

Sl. No. : 30000057

SIFT/16

Register  
Number

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2016

Paper I

**FISHERIES TECHNOLOGY AND NAVIGATION  
ENGINEERING  
(Diploma Standard)**

Time Allowed : 3 Hours]

[Maximum Marks : 300

Read the following instructions carefully before you begin to answer the questions.

**IMPORTANT INSTRUCTIONS**

1. This Booklet has a cover (this page) which should not be opened till the invigilator gives signal to open it at the commencement of the examination. As soon as the signal is received you should tear the right side of the booklet cover carefully to open the booklet. Then proceed to answer the questions.
2. This Question Booklet contains 200 questions. Prior to attempting to answer the candidates are requested to check whether all the questions are there in series without any omission and ensure there are no blank pages in the question booklet. In case any defect in the Question Paper is noticed it shall be reported to the Invigilator within first 10 minutes.
3. Answer all questions. All questions carry equal marks.
4. You must write your Register Number in the space provided on the top right side of this page. Do not write anything else on the Question Booklet.
5. An Answer Sheet will be supplied to you separately by the Invigilator to mark the answers.
6. You will also encode your Register Number, Subject Code, Question Booklet Sl. No. etc. with Blue or Black ink Ball point pen in the space provided on the side 2 of the Answer Sheet. If you do not encode properly or fail to encode the above information, action will be taken as per commission's notification.
7. Each question comprises *four* responses (A), (B), (C) and (D). You are to select **ONLY ONE** correct response and mark in your Answer Sheet. In case you feel that there are more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each question. Your total marks will depend on the number of correct responses marked by you in the Answer Sheet.
8. In the Answer Sheet there are four circles (A), (B), (C) and (D) against each question. To answer the questions you are to mark with Blue or Black ink Ball point pen **ONLY ONE** circle of your choice for each question. Select one response for each question in the Question Booklet and mark in the Answer Sheet. If you mark more than one answer for one question, the answer will be treated as wrong. e.g. If for any item, (B) is the correct answer, you have to mark as follows :  

(A) ● (C) (D)
9. You should not remove or tear off any sheet from this Question Booklet. You are not allowed to take this Question Booklet and the Answer Sheet out of the Examination Hall during the examination. After the examination is concluded, you must hand over your Answer Sheet to the Invigilator. You are allowed to take the Question Booklet with you only after the Examination is over.
10. The sheet before the last page of the Question Booklet can be used for Rough Work.
11. Failure to comply with any of the above instructions will render you liable to such action or penalty as the Commission may decide at their discretion.
12. Do not tick-mark or mark the answers in the Question booklet.

SPACE FOR ROUGH WORK

XXXXXXXXXXXX

1. The spiracle present both in sharks and rays is corresponding to  
(A) Nostril  
~~(B)~~ Vestigial first gill slit  
(C) Vestigial second gill slit  
(D) Vestigial third gill slit
2. Stiffening of the muscles of an animal shortly after death  
(A) Autolysis  
(C) Asphyxia  
~~(B)~~ Rigor mortis  
(D) Hyperemia
3. Cyclic fluctuations in annual growth rates reflecting variations in feeding and metabolism in fishes since they are  
(A) warm blooded  
~~(B)~~ cold blooded  
(C) having short life span  
(D) having long life span
4. Males of some deep sea fishes are obligatory parasites on the females of the same species. An example is  
(A) Pacific Lamprey Lampetra tridentata  
(B) Deep sea eel simenchelys parasiticus  
~~(C)~~ Deep sea angles fish, ceratias  
(D) Sea lamprey petromyzon marinus
5. The fish heart is constructed fundamentally to afford  
(A) double circulation  
(C) multiple circulation  
~~(B)~~ a single circulation  
(D) complicated circulation
6. Gas bladders are not present in  
(A) Cat fishes  
~~(B)~~ Cyclostomes  
(C) African lung fish Ptotopterus  
(D) American lung fish Lepidosiren

7. The digenetic trematode responsible for black spot disease in fresh water fishes is  
 (A) Trichodina sp. ~~(B)~~ Diplostomum sp.  
 (C) Myxobolus sp. (D) Leptotheca sp.
8. The term 'Spat' is related to  
 (A) Prawn (B) Lobster  
 (C) Crab ~~(D)~~ Oyster
9. In fresh water fishes, the white spot disease is caused by the protozoan ciliate  
 (A) Dactylogyrus lamellatus  
~~(B)~~ Ichthyophthirius multifiliis  
 (C) Myxosporidia spp  
 (D) Myxobolus lieni
10. In Nursery ponds, soap-oil emulsion is sprayed over the pond surface about 12 to 24 hrs. prior to stocking of spawn to eradicate  
 (A) Spawn of unwanted fishes  
 (B) Aquatic weeds  
 (C) Weed fishes  
~~(D)~~ Aquatic insects
11. The floating weed, water hyacinth belongs to the genus  
 (A) Pistia (B) Salvinia  
~~(C)~~ Eichhornia (D) Azolla
12. Rice bran, one of the commonly used fish feed ingredients has the protein content of  
~~(A)~~ 10-12 percent (B) 15-20 percent  
 (C) 1-2 percent (D) 25-30 percent
13. The Plankton eating surface feeder include  
 (A) Labeo rohita (B) Cirrhinus mrigala  
~~(C)~~ Catla catla (D) Labeo calbasis

14. When the observations are arranged in ascending or descending order of magnitude pertaining to fish or fishery data, the middle value is called
- (A) Mean ~~(B)~~ Median  
 (C) Mode (D) Average
15. Annuli of Otolith of Fish is useful in the estimation
- ~~(A)~~ Age of Fish  
 (B) Weight of Fish  
 (C) Length of Fish  
 (D) Mortality rate of Fish
16. The exploitation ratio (E) of a Fish stock can be estimated by the relation
- ~~(A)~~  $E = \frac{F}{Z}$  (B)  $E = \frac{Z}{F}$   
 (C)  $E = \frac{M}{F}$  (D)  $E = \frac{F}{M}$
17. In the equation explaining the mortality parameters of fishes  $Z = F + M$ , 'F' denotes
- (A) Total Instantaneous Mortality  
 (B) Instantaneous Natural Mortality  
~~(C)~~ Instantaneous Fishing Mortality  
 (D) Mortality due to other Fish population
18. In the Von Bertalanffy's growth equation of Fish, the parameter 'K' denotes
- (A) Asymptotic length  
~~(B)~~ Growth co-efficient  
 (C) Orbitaly origin of growth  
 (D) Time
19. One among the following four is not the clam species that constitute fishery in Indian waters
- (A) Villorita cyprinoides  
 (B) Paphia malabarica  
 (C) Meretrix casta  
~~(D)~~ Crassostrea madrasensis

20. The compass bowl of wet card magnetic compass is filled with
- (A) Distilled water + ethyl alcohol
  - (B) Distilled water
  - (C) Ethyl alcohol
  - (D) Distilled water + acetic acid
21. The life line of buoyant apparatus should have atleast \_\_\_\_\_ thickness.
- (A) 8 mm diameter
  - (B) 8 cm diameter
  - (C) 80 mm diameter
  - (D) 80 cm diameter
22. The term "Heterosis" is related to
- (A) Polyploidy
  - (B) Androgenesis
  - (C) Gynogenesis
  - (D) Hybridization
23. The lubber line of magnetic compass is aligned with \_\_\_\_\_ of a vessel.
- (A) Fore and aft centre line
  - (B) Beam
  - (C) Water line
  - (D) Horizon line
24. Which of the following is useful in launching the life boat from a ship?
- (A) Winch
  - (B) Davit
  - (C) Windlass
  - (D) Line hauler

25. The short period variations of certain meteorological elements in the atmosphere is termed as
- (A) Climate (B) ~~Weather~~  
(C) Monsoon (D) Season
26. The search and rescue transponder operates on a frequency of
- (A) 9 MHz (B) 9 KHz  
(C) 9 Hz (D) ~~9 GHz~~
27. An optical instrument which is used for measuring vertical and horizontal angles between two objects is
- (A) Compass  
(B) Chronometer  
(C) Log  
(D) ~~Sextant~~
28. The name of a combined machine for heaving the chain cable and mooring hawsers is
- (A) Chain Locker (B) Winch  
(C) ~~Windlass~~ (D) Tackles
29. The technique used to interlock the strands so as to join two ropes or form an eye at the end of a rope is called as
- (A) Hitching (B) ~~Splicing~~  
(C) Whipping (D) Mousing
30. Which of the following fibres are easily damaged by acid and alkaline substances?
- (A) Synthetic fibres  
(B) Animal fibres  
(C) ~~Vegetable fibres~~  
(D) Steel threads

31. Match the List I with List II and select the correct answer using the codes given below

- | List I |              | List II |                         |
|--------|--------------|---------|-------------------------|
| (a)    | Squalene     | 1.      | Fish skin and head      |
| (b)    | Gelatin      | 2.      | Vertebrae               |
| (c)    | Fish calcium | 3.      | Skins and Bones of fish |
| (d)    | Fish glue    | 4.      | Shark liver oil         |

- |                | (a) | (b) | (c) | (d) |
|----------------|-----|-----|-----|-----|
| <del>(A)</del> | 4   | 3   | 2   | 1   |
| (B)            | 3   | 1   | 2   | 4   |
| (C)            | 2   | 1   | 4   | 3   |
| (D)            | 1   | 2   | 3   | 4   |

32. Ambergris is a metabolic product of

- (A) Octopus
- (B) Seals
- (C) Porpoises
- ~~(D)~~ Whales

33. Species of seaweed used for production of carageenan

- (A) Hormophyra dictyota
- (B) Gelidium cartilagineum
- ~~(C)~~ Chondrus crispis
- (D) Ulva rigida

34. Find out which one of the following is not the use of seaweeds

- (A) Food
- (B) Fodder
- (C) Fertilizer
- ~~(D)~~ Growth promoter



35. Duration of cold smoking should not exceed
- (A) 24 hours (B) 30 hours  
~~(C) 72 hours~~ (D) 48 hours
36. Myofibrillar protein covers \_\_\_\_\_% of the total protein.
- (A) 52-68 (B) 60-70  
~~(C) 66-77~~ (D) 70-80
37. The range of protein content of fish meat is
- (A) 16-22% ~~(B) 15-24%~~  
(C) 10-15% (D) 8-12%
38. In salt cured fish, the most important spoilage microorganisms are halophiles that will not grow at
- (A) 6% salt level (B) 7% salt level  
(C) 8% salt level ~~(D) 10% salt level~~
39. \_\_\_\_\_ can be defined as one's ability to get others to willingly follow.
- (A) Guidance ~~(B) Leadership~~  
(C) Coordinator (D) Leader
40. \_\_\_\_\_ is a systematic method for collecting, analysing and using information's to answer questions about projects, policies and programs.
- (A) Project implementation  
(B) Project analysis  
(C) Project prediction  
~~(D) Project evaluation~~

41. (a) In natural spawning, Clarias sp. make 5-8 cm deep hollow nests in shallow waters.  
 (b) The egg are adhesive in nature.
- ~~(A)~~ (a) and (b) are correct  
 (B) (a) and (b) are wrong  
 (C) (a) is correct and (b) is wrong  
 (D) (a) is wrong and (b) is correct
42. (a) The fine textured soils like clay are more suitable for pond farms.  
 (b) They have a greater surface area and therefore absorb more nutrients and retain and release them for organic production in ponds.
- ~~(A)~~ (a) and (b) are correct  
 (B) (a) and (b) are wrong  
 (C) (a) is correct and (b) is wrong  
 (D) (a) is wrong and (b) is correct
43. Submerged weed, which is completely submerged under water but may be rooted in the bottom soil
- (A) Typha (B) Eichhornia  
~~(C)~~ Hydrilla (D) Ceratophyllum
44. The soil is smooth, sticky and plastic when there is a moist
- (A) sand (B) silt  
~~(C)~~ clay (D) alluvial soil
45. A binder which is commonly used in fish feed industry
- ~~(A)~~ Carboxy methyl cellulose  
 (B) Butylated hydroxy anisole  
 (C) Sodium benzoate  
 (D) Ethoxyquin

46. Saprolegniasis is a disease affecting the skin and gills of freshwater fish and crustaceans caused by
- ~~(A)~~ Fungi (B) Bacteria  
(C) Virus (D) Parasite
47. Excessive dietary lipid levels can cause nutritional diseases such as
- (A) Hemorrhage in eyes  
(B) Skin lesions  
(C) Muscle atrophy  
~~(D)~~ Fatty liver
48. High protein diet is required for \_\_\_\_\_ species.
- (A) Predatory (B) Omnivorous  
(C) Herbivorous ~~(D)~~ Carnivorous
49. The fish which is called as 'aquatic chicken'.
- (A) Catfish (B) Common carp  
(C) Catla ~~(D)~~ Tilapia
50. (a) In shrimp farm, biofiltration pond can be stocked with mullet.  
(b) Milk fish can also be stocked with mullet to filter the pond water.
- (A) (a) is wrong and (b) is correct  
~~(B)~~ (a) and (b) are correct  
(C) (a) is correct and (b) is wrong  
(D) (a) and (b) are wrong
51. To keep essential trace elements in synthetic seawater medium \_\_\_\_\_ is added.
- (A)  $\text{NaNO}_3$  ~~(B)~~ EDTA  
(C) Boron (D) Thymine

52. The mid water fishes living in aphotic zone of the sea are adopted for
- (A) Herbivorous mode of feeding
  - (B) Carnivorous mode of feeding
  - (C) Planktonivorous mode of feeding
  - ~~(D)~~ Predatory mode of feeding
53. The Japanese term for the large destructive waves that occasionally roll into their harbors is
- (A) Surfing
  - ~~(B)~~ Tsunami
  - (C) Surging breaker
  - (D) Rogue waves
54. Among the whales, the largest whale is
- (A) Killer whale
  - (B) Sperm whale
  - (C) Humpback whale
  - ~~(D)~~ Blue whale
55. The term 'sea cow' denotes manatees and
- (A) Seals
  - ~~(B)~~ Dugongs
  - (C) Walruses
  - (D) Dolphin
56. Income elasticity of demand for high value fishes would be
- (A) = 1
  - (B) = 0
  - ~~(C)~~ > 1
  - (D) < 1
57. The major constituent among the dissolved components of the sea water is
- (A) Sodium
  - ~~(B)~~ Chloride
  - (C) Sulphate
  - (D) Magnesium

58. The ratio between the mid ship sectional area of a boat to the area of circumscribing rectangle is called
- (A) Mid ship section coefficient
  - (B) Water line co-efficient
  - (C) Block co-efficient
  - (D) Prismatic co-efficient
59. The weight of a FRP boat in comparison with equivalent wooden boat will be
- (A) Lighter by about 25%
  - (B) Lighter by about 50%
  - (C) Lighter by about 75%
  - (D) Lighter by about 40%
60. The ratio between the velocity of the boat and the square root of its length is called
- (A) Block co-efficient
  - (B) Froude's number
  - (C) Prismatic co-efficient
  - (D) Water line co-efficient
61. According to law of floatation, the weight of a floating object is equal to
- (A) Weight of the displaced fluid
  - (B) Volume of the displaced fluid
  - (C) Weight loss experienced by the floating body.
  - (D) Weight of the floating body below water line

62. The portion of webbing which forms the boarder around the main webbing in a purse seine is called
- ~~(A)~~ Selvedge (B) Bunt  
(C) Skiff (D) Flapper
63. The difference between the draught forward and draught aft is called
- (A) Camber (B) Beam  
~~(C)~~ Trim (D) Heel
64. Non-rigid boat constructed with planks sewn together with coir rope is
- (A) Catamaran  
(B) Dry out canoe  
~~(C)~~ Mosula boat  
(D) Thoni
65. Dug out canoes are popularly used in
- ~~(A)~~ Kerala back waters  
(B) Kanyakumari coast of Tamil Nadu  
(C) Orissa Coast  
(D) Gujarat Coast
66. Chromated zinc chloride is used as a preservative to preserve
- (A) Gill net  
~~(B)~~ Boat building timber  
(C) Trawl net  
(D) Purse seine

67. \_\_\_\_\_ shows the financial position and stability of the business at a particular time

- (A) Income statement
- (B) Cash flow statement
- (C) Profit and loss account
- ~~(D) Balance sheet~~

68. The sequence of which projects are planned and carried out is called

- (A) Pre-feasibility studies
- (B) Project evaluation
- (C) Project monitoring
- ~~(D) Project cycle~~

69. If demand change is greater than supply change

- ~~(A) Price rise~~
- (B) Price fall
- (C) No change in price
- (D) Erratic change in price

70. Elasticity of demand is determined by all the following factors except

- (A) Nature of commodity
- (B) Substitutes
- (C) Time
- ~~(D) Government policies~~

71. Which of the following will cause a shift of demand curve from its original position except?

- (A) Change in price of product
- (B) Change in price of substitute
- ~~(C) Increase in subsidy on raw materials~~
- (D) Increase in disposable income

72. Which of the following does not fall under classification of Cooperatives societies
- (A) Area of operation
  - (B) Purpose
  - (C) Economic activity.
  - ~~(D) Business interest~~
73. The ideal fishing gear to carryout the fishery resource survey is
- ~~(A) Demersal trawl net~~
  - (B) Gill net
  - (C) Long line
  - (D) Purse seine
74. The most important aspect in the biological survey of fisheries resources include the sampling and analysis of
- ~~(A) Ichthyoplankton~~
  - (B) Phytoplankton
  - (C) Zooplankton
  - (D) Nekton
75. The shoal forming fish that constitutes notable fishery along the west coast in the states of Karnataka and Kerala is
- (A) Lesser sardine
  - (B) Tuna
  - ~~(C) Mackerel~~
  - (D) Seer Fish



6. The temperature to which the fuel has to be heated to produce sufficient vapour to ignite when brought in contact with flame is termed as
- (A) Distillation temperature
  - (B) Ignition temperature
  - ~~(C) Flash point~~
  - (D) Pour point
77. The ideal lubrication system for big marine diesel engine is
- (A) Grease oiling
  - (B) Splash lubrication
  - (C) Mist lubrication
  - ~~(D) Force feed lubrication~~
78. In four stroke diesel engine the tappet clearances of the inlet and exhaust valves are adjusted according to the
- (A) size of the engine
  - (B) number of cylinders in the engine
  - ~~(C) firing order of the engine~~
  - (D) strokes of the engine
79. In the fuel pump of a diesel engine, the plunger has two types of movements such as vertical movement and
- ~~(A) lateral movement~~
  - (B) circular movement
  - (C) zig-zag movement
  - (D) reciprocating movement
80. The leakage of compressed air and combustion gas through the gap between piston and liners is prevented by
- (A) 'O' rings
  - ~~(C) Compression rings~~
  - (B) Oil scraper rings
  - (D) 'G' link

81. The centrifugal pump with volute has a chamber so as to gradually reduce the velocity of liquid leaving the impeller is called
- (A) ~~Vortex~~ (B) Grid  
(C) Bilge (D) Casing
82. The amount of energy or work required to raise 75 kilogram of weight through one meter in one second is called one
- (A) Watt (B) Newton  
(C) ~~Horse power~~ (D) Kilowatt
83. The formula  $\frac{2\pi NT}{4500}$  where  $N = \text{rpm}$   $T = \text{Torque}$  is used to estimate
- (A) SHP (B) EHP  
(C) ~~BHP~~ (D) THP
84. The effective horse power is the sum of HP required to overcome the hull resistance at the towing speed and
- (A) HP required to overcome frictional resistance at the propeller shaft  
(B) HP required to overcome frictional resistance inside the cylinder  
(C) ~~HP required to overcome the drag of the trawl gear~~  
(D) HP required to overcome the resistance caused collectively by wind, waves and currents
85. \_\_\_\_\_ can be defined as the process of organising people and resources effectively, so as to direct activities towards the common goal and objectives
- (A) ~~Administration~~ (B) Leadership  
(C) Coordination (D) Supervision
86. To facilitate easy cranking of the engine, a valve provided on the cylinder head to reduce the compression pressure is
- (A) ~~De-compression valve~~ (B) Starting valve  
(C) Inlet valve (D) Exhaust valve

87. The outer frame of the generator is called as  
 (A) Brush ~~(B) Yoke~~  
 (C) Armature (D) Commutator
88. The general term for the propagation of sound in water is  
 (A) Hydrodynamics (B) Hydroelectricity  
~~(C) Hydroacoustics~~ (D) Hydromechanical
89. Expand SONAR  
 (A) Sound Nautical And Ranging (B) Solar Navigation And Ranging  
~~(C) Sound Navigation And Ranging~~ (D) Sound Navigation And Radiation
90. Which part of Echosounder generates electrical pulse at a particular frequency?  
~~(A) Transmitter~~ (B) Transducer  
 (C) Receiver (D) Recorder
91. The equipment which is working with radio wave is  
 (A) SONAR ~~(B) RADAR~~  
 (C) Net Sonde (D) Echosounder
92. Which of the following instrument is used to measure the specific gravity of the electrolyte of battery?  
 (A) Hygrometer (B) Ammeter  
 (C) Voltmeter ~~(D) Hydrometer~~
93. Which of the following chemical acts as depolariser in dry cell?  
 (A) Carbon rod (B) Zinc sheet  
~~(C) Manganese dioxide~~ (D) Sulphuric acid
94. Ohm meter is used to measure  
 (A) The electrical energy (B) The electrical power  
 (C) The electrical current ~~(D) The resistance of dead circuit~~

95. The LH and FSH in fish are  
 (A) Growth hormones (B) Adrenal Cortical steroids  
~~(C) Gonodotropins~~ (D) Estrogens
96. A set of sense organs restricted to the fishes and aquatic stages of amphibian is  
 (A) Facial nerve (B) Acoustic nerve  
 (C) Vagous nerve ~~(D) Lateral line~~
97. In sharks the eggs are strongly  
 (A) Isolecithal ~~(B) Telolecithal~~  
 (C) Holoblastic (D) Meroblastic
98. The copulatory organ present in male guppy is called  
 (A) Gonad ~~(B) Gonopodium~~  
 (C) Spermatophore (D) Clasper
99. Fishes from deeper waters in general fill the gas bladder mostly with  
 (A) Nitrogen ~~(B) Oxygen~~  
 (C) Carbon dioxide (D) Ammonia
100. Scorpion fishes do not have venom glands in the spines of  
~~(A) Pectoral fin~~ (B) Pelvic fin  
 (C) Dorsal fin (D) Anal fin
101. An example for protandric hermaphrodites, being male first, female later is  
 (A) Perca (B) Micropterus  
~~(C) Serranus~~ (D) Stizostedion
102. An Air breathing structure present in climbing perches is called  
 (A) Otolith (B) Statolith  
 (C) Pituitary ~~(D) Labyrinth~~

103. Pouch-gills are present in  
~~(A)~~ Jawless fishes (B) Rays  
(C) Sharks (D) Chimaeras
104. The shark skull is composed of  
~~(A)~~ Single unit cartilage  
(B) Double unit cartilage  
(C) Multiple unit cartilage  
(D) Well developed bone
105. The modern bony fishes had their origin as long as  
(A) 300 million years ~~(B)~~ 200 million years  
(C) 500 million years (D) 100 million years
106. Toxins produced by moulds on fish feed under humid and high temperature are called  
(A) Botulism (B) Cyanogen  
(C) Peroxide ~~(D)~~ Aflatoxins
107. The reciprocal of feed conversion ratio expressed in percentage is called  
(A) Condition factor  
(B) Growth conversion efficiency  
(C) Instantaneous growth rate  
~~(D)~~ Feed conversion efficiency
108. The scientific name of giant gourami is  
~~(A)~~ Osphronemus goramy (B) Trichogaster pectoralis  
(C) Helostoma temmencki (D) Anabas testudineus
109. Govindsagar reservoir is present in the State of  
(A) Uttar Pradesh (B) Andhra Pradesh  
(C) West Bengal ~~(D)~~ Punjab

110. The chemical formula for the fish poison Aldrin is
- (A) ~~C<sub>12</sub>H<sub>8</sub>Cl<sub>3</sub>~~ (B) C<sub>12</sub>H<sub>8</sub>Cl<sub>8</sub>O  
(C) C<sub>12</sub>H<sub>8</sub>Cl<sub>6</sub>O (D) C<sub>12</sub>H<sub>8</sub>Cl<sub>10</sub>
111. The ecotone or buffer zone between fresh water of the stream and salt water of the sea is called as
- (A) Fjord (B) Back water  
(C) Lagoon (D) ~~Estuary~~
112. The largest river system in India is
- (A) Yamuna (B) ~~Ganga~~  
(C) Godavari (D) Brahmaputra
113. In fish population dynamics, the yield per recruit model of Beverton and Holt is an example for
- (A) Holistic model  
(B) ~~Analytical model~~  
(C) Surplus production model  
(D) Virtual population analysis
114. The rate of change in the dependent variable per unit change in the independent variable is denoted by
- (A) Correlation co-efficient  
(B) 'F' value  
(C) ~~Regression co-efficient~~  
(D) 't' value
115. The positive square root of arithmetic mean of the squares of deviations of the given observation from their arithmetic mean is called as
- (A) Mode  
(B) Median  
(C) ~~Standard deviation~~  
(D) Standard error

116. Among the species that constitute lobster fishery of India, one of the following four is not a species belong to spiny lobster group
- (A) Panulirus homarus
  - ~~(B) Thenus unimaculatus~~
  - (C) Panulirus polyphagus
  - (D) Panulirus ornatus
117. The flying fish fishery of India is limited to
- (A) Bay of Bengal of Tamil Nadu
  - (B) Kerala coast
  - ~~(C) Coromandel coast of Tamil Nadu~~
  - (D) Karnataka coast
118. Which of the following comes under organic manure?
- ~~(A) Cow dung~~
  - (B) Urea
  - (C) Super phosphate
  - (D) Ammonium sulphate
119. \_\_\_\_\_ is an example for price strategy element of marketing mix.
- ~~(A) Discount~~
  - (B) Transport
  - (C) Advertising
  - (D) After sales service
120. Oil sardine is an important fish that constitutes notable marine fishery of India as the
- ~~(A) Pelagic fishery resource~~
  - (B) Demersal fishery resource
  - (C) Deep sea fishery resource
  - (D) Estuarine fishery resource





127. The geometric centre of the water plane area at which the ship is floating is called as
- (A) Centre of buoyancy
  - (B) Centre of gravity
  - ~~(C) Centre of floatation~~
  - (D) Metacentre floatation
128. The difference between the depth and draft of a vessel is called as
- ~~(A) Free board~~
  - (B) Camber
  - (C) Breadth
  - (D) Draught
129. The horizontal distance between the forward and aft perpendicular of a boat is called as
- (A) Forward perpendicular
  - ~~(B) Length between perpendicular~~
  - (C) Aft perpendicular
  - (D) Mean draft
130. In the preparation of chitin ——— process is not involved
- (A) Deproteinization
  - (B) Demineralization
  - (C) Deacetylation
  - ~~(D) Decarboxylation~~
131. The main component of fish skin is
- ~~(A) Collagen~~
  - (B) Gelatin
  - (C) Shagreen
  - (D) Factice

132. Fish liver oil is rich in vitamins  
(A) A and B  
(C) B and D  
~~(B)~~ A and D  
(D) B and C
133. Catla mainly feeds on  
~~(A)~~ Zoo-Plankton  
(C) Plant debris  
(B) Phyto Plankton  
(D) Aquatic plants
134. In line fish transport, which of the following method is not in practice.  
(A) Plastic bag method  
(B) Waterless method  
~~(C)~~ Tunnel method  
(D) Tank method
135. From the following pairs, choose the incorrect pair  
(A) Hot air dryer - Kiln dryer  
(B) Contact dryer - Drum dryer  
(C) Solar dryer - Tent dryer  
~~(D)~~ Artificial dryer - Rack dryer
136. Which of the following attribute of fish that does not affect the falling rate period of drying?  
(A) Fat content  
(B) Water content  
(C) Shape of fish  
~~(D)~~ Protein content
137. Which type of smoking is popular in India?  
(A) Liquid smoking  
~~(B)~~ Hot smoking  
(C) Electric smoking  
(D) Cold smoking

138. Scientific name for silver pompano is

- (A) Trachinotus blochii
- (B) Trechanatus blachii
- (C) Trachinotus homarus
- (D) Panulirus ornatus

139. MPEDA paved the way for establishment of number of private hatcheries after establishment of

- (A) TASPARC and OSPARC
- (B) NETFISH
- (C) CMFRI
- (D) RGCA and CIBA

140. \_\_\_\_\_ is defined as setting performance expectations and goals for groups and individuals to channels their efforts achieving organisational objectives.

- (A) Coordination
- (B) Planning
- (C) Administration
- (D) Supervision

141. \_\_\_\_\_ is defined as the act of making law.

- (A) Administration
- (B) Guiding
- (C) Legislation
- (D) Coordinating

142. Examples for non-aquatic live feed is

- (A) Avanti Bact
- (B) Bloodworm
- (C) Artemia
- (D) Rotifer

143. The number of eggs produced per kg common carp during normal breeding season

- (A) 150,000
- (B) 10,000
- (C) 75,000
- (D) 900,000

144. The common name of Penaeus merguensis is  
 (A) White shrimp (B) ~~Banana shrimp~~  
 (C) Kuruma shrimp (D) Redtail shrimp
145. The common name of Clarias gariepinus  
 (A) Asian catfish (B) American catfish  
 (C) Amur catfish (D) ~~African catfish~~
146. (a) Monk is a pond outlet.  
 (b) It should be made only with concrete and no other material can be used.  
 (A) (a) and (b) are wrong  
 (B) (a) and (b) are correct  
 (C) ~~(a) is correct (b) is wrong~~  
 (D) (a) is wrong and (b) is correct
147. (a) Pen and cage are used for fish culture.  
 (b) Both are different in structure.  
 (A) (a) is wrong and (b) is correct  
 (B) (a) is correct and (b) is wrong  
 (C) ~~(a) and (b) are correct~~  
 (D) (a) and (b) are wrong
148. The most suitable pH of water for aquaculture farms is considered to lie in the range  
 (A) 5.5-6.0 (B) ~~6.7-8.6~~  
 (C) 9.0-9.2 (D) 4.5-5.5
149. (a) Amino acids in the diet are absorbed in the body of the fish and utilized for growth.  
 (b) Amino acids are building tissue in fish body.  
 (A) (a) and (b) are wrong  
 (B) ~~(a) and (b) are correct~~  
 (C) (a) is correct and (b) is wrong  
 (D) (a) is wrong and (b) is correct

150. Mugil cephalus and chanos chanos are commonly called as \_\_\_\_\_ and \_\_\_\_\_ respectively.
- ~~(A)~~ Mullet and Milk fish
  - (B) Milk fish and Mullet
  - (C) Mullet and Yellow tail
  - (D) Yellow tail and Mullet
151. The scientific name of the mirror carp
- (A) Cyprinus carpio var. communis
  - ~~(B)~~ Cyprinus carpio var. specularis
  - (C) Cyprinus carpio var. nudus
  - (D) Cyprinus carpio var. Flavipinnis
152. The trade winds which blow from the south east in southern hemisphere and from the north east in the northern hemisphere result in the formation currents called
- (A) Equatorial counter currents
  - (B) Labrador current
  - ~~(C)~~ Equatorial currents
  - (D) Florida current
153. A popular warm water current said to be responsible for the reduced population of anchovies in the coastal waters of Peru is called
- ~~(A)~~ El Nino current
  - (B) La Nina current
  - (C) Alaska current
  - (D) California current
154. When the Earth-Moon-Sun system is aligned in straight line and the tide caused under such condition is called
- ~~(A)~~ Spring tide
  - (B) Neap tide
  - (C) Food tide
  - (D) Ebb tide

155. Unlike freshwater, sea water at 35 ppt continues to increase in density until it freezes at a temperature of
- (A) 4°C (B) 0°C  
(C) -4°C (D) -1.9°C
156. The quantity of heat absorbed or emitted without change of temperature during a change of state of unit mass of a material is called
- (A) Specific heat (B) Latent heat  
(C) Sensible heat (D) Absolute heat
157. In the biogenous sediment formation, foraminifers are responsible for the formation of
- (A) Calcium carbonate (B) Silica  
(C) Manganese (D) Iron
158. The new Eastern trade route from Europe to Asia was established after the expedition to India by
- (A) Christopher Columbus  
(B) Vasco da Gama  
(C) Ferdinand Magellan  
(D) James cook
159. The planet Earth is covered by Oceans as much as
- (A) 70.8% of its surface  
(B) 80.8% of its surface  
(C) 60.8% of its surface  
(D) 50.8% of its surface
160. The power required to overcome the hull resistance in a boat is called
- (A) Brake horse power  
(B) Effective horse power  
(C) Indicated horse power  
(D) Thermal horse power

161. The table containing the details of lines-drawing of a boat is called
- (A) Hydrostatic table
  - (B) Lines of plan table.
  - ~~(C) Off set table~~
  - (D) Half breadth plan table
162. The overlapping joint of wood during boat construction is called
- ~~(A) Lap joint~~
  - (B) Scarf joint
  - (C) Butt joint
  - (D) Keel joint.
163. The metal used as sacrificial anode in vessels constructed with Aluminium or steel to prevent corrossion is
- ~~(A) Zinc~~
  - (B) CU
  - (C) Mg
  - (D) Stainless steel
164. The basic molecule present in the PA 6 is
- ~~(A) Poly-Carpolactum~~
  - (B) Poly Venyl Alcohol
  - (C) Poly ethylene
  - (D) Polyester
165. Bobbins are attached in the foot rope of
- ~~(A) Trawl net~~
  - (B) Gill net
  - (C) Purse seine
  - (D) Ring seine

166. Chinese dip net is a type of
- (A) Gill net
  - ~~(B) Lift net~~
  - (C) Tangle net
  - (D) Drag net
167. The specific gravity of poly ethylene and poly propylene will be
- ~~(A) Less than one~~
  - (B) More than one
  - (C) More than 0.95
  - (D) Equal to one
168. A cabled yarn is otherwise called as
- (A) Strand
  - ~~(B) Twine~~
  - (C) Folded yarn
  - (D) Yarn
169. Netting material with high sinking speed and high breaking strength is ideal for making
- (A) Trawl net
  - (B) Long line
  - (C) Dip net
  - ~~(D) Purse seine~~
170. Specific gravity of steel used for boat building is
- (A) 2.0
  - (B) 3.0
  - (C) 5.6
  - ~~(D) 7.8~~



171. Advantages of sole proprietorship include all of the following except

- (A) Speedy decision making
- (B) Easy inception
- (C) Transcending trade secrets
- ~~(D) Shared responsibility~~

172. In the process of new product development test marketing is necessary to

- (A) Identify potential customers
- ~~(B) Pretest before mass production~~
- (C) Keep ready in bound logistics
- (D) Conduct market research

173. Warehousing of fishery products creates \_\_\_\_\_ utility

- ~~(A) Time~~
- (B) Place
- (C) Form
- (D) Possession

174. Match the following

- |                  |             |
|------------------|-------------|
| (a) Land         | 1. Wage     |
| (b) Labour       | 2. Profit   |
| (c) Capital      | 3. Interest |
| (d) Organization | 4. Rent     |

- |                | (a) | (b) | (c) | (d) |
|----------------|-----|-----|-----|-----|
| <del>(A)</del> | 4   | 1   | 3   | 2   |
| (B)            | 3   | 4   | 1   | 2   |
| (C)            | 1   | 3   | 2   | 4   |
| (D)            | 2   | 1   | 4   | 3   |

175. One of the leading producing states of Anchovies in India is
- (A) Pondicherry
  - (B) Karnataka
  - (C) Orissa
  - ~~(D) Kerala~~
176. Isolated or semi isolated bodies of shallow coastal water that do not receive an appreciable input of fresh water is called
- (A) Bay
  - ~~(B) Lagoon~~
  - (C) Estuary
  - (D) Salt Marsh
177. Organically constructed rock structure created by carbonate secreting animals and plants in the sea is called
- ~~(A) Coral reef~~
  - (B) Limestone
  - (C) Corallite
  - (D) Polyp
178. The marine Cat Fish belong to the genus
- ~~(A) Arius~~
  - (B) Lactarius
  - (C) Gnathanodon
  - (D) Lates
179. Considering the rich bio diversity a group of 21 islets lying off the Tamilnadu coast between Thoothukudi and Dhanushkodi has been declared as
- (A) Pearl bank
  - (B) Coaral region
  - ~~(C) Marine National Park~~
  - (D) Sea grass region

180. Reversing the firing order of the engine is difficult in the case of  
~~(A)~~ Four stroke engines (B) Two stroke engines  
 (C) Diesel engines (D) Petrol engines
181. In the four stroke diesel engine the inlet valve is in open position and the exhaust valve is in closed position during  
~~(A)~~ suction stroke (B) compression stroke  
 (C) power stroke (D) exhaust stroke
182. The super charger functioning utilizing the velocity of exhaust gases in a diesel engine is called  
~~(A)~~ Turbo charger  
 (B) Rotary compressor  
 (C) Turbine  
 (D) Naturally aspirated engine
183. After long period of operation of air compressor, the delivery valves inside the cylinders and coil tubes of the inner coolers are accumulated with  
 (A) oil (B) dust  
~~(C)~~ sludge (D) water
184. Petrol engines are working based on the thermodynamic cycle namely  
 (A) Diesel cycle ~~(B)~~ Otto cycle  
 (C) Dual cycle (D) Four stroke cycle
185. A bearing fitted inside the fishing boat to transmit the thrust from the propeller to the hull is called  
 (A) Ball bearing (B) Main bearing  
~~(C)~~ Thrust bearing (D) Epicyclic bearing
186. Power block is a fishing device mainly used in  
 (A) Trawler (B) Gill netter  
 (C) Long liner ~~(D)~~ Purse seiner

187. One Watt is equal to

~~(A)~~ 1 Joule/Sec

(B) 10 Joule/Sec

(C) 100 Joule/Sec

(D) 1000 Joule/Sec

188. The source of electricity in thermocouple is

(A) Light

~~(B)~~ Heat

(C) Friction

(D) Magnetism

189. Unit for measuring current is

(A) Volt

(B) Watt

(C) Ohm

~~(D)~~ Ampere

190. The total number of protons in the nucleus of an atom is called as

(A) Molecular Number

(B) Atomic Weight

~~(C)~~ Atomic Number

(D) Molecular Weight

191. The liquid conductor in an electrolysis is called as

(A) Electrodes

~~(B)~~ Electrolyte

(C) Diluter

(D) Diffuser

192. In lead acid cell \_\_\_\_\_ is acting as anode.

~~(A)~~ Lead Peroxide

(B) Lead Sulphate

(C) Lead Carbonate

(D) Lead Nitrate

193. Which of the following is acting as negative plate in lead acid cell?

(A) Lead Peroxide

(B) Silver Nitrate

~~(C)~~ Pure Spongy Lead

(D) Treated Wood

194. To pump liquids containing impurities and sewage water, the type of impeller most suited for centrifugal pump is
- (A) Semi – open impeller                      ~~(B)~~ Open impeller  
(C) Closed impeller                              (D) Vortex
195. The property of liquid which tends to oppose relative motion between its different layers is called
- (A) Density                                      ~~(B)~~ Viscosity  
(C) Specific gravity                              (D) Venturi effect
196. The resistance and current are inversely proportional to each other is explained by
- (A) Faraday's law                              (B) Lenz's law  
~~(C)~~ Ohm's law                                      (D) Fleming's law
197. The type of power obtained from batteries and solar cells is
- (A) AC    ~~(B)~~ DC  
(C) NC    (D) KC
198. The material which conduct electricity in the option is
- (A) Rubber                                      ~~(B)~~ Copper  
(C) Mica    (D) Wood
199. The circuit designed to reproduce faithfully the information transmitted by the transmitter is called as
- (A) Transducer                                      (B) Modulator  
(C) Aerial antenna                              ~~(D)~~ Radio receiver
200. The correct expansion for an acronym AVR is
- (A) Automatic Voltage Reserve  
(B) Average Voltage Regulator  
(C) Automobile Voltage Regulator  
~~(D)~~ Automatic Voltage Regulator

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