

204/2015

1. Deepest parts of the oceans are called :
(A) Mid-ocean ridges (B) Seamount
(C) Trench (D) Continental shelf
2. The most abundant component of sea water is :
(A) Chlorine (B) Sulphate (C) Sodium (D) Potassium
3. The average speed of sound in the ocean is :
(A) 200 m/s (B) 800 m/s (C) 1500 m/s (D) 2500 m/s
4. The layer where ocean temperature decreases rapidly with depth is called :
(A) Halocline (B) Pycnocline (C) Thermocline (D) SOFAR channel
5. On the average, sea surface salinity is :
(A) Maximum at the equator (B) Maximum around 30 degrees latitude
(C) Maximum at poles (D) None of the above
6. Heat lost by sea due to evaporation is called :
(A) Shortwave radiation (B) Longwave radiation
(C) Latent heat (D) Sensible heat
7. If the time taken by a sound pulse to travel from the sound source at sea surface to the ocean floor and back is 3 seconds, then the approximate ocean depth is :
(A) 2250 m (B) 4500 m (C) 9000 m (D) 9500 m
8. Coriolis force at the equator is :
(A) Maximum (B) Zero
(C) Varies with longitude (D) Varies with depth
9. Wind stress is proportional to :
(A) Wind speed (B) Square of wind speed
(C) Cube of wind speed (D) Square root of wind speed
10. In the ocean, light intensity :
(A) Increases linearly with depth
(B) Decreases linearly with depth
(C) Increases exponentially with depth
(D) Decreases exponentially with depth

11. The major limiting nutrient in culture ponds :
- (A) Phosphorus (B) Nitrogen (C) Potassium (D) Calcium
12. Acute hepatopancreatic necrosis disease, popularly known as Early mortality syndrome is an emerging disease that affects _____ .
- (A) Indian major carps (B) *Macrobrachium rosenbergii*
 (C) *Penaeus vannamei* (D) *Pangasius sp.*
13. _____ has to be applied to ponds to increase pH after stocking of fishes/shrimps.
- (A) Quick lime (B) Agricultural lime
 (C) Gypsum (D) Slaked lime
14. Peasoup green colour of water is often associated with this algae :
- (A) *Microcystis* (B) *Anabaena* (C) *Euglena* (D) *Spirogyra*
15. The paddle wheel aerator commonly used in shrimp culture ponds is an example of :
- (A) Gravity aerator (B) Diffuser aerator
 (C) Surface aerator (D) Bucket dissipater type
16. Ovaprim used for fish breeding consists of :
- (A) Natural salmon GnRH
 (B) Pituitary extract and domperidone
 (C) Synthetic analogue of sGnRH
 (D) Synthetic analogue of sGnRH and domperidone
17. The number of days normally taken by *Macrobrachium rosenbergii* larvae to settle as post larvae at 28–32°C :
- (A) 22 - 26 days (B) 35 - 38 days (C) 15 - 18 days (D) 32 - 35 days
18. The scientific name of silver pompano, the captive breeding of which has been standardized is :
- (A) *Trachinotus mookalee* (B) *Epinephelus coioides*
 (C) *Rachycentron canadum* (D) *Trachinotus blochii*
19. A widely used cryoprotectant for fish spermatozoa is :
- (A) Buffered formalin (B) Ethyl alcohol
 (C) DMSO (D) Isopropyl alcohol

20. The members of this group of fishes are non-guarders scattering eggs :
- (A) Cichlids (B) Gouramis
(C) Tetras and barbs (D) Guppies and mollies
21. The zone of shallow water near the shore is called :
- (A) Oceanic Province (B) Continental Shelf
(C) Neritic Province (D) Continental Slope
22. Methylene Blue is a :
- (A) Basic dye (B) Acidic dye
(C) Neutral dye (D) None of the above
23. Which one of the following does not indicate a species diversity index ?
- (A) H index (B) Shannon diversity index
(C) Pielou's evenness (D) Margalef's index
24. An agent or a factor which causes malformation of an embryo is known as :
- (A) Carcinogen (B) Teratogen
(C) Mutagen (D) Allergen
25. Ramsar convention was held in :
- (A) USA (B) India (C) Japan (D) Iran
26. IPCC headquarters is located at :
- (A) New York (B) Geneva (C) London (D) Rome
27. Which one of the following is a keystone species in a Kelp forest ?
- (A) Sea Otter (B) Starfish (C) Parrot fish (D) Shark
28. What is function of immersion oil in an oil immersion objective of light microscope ?
- (A) Increase magnification (B) Increase resolution
(C) Improve contrast (D) None of the above
29. Genetic material possessing the dual capacity to exist either as an extra chromosomal or chromosomal entity is called :
- (A) Episome (B) Autosome (C) Mesosome (D) Oxysome
30. Bioindicators cover a wide spectrum of organisms serving as indicators of :
- (A) Water (B) Climate (C) Air (D) Environment

31. Which one of the following nutrient cycle is considered as sedimentary type ?
 (A) Carbon cycle (B) Phosphorus cycle
 (C) Nitrogen cycle (D) Manganese cycle
32. Fundamental status of an organism in its community is known as :
 (A) Ecological niche (B) Edaphic factor
 (C) Trophic level (D) Primary producer
33. Which one of the following organisms possesses Aristotle's lantern ?
 (A) Asterias (B) Ophiothrix (C) Antedon (D) Echinus
34. Analytical characters are generally expressed in terms of :
 (A) Chi-square test (B) 3 - point test
 (C) 5 - point test (D) None of the above
35. BOD of the waste water after secondary treatment :
 (A) Will increase (B) Will decrease
 (C) Remain the same (D) None of the above
36. *Catla catla* belongs to the family :
 (A) Cichlidae (B) Cyprinidae (C) Scombridae (D) Mullidae
37. Larval form of lobsters is known as :
 (A) Phyllosoma (B) Megalopa (C) Veliger (D) Mysis
38. Which of the following factors will affect the Hardy - Weinberg Equilibrium ?
 (A) Genetic drift (B) Natural selection
 (C) Mutation (D) All of the above
39. The maximum number of individual that can be supported in a habitat at a given time is known as :
 (A) Biotic potential (B) Carrying capacity
 (C) Vital index (D) Aggregation
40. Which one of the following country exerts maximum carbon foot print ?
 (A) Norway (B) Japan (C) USA (D) India

41. Potential benefits of MPA :
- (A) (i) Protection of marine species (ii) Protection of fixed, critical habitats (iii) Protection of coral reefs, estuaries
 - (B) (i) Protection of marine species (ii) Protection of marine seas (iii) Construction of marine parks
 - (C) (i) Construction of aquapark (ii) Construction of large marine aquarium
 - (D) All the above
42. Motivation theories were proposed by :
- (A) (i) Frederick Herzberg (ii) Abraham Maslow (iii) Douglas Mc Gregor
 - (B) (i) Max Weber (ii) F.W. Taylor (iii) Henry Fayol
 - (C) All the above
 - (D) None of the above
43. Input controls are :
- (A) (i) Total Allowable Catch (ii) Individual Quotas (iii) Escapement Targets
 - (B) (i) Fleet size (ii) Vessel capacity (iii) Fishing Effort (iv) Fishing area/Boat
 - (C) (i) Gear Limitations (ii) Closed areas (iii) Closed seasons
 - (D) All the above
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45. Rights in fishery systems :
- (A) (i) Open access (ii) Limited entry (iii) Trip limits
 - (B) (i) Use rights (ii) Access rights (iii) Harvest Rights
 - (C) (i) TURF (ii) Management rights (iii) Property rights
 - (D) All the above
46. Sustainability in fishery systems includes :
- (A) (i) Ecological Sustainability (ii) Socioeconomic Sustainability
 - (B) (i) Community Sustainability (ii) Institutional Sustainability
 - (C) Both (A) and (B)
 - (D) None of the above

47. International agencies involved in fishery management and development :
- (A) (i) FAO (ii) UNDP (iii) IPFC (iv) IOFC
 (B) (i) ICLAARM (ii) GFCM (iii) IUCN (iv) AIT
 (C) (i) FAO (ii) UNDP (iii) IPFC (iv) CRY
 (D) All the above
48. EU Regulation to prevent IUU :
- (A) Illegal, Unregistered and Unregulated fishing, entered into force on 1 January 2001
 (B) Illegal, Unrecorded and Unregulated fishing, entered into force on 1 January 2010
 (C) Illegal, Unregistered and Unregulated fishing, entered into force on 1 January 2010
 (D) Illegal, Unreported and Unregulated fishing, entered into force on 1 January 2010
49. Certifications in fisheries management :
- (A) (i) Catch certification (ii) Green certification (iii) MSC (iv) MAC
 (B) (i) ISO 9000 (ii) BRC (iii) HACCP (iv) ISO 22000
 (C) None of the above
 (D) All the above
50. Biological Diversity Act, 2002 :
- (A) Act of the Parliament of India for Preservation of biological diversity in India
 (B) It provides mechanism for equitable sharing of benefits arising out use of traditional biological resources and knowledge
 (C) The Act was enacted to meet the obligations under Convention on Biological Diversity (CBD)
 (D) All the above
51. KMFR Act, 1980 :
- (A) Kerala Marine Fishing Regulation Act, 1980
 (B) Amended by Act 21 of 1991
 (C) An Act to provide for the regulation of fishing by fishing vessels in the sea along the coast line of the State
 (D) All the above
52. Trawl ban in Kerala in the year 2015 is for :
- (A) (i) 45 days (ii) June 15 to July 30 (iii) Not joined the uniform ban
 (B) (i) 47 days (ii) June 15 to July 31 (iii) Not joined the uniform ban
 (C) (i) 61 days (ii) June 1 to July 31 (iii) Uniform ban period for whole of India
 (D) (i) 47 days (ii) midnight of June 14 to midnight of July 31 (iii) Uniform ban period for whole of India

53. UNCLOS :
- (A) The United Nations Convention on the Law of the Sea
 (B) Law of the Sea Convention
 (C) Law of the Sea treaty
 (D) All the above
54. *Matsyasarudhi* is a project of Kerala State fisheries aiming at :
- (A) Integrated development of inland fisheries and aquaculture
 (B) Implemented in 14 districts of the state
 (C) Provided extension of Karimeen production in ponds, cages etc.
 (D) All the above
55. Departments, Institutions and organizations under the fisheries department of Kerala :
- (A) (i) Matsyafed (ii) FFDA (iii) BFFDA (iv) KFWFB
 (B) (i) Marine Enforcement (ME) (ii) Harbour Engineering Department (HED)
 (C) (i) Agency for development of Aqua Culture
 (D) All the above - (A), (B) and (C)
56. Redline Torpedo Barb is :
- (A) (i) *Puntius denisonii* (ii) Miss Kerala (iii) Indigenous ornamental fish
 (B) (i) Top exported ornamental fish (ii) Exotic (iii) Cyprinid fish
 (C) (i) Endemic (ii) Endangered (iii) *Sahyadria denisonii*
 (D) (A) and (C)
57. State fish of Kerala :
- (A) (i) *Etroplus suratensis* (ii) Green chromide (iii) Pearlsport
 (B) (i) *Rastralliger kanagurta* (ii) Mackerel
 (C) (i) *Sardinella longiceps* (ii) Sardine
 (D) (i) Miss Kerala (ii) *Puntius denisonii* (iii) Indigenous ornamental fish
58. Which species of prawn now dominates the exports from India ?
- (A) *Penaeus monodon* (B) *Metapenaeus dobsoni*
 (C) *Parapeneopsis stylifera* (D) *Litopenaeus vannamei*
59. Information about netmouth opening, depth and position of net relative to fish is found by :
- (A) (i) Net recorder (ii) Net sonde (iii) Trawl eye
 (B) (i) Gear monitoring system (ii) SONAR (iii) Ecogramme
 (C) (A) and (B)
 (D) None of the above

60. SONAR :
- (A) (i) Satellite Navigation and ranging (ii) Aimed purse seining and trawling (iii) Horizontally scanning echosounder
- (B) (i) Sound Navigation and ranging (ii) Aim purse seining and trawling (iii) Horizontally scanning echosounder
- (C) (i) Sound Navigation and radiating (ii) Aimed purse seining and trawling (iii) Horizontally scanning echosounder
- (D) All the above
61. Longlines are :
- (A) (i) Passive fishing gears (ii) highly fuel efficient (iii) Ecofriendly
- (B) (i) Gravel line (ii) Floats (iii) Sinkers (iv) Buoys
- (C) (i) Snood wire (ii) Sekiyama (iii) Branch line (iv) Buoy lines
- (D) All the above
62. On the basis of bio-physico characteristics seas have different zones :
- (A) Pelagic zone, Benthic zone, Neritic zone, Oceanic zone
- (B) Epipelagic, Mesopelagic, Bathypelagic, Benthopelagic
- (C) None of the above
- (D) (A) and (B)
63. Trolling is :
- (A) Passive fishing method (B) Active fishing method
- (C) Type of fishing craft (D) None of the above
64. Edible Oysters are :
- (A) *Crassostrea madrasensis* (B) *Crassostrea cucullata*
- (C) *Crassostrea discoides* (D) All the above
65. Bombay duck, *Harpodon nehereus* (Hamilton) belong to the family :
- (A) Syngnathidae (B) Schilbeidae
- (C) Sciaenidae (D) None of the above
66. Commercially important catfishes in India belong to the family :
- (A) Plotosidae (B) Tachysuridae
- (C) Both (A) and (B) (D) None of the above

67. Molluscan fisheries is constituted by the taxonomic class :
 (A) Lamellibranchia (B) Gastropoda
 (C) Cephalopoda (D) All the above
68. Name a computer software with the help of which the fish stock assessment by using length - frequency distribution is done :
 (A) ELEFAN (B) BIOEDIT (C) PRIMER (D) ARNEQUIN
69. Total marine capture fish production in India during 2013 - 14 :
 (A) 1.9 million tonnes (B) 2.1 million tonnes
 (C) 3.4 million tonnes (D) 6.1 million tonnes
70. Total inland fish production in India during 2013 - 14 :
 (A) 3.14 million tonnes (B) 4.14 million tonnes
 (C) 5.14 million tonnes (D) 6.14 million tonnes
71. Fibrous protein present in connective tissue :
 (A) Actin (B) Myosin (C) Actinomyosin (D) Collagen
72. Complete oxidation of one molecule of glucose into CO_2 and H_2O yields :
 (A) 8 ATP equivalents (B) 15 ATP
 (C) 30 ATP (D) 38 ATP
73. Fish fat is nutritionally important because of the presence of :
 (A) PUFA (B) Glycerol (C) Phospholipids (D) Monoglycerol
74. Dry ice is :
 (A) Freon (B) Liquid ammonia
 (C) Liquid Nitrogen (D) Solid carbon dioxide
75. Case hardening is seen in fishes during :
 (A) Freezing (B) Drying (C) Canning (D) Salting
76. *Vibrio parahaemolyticus* is found in :
 (A) Marine waters (B) Fresh waters
 (C) Both of the above (D) Neither of the above