OPSC
AFO (SD)
Previous Year Paper
Paper-II
21 July, 2024

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

T. B. C. : AFO(SR) – 2/24

Test Booklet Series

A

TEST BOOKLET

ASSISTANT FISHERIES OFFICER

(SPECIAL DRIVE)

PAPER—II

Sl. No. **2081**

Time Allowed : 2½ Hours | **Maximum Marks : 400**

: INSTRUCTIONS TO CANDIDATES :

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET **DOES NOT** HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF THE SAME SERIES ISSUED TO YOU.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C** OR **D**, AS THE CASE MAY BE, IN THE APPROPRIATE PLACE IN THE ANSWER SHEET USING BALL POINT PEN (BLUE OR BLACK).
3. You have to enter your **Roll No.** on the Test Booklet in the Box provided alongside. **DO NOT** write *anything else* on the Test Booklet.
4. **YOU ARE REQUIRED TO FILL UP & DARKEN ROLL NO., TEST BOOKLET / QUESTION BOOKLET SERIES IN THE ANSWER SHEET AS WELL AS FILL UP TEST BOOKLET / QUESTION BOOKLET SERIES AND SERIAL NO. AND ANSWER SHEET SERIAL NO. IN THE ATTENDANCE SHEET CAREFULLY. WRONGLY FILLED UP ANSWER SHEETS ARE LIABLE FOR REJECTION AT THE RISK OF THE CANDIDATE.**
5. This Test Booklet contains **200** items (questions). Each item (question) comprises of four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
6. You have to mark (darken) all your responses (answers) **ONLY** on the **separate Answer Sheet** provided by **using BALL POINT PEN (BLUE OR BLACK INK)**. See instructions in the Answer Sheet.
7. All items (questions) carry **equal marks**. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet. **No negative** marking system will be followed in the written examination in case of wrong response (answer).
8. Before you proceed to mark (darken) in the Answer Sheet the responses (answers) to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per the instructions sent to you with your **Admission Certificate**.
9. After you have completed filling in all your responses (answers) on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the Answer Sheet issued to you. You are allowed to take with you the candidate's copy / second page of the Answer Sheet along with the **Test Booklet**, after completion of the examination, for your reference.
10. Sheets for rough work are appended in the Test Booklet at the end.

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SEAL

1. The term Limnology is derived from Greek words Limne & Logos mean

(A) mangrove and knowledge

(B) sea and knowledge

(C) river and knowledge

(D) lake and knowledge

2. The term Limnology is coined by

(A) François-Alphonse Forel (1841–1912)

(B) François-Alphonse Forel (1851–1912)

(C) François-Alphonse Forel (1841–1915)

(D) François-Alphonse Forel (1941–1951)

3. Initiation of works in the field of Limnology could be traced

(A) back to Aristotle (384-322 BC)

(B) back to Aristotle (384-422 AD)

(C) back to Aristotle (484-422 BC)

(D) back to Aristotle (584-522 BC)

4. Standing water is otherwise called as

(A) lentic water

(B) lotic water

(C) marine water

(D) riverine water

5. In earth's surface, inland water covers

(A) < 3%

(B) > 2%

(C) < 2%

(D) < 5%

6. Dal lake is in

(A) Jharkhand

(B) Kerala

(C) A and N Islands

(D) Kashmir

7. Vembanad lake is in

(A) Jharkhand

(B) Kerala

(C) A and N Islands

(D) Kashmir

8. Due to scattering of light by water molecules, lake contains suspended matter is in

(A) black colour

(B) purple colour

(C) white colour

(D) blue colour

9. Clear water is normally

(A) cooler

(B) semi cooler

(C) frost colour

(D) warmer

10. Plankton organisms occur in

(A) bottom water

(B) surface water

(C) semi bottom water

(D) deep water

11. Currently, ocean covers

(A) 61% earth surface

(B) 81% earth surface

(C) 72% earth surface

(D) 71% earth surface

12. Shallower part of ocean is

(A) photic zone

(B) disphotic zone

(C) aphotic zone

(D) epizootic zone

13. Marine habitat is said to be

(A) brother of life

(B) sister of life

(C) father of life

(D) mother of life

14. Examples for zooplankton are

(A) algae

(B) copepods

(C) seaweeds

(D) earthworms

15. Examples for phytoplankton are

(A) algae

(B) copepods

(C) seaweeds

(D) earthworms

16. Limnoria is commonly called as

(A) algae

(B) copepods

(C) pill bug

(D) gribble

17. Animals that bore into rocks are

(A) algae

(B) sponges

(C) seaweeds

(D) earthworms

18. Apex body in agriculture and related allied fields including research and education in India is

(A) ICAR

(B) IARI

(C) ICMR

(D) IASRI

19. Specific gravity of fish is

(A) 1·02–1·06

(B) 1·03–1·04

(C) 1·04–1·05

(D) 1·05–1·06

20. Limnology is defined as

(A) study of mangrove water

(B) study of marine water

(C) study of inland water

(D) study of coastal water

21. The problem of biological productivity is coined by

(A) Welch (1945)

(B) Welch (1955)

(C) Welch (1935)

(D) Kiihnelt (1950)

22. Flowing water is otherwise called as

(A) lentic water

(B) lotic water

(C) marine water

(D) riverine water

23. Chilika lake is in

(A) Jharkhand

(B) Odisha

(C) A and N Islands

(D) Kashmir

24. Turbid water is normally

(A) cooler

(B) semi cooler

(C) frost colour

(D) warmer

25. In India, vaccine for fish nodavirus was developed by

(A) CIBA

(B) CIFA

(C) CIFE

(D) CIFRI

26. Examples for nektonic species are

(A) algae

(B) copepods

(C) seaweeds

(D) fish

27. Aquatic ecosystems are divided into

(A) finfish and shellfish

(B) freshwater and marine ecosystems

(C) freshwater and marine fish

(D) estuary and mangrove fish

28. Five names of oceans are

(A) Atlantic / Palk Bay / Indian / Southern / Arctic Oceans

(B) Atlantic / Pacific / Indian / BOP / Arctic Oceans

(C) Atlantic / Pacific / Indian / Southern / Arctic Oceans

(D) Atlantic / Pacific / Indian / Southern / Coromandel Oceans

29. Fishes are

(A) cold-blooded aquatic vertebrates

(B) cold-blooded aquatic invertebrates

(C) warm-blooded aquatic vertebrates

(D) warm-blooded aquatic invertebrates

30. Nodal organization to regulate seafood exports in India is

(A) CIFT

(B) CMFRI

(C) MPEDA

(D) CIFA

31. The largest inland fisheries resource is

(A) marine water

(B) reservoir

(C) freshwater

(D) backwater

32. Black and white Secchi disc is used in

(A) brackish water studies

(B) freshwater studies

(C) marine studies

(D) water studies

33. Synthesis of organic carbon through the process of photosynthesis is called as

(A) primary production

(B) tertiary production

(C) secondary production

(D) swarming

34. Shrimp is used for the animals that live in

(A) clear water

(B) turbid water

(C) freshwater

(D) seawater

35. In fish culture, Costiasis is caused by

(A) mustigophoresis

(B) mustigophore

(C) mastigophora

(D) mastigophorii

36. Herbivores have good capacity to digest CHO than

(A) protein and fat

(B) vitamins

(C) minerals

(D) non-dietary nutrients

37. Black gill disease in shrimp is caused due to

(A) high organic content alone

(B) high organic content, debris, ammonia and H_2S

(C) debris alone

(D) H_2S alone

38. Velvet/Rust disease is caused by

(A) bacteria

(B) metazoan parasites

(C) protozoan parasites

(D) Both (A) and (B)

39. Examples for cytozoic parasite are

(A) diphyllobothrium

(B) microsporidia

(C) nematodes

(D) cestodes

40. CAAI stands for

(A) Coastal Agricultural Authority of India

(B) Coastal Aquaculture Authority of India

(C) Coastal Agricultural Aquaculture of India

(D) Coastal Agroclimatic Authority of India

41. To control water pH within the optimum range of 7·5–8·5, limit diurnal pH fluctuation to

(A) < 1·5

(B) < 0·5

(C) < 2

(D) < 0·01

42. Based on nature, factors considered in site selection for an aqua farm can be grouped as

(A) ecological, biological and locational factors

(B) external, bilateral and sociological factors

(C) economical, biological and sociological factors

(D) ecological, biological and sociological factors

43. Study of nutrients in fish body is called as

(A) nutrition

(B) fish nutrition

(C) fish in nutrition

(D) aquaculture nutrition

44. Saprolegniasis is caused by

(A) *Saprolegnia parasitica*

(B) *Sapro parasitica*

(C) bacterial disease

(D) viral disease

45. Rectangular pond should be oriented north to south in order to maximize the

(A) sunlight hitting pond

(B) moon hitting pond

(C) bottom hitting pond

(D) surface hitting pond

46. Pokkali fields in Kerala are otherwise called as

(A) trapping and holding systems

(B) trapping and filtration systems

(C) trapping and receding systems

(D) gravitational force system

47. Squalene is derived from

(A) body oil

(B) liver oil

(C) herbs oil

(D) spleen oil

48. The test to know the soil has clay or not is called as

(A) institute test

(B) institution test

(C) *in-situ* test

(D) integrated soil test

49. Longer sides should be parallel to prevailing wind direction in pond and aeration can be increased in

(A) circular ponds

(B) triangle ponds

(C) square ponds

(D) rectangular ponds

50. Ghery fields in Odisha is otherwise called as

(A) trapping and holding system

(B) trapping and filtration system

(C) trapping and receding system

(D) pump fed system

51. Overall protecting structure of a pond is called as

(A) secondary dike

(B) main dike

(C) tertiary dike

(D) partition dike

52. Frost allowance must be given while designing

(A) sluice

(B) monk

(C) main bund

(D) culvert

53. Longest horizontal distance in a pond is called

(A) freeboard

(B) wetch

(C) hetch

(D) fetch

54. Soil texture consists of

(A) Silt + Sand + Cobble

(B) Clay + Silt + Sand

(C) Soil + Sand + Seepage

(D) Clay + Sand + Grain

55. Excavated ponds are constructed

(A) below the ground level

(B) above the ground level

(C) below and above the ground level

(D) from artesian level

56. Three major causes of fish diseases are

(A) parasitic, non-parasitic and nutritional factors

(B) stress, poor intake and poor soil

(C) poor water quality, environmental pathogens and low resistance of fish stock

(D) sand/silt/clay

57. When applying fish drugs, avoid contact with

(A) spleen, liver and pancreas

(B) eyes, mouth and skin

(C) pancreas, skin and spleen

(D) kidney, lungs, heart

58. Vibriosis is a bacterial disease caused by

(A) *Cestode*

(B) *Bibrio*

(C) *Vibrio*

(D) *Nematode*

59. Better production and lower risk of disease outbreaks occur in

(A) foggy water

(B) yellow water

(C) green water

(D) black water

60. In most cases, the haemolymph of healthy shrimp will coagulate as little as

(A) 10 seconds

(B) 60 seconds

(C) 1 minute

(D) 110 seconds

61. Disease of fishes is classified as

(A) cestode and nematode

(B) parasitic and non-parasitic disease

(C) fungal and bacterial disease

(D) viral disease

62. Milkfish prefers

(A) geosmin

(B) lumet

(C) lab-lab

(D) pepsi weed

63. Carnivores have good capacity to digest protein and fat than

(A) CHO

(B) vitamins

(C) minerals

(D) fibre and ash

64. IPN stands for

(A) Infections Pan Necrosis

(B) Infections Pancreatic Necrosis

(C) Infectious Pyramid Necrosis

(D) Necropecia

65. In Salmon fishes, Furunculosis disease is caused by

(A) *Vibrio, Salmonella*

(B) *Aeromonas salmonicida*

(C) *Aeromonas coccus*

(D) WSSV

66. The total world aquaculture production during 2020 is

(A) 87·500 lakh tonnes

(B) 87·500 billion tonnes

(C) 87·500 million tonnes

(D) 51·30 million tonnes

67. Indian fish production during 2022–2023 is

(A) 17·545 lakh tonnes

(B) 17·545 billion tonnes

(C) 17·545 million tonnes

(D) 13·113 million tonnes

68. Malabar tamarind is used as a curing ingredient in

(A) wet salting

(B) pit curing

(C) Colombo curing

(D) kench salting

69. Two main pillars for growth for Inland resources are

(A) Brackish water/Marine Aquaculture

(B) Lagoon and Derelict Water Aquaculture

(C) Estuary and Backwater Aquaculture

(D) Reservoir/Freshwater Aquaculture

70. The number of BFDA's in India is

(A) 42

(B) 41

(C) 40

(D) 39

71. The number of FFDA's in India is

(A) 422

(B) 412

(C) 402

(D) 392

72. In Jadi, the ratio of fish and salt is

(A) 1 : 1

(B) 2 : 1

(C) 3 : 1

(D) 1 : 4

73. Net sonde is a

(A) fish finding equipment

(B) navigational equipment

(C) life saving appliance

(D) fire fighting equipment

74. The total world inland aquaculture production during 2020 is

(A) 54·40 lakh tonnes

(B) 54·40 billion tonnes

(C) 54·40 million tonnes

(D) 33·100 million tonnes

75. In India, which State ranked first in Inland fish production during 2022–2023?

(A) Gujarat

(B) West Bengal

(C) Tamil Nadu

(D) Andhra Pradesh

76. Indian marine fish production during 2022–2023 is

(A) 4·432 lakh tonnes

(B) 4·432 billion tonnes

(C) 4·432 million tonnes

(D) 13·113 million tonnes

77. Gastropod shells are used in

(A) lobster trap

(B) crab pots

(C) kalava trap

(D) octopus pots

78. The traditional practice of fish farming with rice in Kerala is called as

(A) Pokkali

(B) Ghery field

(C) Kharland

(D) Bheries

79. Hydraulic radius of a canal is calculated by

(A) cross-section area of a dike/ wetted perimeter

(B) cross-section area of a dike/ dry perimeter

(C) cross-section area of a channel/wetted perimeter

(D) cross-section area of a bund/ wetted perimeter

80. Non-parasitic disease is divided into

(A) environmental and nutritional fish diseases

(B) viral and non-viral fish diseases

(C) pathogenic and non-pathogenic fish diseases

(D) None of the above

81. EEZ stands for

(A) External Economic Zone

(B) Economic Extended Zone

(C) Exclusive Extended Zone

(D) Exclusive Economic Zone

82. TED is

(A) fish aggregating device

(B) bycatch reduction device

(C) fish finding device

(D) fish harvesting device

83. The two directions of twist in the netting yarn are

(A) S twist and N twist

(B) Z twist and N twist

(C) S twist and Z twist

(D) V twist and N twist

84. Top width + Height (wet and dry slope ratio) is the formula used to calculate

(A) crown width of a dike

(B) berm width of a dike

(C) fetch width of a dike

(D) base width of a dike

85. Which of the following structures can be used as both inlet and outlet in fish culture ponds?

(A) Sluice

(B) Feeder canal

(C) Secondary feeder canal

(D) Drainage canal

86. Base width–Height (wet and dry slope ratio) is the formula used to calculate

(A) berm width of a dike

(B) crown width of a dike

(C) base width of a dike

(D) fetch width of a dike

87. Dark colour of a soil indicates

(A) higher content of unhydrated iron oxide

(B) lower content of organic matter

(C) lower content of unhydrated iron oxide

(D) higher content of organic matter

88. Which one of the following structures is alone used as outlet in fish ponds?

(A) Sluice

(B) Drainage canal

(C) Feeder canal

(D) Monk

89. In soil analysis, the qualitative tests used are

(A) Soil Triangle and Square Test

(B) Water Retention and *In-situ* Test

(C) Water Absorption and Institution Test

(D) Bucket and Screw Auger

90. Kutsch scales or reduction scales are

(A) miscellaneous rulers in engineering drawings

(B) special rulers in fish length measurements

(C) special rulers in engineering drawings

(D) None of the above

91. Compass is used for

(A) drawing contour map boundary

(B) drawing elevation map boundary

(C) drawing location map boundary

(D) drawing fish pond measurements

92. Yellow colour of a soil indicates

(A) higher content of unhydrated iron oxide

(B) lower content of organic matter

(C) lower content of unhydrated iron oxide

(D) higher content of hydrated iron oxide

93. Red colour of a soil indicates

(A) higher content of unhydrated iron oxide

(B) lower content of organic matter

(C) lower content of unhydrated iron oxide

(D) higher content of hydrated iron oxide

94. Ice-Ice is a common disease encountered in

(A) corals

(B) seaweeds

(C) echinoderms

(D) seahorses

95. In engineering survey, computation of plotted plane by trapezoidal rule is calculated by

(A) d/3 (O first + O last – 2 Σ O rest)

(B) d/2 (O first – O last + 2 Σ O rest)

(C) d/2 (O first + O last + 2 Σ O rest)

(D) d/2 (O first – O last – 2 Σ O rest)

96. In engineering survey, computation of plotted plane by parabolic rule is calculated by

(A) d/2 (O first + O last + 2 Σ O odd + 4 Σ O even)

(B) d/3 (O first – O last + 2 Σ O odd – 4 Σ O even)

(C) d/3 (O first – O last – 2 Σ O odd – 4 Σ O even)

(D) d/3 (O first + O last + 2 Σ O odd + 4 Σ O even)

97. In engineering survey, volume of earth by Trapezoidal Rule (VT) is calculated by

(A) $D/3\ (A_{first} - A_{last} - 2 \Sigma A_{rest})$

(B) $D/2\ (A_{first} + A_{last} - 2 \Sigma A_{rest})$

(C) $D/2\ (A_{first} + A_{last} + 2 \Sigma A_{rest})$

(D) $D/2\ (A_{first} - A_{last} - 2 \Sigma A_{rest})$

98. In engineering survey, volume of earth by Prismoidal Rule (VP) is calculated by

(A) $D/2\ (A_{first} - A_{last} + 4 \Sigma A_{even} + 2 \Sigma A_{odd})$

(B) $D/3\ (A_{first} + A_{last} + 4 \Sigma A_{even} + 2 \Sigma A_{odd})$

(C) $D/3\ (A_{first} - A_{last} - 4 \Sigma A_{even} + 2 \Sigma A_{odd})$

(D) $D/2\ (A_{first} + A_{last} + 4 \Sigma A_{even} + 2 \Sigma A_{odd})$

99. Top width of a feeder canal is calculated by

(A) b / (2 z d)

(B) b + (2 z d)

(C) b + (3 z d)

(D) b – (2 z d)

100. Hydraulic depth of a canal is calculated by

(A) cross-section area of a dike – top width

(B) cross-section area of a dike / top width

(C) cross-section area of a channel / wetted perimeter

(D) cross-section area of a bund / wetted perimeter

101. Wetted perimeter of a trapezoidal canal is calculated by

(A) $P = (b + 2d)\ 1 - z^2$

(B) $P = (b + 2d)\ 1 + z^2$

(C) $P = (b + 3d)\ 1 - z^2$

(D) $P = (b + 3d)\ 1 - z^2$

102. Seepage loss of a feeder canal is calculated by

(A) $C - Q/V^{1/3}$

(B) $C \times Q/V^{1/3}$

(C) $C/Q/V^{1/3}$

(D) $C \times Q/V^{1/2}$

103. The unit for electrical conductivity of soil is

(A) µmhos/mm

(B) µmhos/m

(C) µmhos/cm^2

(D) µmhos/cm

104. Agricultural lime is otherwise called as

(A) dolomite

(B) $CaSO_4$

(C) $CaCO_3$

(D) $CaPO_4$

105. Freeboard of a feeder canal is calculated by

(A) $(C \times d)^{1/2}$

(B) $(C - d)^{1/2}$

(C) $(C/d)^{1/2}$

(D) $(C - d)^{1/3}$

106. Base width of a feeder canal is calculated by

(A) (b + zd) d

(B) (b/zd) d

(C) (b – zd) d

(D) $A = (b + zd)\ d^2$

107. Fine soil consists of

(A) Silt + Sand + Cobble

(B) Clay + Silt + Sand

(C) Soil + Sand + Seepage

(D) Clay + Sand + Grain

108. Embankment ponds are constructed

(A) below the ground level

(B) above the ground level

(C) below and above the ground level

(D) engineering level

109. Height for wave action in dike construction is calculated by

(A) $0{\cdot}014 - \text{Fetch}^{1/2}$

(B) $0{\cdot}014 + \text{Fetch}^{1/3}$

(C) $0{\cdot}014 - \text{Fetch}^{1/3}$

(D) $0{\cdot}014 \times \text{Fetch}^{1/2}$

110. Freeboard of a bund is calculated by

(A) $0{\cdot}3 \times (\text{height})^{1/2}$

(B) $0{\cdot}2 \times (\text{height})^{1/2}$

(C) $0{\cdot}3 - (\text{height})^{1/2}$

(D) $0{\cdot}4 \times (\text{height})^{1/2}$

111. In engineering survey, computation of plotted plane by mid ordinate rule is calculated by

(A) Common distance (d) – Sum of Mid Ordinates

(B) Common distance (d) × Sum of Mid Ordinates

(C) Common depth (d) × Sum of Mid Ordinates

(D) Common depth (d) – Sum of Mid Ordinates

112. In engineering survey, computation of plotted plane by average ordinate rule is calculated by

(A) (Sum of Ordinates / Length of base line) × Number of Ordinates

(B) (Sum of Ordinates × Length of base line) × Number of Ordinates

(C) (Sum of Ordinates % Length of base line) × Number of Ordinates

(D) (Sum of Ordinates × Breadth of base line) × Number of Ordinates

113. Design Height (DH) in dike designing is calculated by

(A) Water Depth + Fetch

(B) Water Depth – Freeboard

(C) Water Depth + Freeboard

(D) Water Depth + Frost Allowance

114. *In-situ* test is used

(A) to know the soil has sand or not

(B) to know the soil has silt or not

(C) to know the soil has clay or not

(D) to know the soil is loamy soil or not

115. The dike which divides the pond is called as

(A) secondary dike

(B) main dike

(C) feeder canal

(D) primary dike

116. While designing a primary dike, which of the following allowances must be given?

(A) Freeboard

(B) Free berth

(C) Frost

(D) Froth

117. In fish pond construction, fetch is considered as

(A) freeboard

(B) longest vertical distance in a pond

(C) longest horizontal distance in a pond

(D) fry board

118. Construction Height (CH) in dike designing is calculated by

(A) Design Height / [(100 % Settlement Allowance) × 100]

(B) Design Height / [(100 – Settlement Allowance) × 100]

(C) Design Height / [(100 % Frost Allowance) × 100]

(D) Design Height / [(100 – Settlement Allowance) × 100]

119. The action of the drug on the body is known as

(A) pharmacokinetics

(B) pharmacology

(C) pharmacodynamics

(D) pharmacotherapeutics

120. The IV route of administration of drugs

(A) is 100% bioavailable

(B) is rapidly absorbed

(C) undergoes the first-pass metabolism

(D) is rapidly excreted by renal route

121. When a drug is administered through the layers of skin into areolar tissue is known as

(A) intradermal administration

(B) intra-arterial administration

(C) subcutaneous administration

(D) intramuscular administration

122. The name assigned to a drug by the manufacturer is called

(A) chemical name

(B) proprietary name

(C) non-proprietary name

(D) pharmacopoeias

123. An 'orphan drug' is

(A) a very cheap drug

(B) a drug which has no therapeutic effect

(C) a drug which acts on orphan receptor

(D) a drug needed for treatment or prevention of a rare disease

124. Father of Modern Pharmacology is

(A) Oswald Schmiedeberg

(B) Rudolf Buchheim

(C) Alexander Fleming

(D) François Magendie

125. ED 50 mainly reflects a drug's

(A) maximal effect

(B) lethality

(C) potency

(D) safety

126. Biotransformation of a drug is to render them as

(A) unionized

(B) more lipid soluble

(C) more pharmacologically active

(D) less lipid soluble

127. Which route of drug administration is most likely to lead to the first pass effect?

(A) Sublingual

(B) Oral

(C) Intravenous

(D) Intramuscular

128. Liquid paraffin is a/an

(A) volatile oil

(B) fixed oil

(C) essential oil

(D) mineral oil

129. The term potentiating effect of a drug means

(A) cumulative ability of a drug

(B) hypersensitivity of a drug

(C) fast tolerance developing

(D) intensive increase of drug effects due to their combination

130. The principal organ of drug metabolism is

(A) kidney

(B) intestine

(C) liver

(D) brain

131. Weak acids tend to be better absorbed from the

(A) stomach

(B) small intestine

(C) liver

(D) kidney

132. A series of relatively small doses that may be given in order to maintain an effective concentration in the bio phase is

(A) loading dose

(B) maintenance dose

(C) single dose

(D) multi-dose

133. A process, where no needle is used, is

(A) pellet implantation

(B) dermojet

(C) subcutaneous injection

(D) intramuscular injection

134. Acidic drugs are bound primarily to

(A) albumin

(B) α1-acid glycoprotein

(C) lipoprotein

(D) globulin

135. There is rapid dissociation of the drug-receptor complex, when free drug concentration is

(A) higher

(B) moderate

(C) lower

(D) None of the above

136. The study of the adverse or toxic effects of drugs and other chemical agents is called

(A) physiology

(B) pharmacology

(C) toxicology

(D) chemotherapy

137. The father of toxicology is known as

(A) Hippocrates

(B) Galen

(C) Paracelsus

(D) Buchheim

138. Which of the following antibiotics have bactericidal action?

(A) Gentamicin

(B) Vancomycin

(C) Chloramphenicol

(D) Penicillin

139. The removal of moisture from the timber before utilizing for boat construction is called

(A) seasoning

(B) dehydration

(C) dehumidification

(D) drying

140. Enteric red mouth disease is caused by

(A) *Renibacterium salmoninarum*

(B) *Pseudomonas septicaemia*

(C) *Aphanomyces invadans*

(D) *Yersinia ruckeri*

141. Bacterial kidney disease is caused by

(A) *Renibacterium salmoninarum*

(B) *Pseudomonas septicaemia*

(C) *Aphanomyces invadans*

(D) *Yersinia ruckeri*

142. Site of infection of *Dactylogyrus* sp is

(A) skin

(B) gill

(C) eye

(D) fin

143. Red tail disease in shrimp is caused by

(A) WSSV

(B) IHHNV

(C) MBV

(D) TSV

144. The causative agent of EUS is

(A) *Pseudomonas septicaemia*

(B) *Yersinia ruckeri*

(C) *Aphanomyces invadans*

(D) *Renibacterium salmoninarum*

145. Which of the following is shrimp virus?

(A) Infectious pancreatic necrosis virus

(B) Infectious haematopoietic necrosis virus

(C) Hepatopancreatic parvolike virus

(D) Viral haemorrhagic septicaemia virus

146. NBC stands for

(A) Nucleus Breeding Center

(B) National Bureau Center

(C) Nano-Biotechnology Center

(D) New Broodstock Center

147. Pathogen is transmitted from parents to offspring through sex is called

(A) vertical transmission

(B) horizontal transmission

(C) lateral transmission

(D) parallel transmission

148. Length Overall (LOA) is the extreme length of the vessel measured from

(A) horizontal distance between forward and aft perpendicular

(B) foremost point of the stem to the aftermost point of the stern

(C) side to side measurement of a vessel at any given place

(D) front to front measurement of a vessel at any given place

149. Rectangular openings provided in the deck vessel for the passage of cargo is

(A) clamps

(B) hull

(C) bulk heads

(D) hatchways

150. The height of the side of the vessel which is above the surface of water is

(A) beam

(B) breadth

(C) freeboard

(D) trim correct

151. An instrument used for measuring and recording distance run by a vessel through water is called

(A) gyrocompass

(B) sextant

(C) compass

(D) log

152. Drawing the lines of the lines plan to full size in boat construction is termed as

(A) shaping

(B) mould lofting

(C) marking

(D) trimming

153. The angle between true north and magnetic north is termed as

(A) deviation

(B) bearing

(C) variation

(D) None of the above

154. Additional strength to the keel is provided by

(A) hog keel

(B) shaft

(C) clamp

(D) horn timber

155. An apparatus measuring depth using sound waves is called

(A) radar

(B) echo sounder

(C) GPS

(D) LPG

156. An example of marine borer is

(A) rotifer

(B) barnacles

(C) diatoms

(D) martesia

157. Gradual disintegration of metal due to chemical or electrochemical attack by various agents is termed as

(A) disintegration

(B) rotting

(C) corrosion

(D) spoiling

158. The accumulation of animal and plant life on submerged structures in marine environment causing economic loss is termed as

(A) biofouling

(B) disintegration

(C) deposition

(D) non-biofouling

159. An example of passive fishing gear is

(A) trawl net

(B) purse seine

(C) gill net

(D) beach seine

160. A method of fishing, in which several lines with special lures are towed from a boat, is called

(A) long lining

(B) entangling

(C) trawling

(D) trolling

161. Trawl net is kept horizontally open during towing by

(A) wire ropes

(B) otter boards

(C) Kelly's eye

(D) head rope

162. The ropes or cables that connect the wing to the otter boards are called

(A) sweep lines

(B) pork lines

(C) belly lines

(D) lazy lines

163. Jig lines are used for capturing

(A) predatory fishes

(B) squids

(C) lobsters

(D) crabs

164. A few rows of meshes made up of thicker twine provided on the upper and lower sides of webbing in a purse seine is termed as

(A) Bunt

(B) Webbing

(C) Bridles

(D) Selvedges

165. A cut through both twines at one side of the knot in the vertical direction is termed as

(A) T-cut

(B) B-cut

(C) N-cut

(D) Z-cut

166. A centre line strength member running fore and aft along the bottom of the vessel referred to as backbone is called

(A) keel

(B) stem

(C) stern

(D) beam

167. The saucer shaped craft used in reservoirs of South India is

(A) catamaran

(B) coracle

(C) machwa

(D) raft

168. Disease outbreak on a certain area but does not spread to other area is called as

(A) epidemic disease

(B) endemic disease

(C) pandemic disease

(D) panic disease

169. Effect of pH 4–6 on fish is

(A) slow growth

(B) best growth

(C) acid death

(D) alkaline death

170. Development of tumor in the liver is known as

(A) neoplasia

(B) hepatomas

(C) hyperplasia

(D) oedema

171. Cataract development is associated with

(A) Leucine and Isoleucine

(B) Arginine and Histidine

(C) Methionine and Tryptophan

(D) Lysine and Leucine

172. Inflammation of fat is called as

(A) hyperplasia

(B) enteritis

(C) metaplasia

(D) steatitis

173. Enlargement of local blood vessels leading to engagement is

(A) Hyperaemia

(B) Metaplasia

(C) Cell atrophy

(D) Hypertrophy

174. Which of the following has antioxidant properties?

(A) Calciferol

(B) Tocopherol

(C) Retinol

(D) Retinol

175. Blue shell syndrome is caused due to

(A) Vitamin C deficiency

(B) Imbalance of Ca : Mg ratio

(C) Vitamin B deficiency

(D) Carotenoids deficiency

176. Series of epithelial layer formed over the disease part is called as

(A) Necrosis

(B) Edematous

(C) Cirrhosis

(D) Granuloma

177. Fluid accumulation in intracellular space is known as

(A) hyperplasia

(B) opsonisation

(C) oedema

(D) spongiosis

178. Modification in morphology and function to a cell type more suited to changed environment is

(A) metaplasia

(B) neoplasia

(C) hyperplasia

(D) hypertrophy

179. Dilation of capillaries due to increase in the blood flow in blood vessels is called as

(A) Calor

(B) Dolere

(C) Tumor

(D) Rubor

180. Partial or full dissolution of dead tissue and transformation into a liquid, viscous mass is called as

(A) liquefactive necrosis

(B) coagulative necrosis

(C) caseous necrosis

(D) fat necrosis

181. Reduction of red blood corpuscles is called as

(A) anaemia

(B) leukaemia

(C) neoplasia

(D) neoplasia

182. Rupture of the nuclear membrane and fragmentation of the nuclear chromatin is called

(A) Karyorrhexis

(B) Karyolysis

(C) Karyopyknosis

(D) Karyomegaly

183. Scoliosis and lordosis are caused due to the deficiency of

(A) ascorbic acid

(B) biotin

(C) niacin

(D) folic acid

184. Anterior abdominal enlargement is due to

(A) enlargement of swim bladder

(B) accumulation of ascitic fluid

(C) enlargement of kidney

(D) accumulation of gases

185. Red disease in shrimp is caused due to

(A) high application of cow dung

(B) high water temperature

(C) high application of lime

(D) high water salinity

186. Nodular and wart like lesion is a

(A) bacterial disease

(B) viral disease

(C) parasitic disease

(D) fungal disease

187. Clinical signs of AHPND are

(A) empty stomach, white gut and swollen hepatopancrea

(B) empty stomach, empty gut and shrunken hepatopancrea

(C) black spots, white gut and swollen hepatopancrea

(D) white spots, white gut and shrunken hepatopancrea

188. Bating is done in order to produce

(A) shark leather

(B) fish glue

(C) fish gelatin

(D) fish chitosan

189. Addition of salt in fish meat while making gel based products actually helps to enhance

(A) protein-protein interaction

(B) protein-water interaction

(C) protein-fat interaction

(D) protein-carbohydrate interaction

190. The Protein Efficiency Ratio (PER) of fish protein hydrolysates depends on

(A) amino acid profile

(B) enzymatic digestion

(C) amino acid profile and enzymatic digestion

(D) acid hydrolysis

191. The cleaned, desalted, air dried and hardened swim bladder is called as

(A) squalene

(B) fish maws

(C) isinglass

(D) pearl essence

192. Fish meal is rich in which mineral?

(A) Potassium

(B) Calcium

(C) Iodine

(D) Iron

193. Smoke has a carcinogenic property due to the presence of

(A) 3,4 benzopyrene

(B) toluene

(C) benzene

(D) anthracene

194. Broiled Kamaboko is called as

(A) Chikuwa

(B) Hampen

(C) Satsumage

(D) Kamaboko

195. Which of the following technologies is the method of ensuring that pathogens in food products can be controlled or eliminated?

(A) Barrier technology

(B) Hurdle technology

(C) Sous vide technology

(D) Barrier and hurdle technologies

196. The zone in the extrusion where the ingredients are subjected to extreme mixing, pressure and steam heat is called

(A) cooking zone

(B) input zone

(C) kneading zone

(D) extrusion zone

197. In the imitation products, the additives such as soy and salt are added to promote the

(A) cohesion among protein molecules

(B) adhesion among protein molecules

(C) linearity among fat molecules

(D) collinearity among fat molecules

198. Whirling disease is caused by

(A) *Myxobolus cerebralis*

(B) *Microsporidia sporozoans*

(C) *Trypanosoma* sp.

(D) *Chilodonella* sp.

199. Non-digestible food ingredient that is used for enhancing the growth of health promoting bacteria is called as

(A) probiotics

(B) prebiotics

(C) immune enhancer

(D) vaccine

200. Process of reducing hazardous organic waste to environmentally safe levels through the use of microbes is called as

(A) biomagnification

(B) bioavailability

(C) bioaccumulation

(D) bioremediation

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