water at high tide and remains terrestrial at low tide

- A. Intertidal zone
- B. Beach
- C. Wetland
- D. Subtidal zone

95. Biomagnification is related to

- A. Pollution
- B. Turbidity
- C. Turbulence
- D. Water currents

96. The conservation measure is more effective in case of open assess fisheries

- A. MPA
- B. Banning
- C. Mesh size regulation
- D. Closed season

97. These otter board are suitable for stony and uneven ground

- A. Oval type
- B. V-shaped
- C. Rectangular type
- D. A and B

98. Ranching is for

- A. Natural mortality
- B. Increasing catch
- C. High yielding variety
- D. Exotic fish

99. Management method adopted by fishing managers include

- A. Controlling number of boats
- B. Controlling the mesh size
- C. Both 'A' and 'B'
- D. Ban fishing completely

100. Sustainable fishing means

- A. Catch may be good in one year and decline subsequently
- B. Catch may go on decline over the years.
- C. Catch would more or less remain stable for a long period of time.
- D. Wide fluctuations of catch over a long period of time
