

FISHERIES SCIENCE ICAR SEPT 2022

Topic:- 15 FISHERIES SCIENCE_PG

1) *Neolissochilus hexagonolepis* is commonly known as[Question ID = 1321][Question Description =

101_25_FIS_AUG22_Q01]

1. Snow trout [Option ID = 5281]
2. Copper mahseer [Option ID = 5282]
3. Deccan mahseer [Option ID = 5283]
4. Himalayan mahseer [Option ID = 5284]

2) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Fishes of the family Polynemidae are called threadfins.

Reason R: Upper part of pectoral fins of polynemids modified into thread like filaments.

In light of the above statements, choose the *correct* answer from the options given below

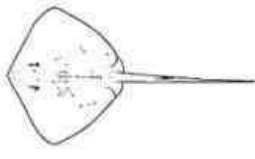
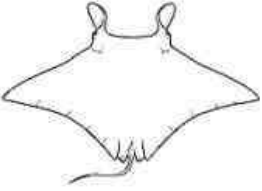

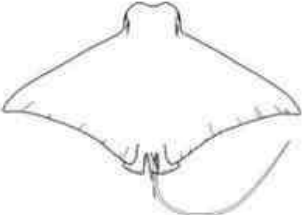
[Question ID = 1322][Question Description = 102_25_FIS_AUG22_Q02]

1. Both A and R are true and R is the correct explanation of A [Option ID = 5285]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 5286]
3. A is true but R is false [Option ID = 5287]
4. A is false but R is true [Option ID = 5288]

3) Dugong is a[Question ID = 1323][Question Description = 103_25_FIS_AUG22_Q03]

1. Cetacean [Option ID = 5289]
2. Sirenian [Option ID = 5290]
3. Pinniped [Option ID = 5291]
4. Fissiped [Option ID = 5292]

4) Match List I with List II

List I	List II
A. Gymnuridae	I. 
B. Rhinopteridae	II. 
C. Dasyatidae	III. 
D. Mobulidae	IV. 

Choose the **correct** answer from the options given below:

[Question ID = 1324][Question Description = 104_25_FIS_AUG22_Q04]

1. A - III , B - IV , C - II , D - I [Option ID = 5293]
2. A - III , B - IV , C - I , D - II [Option ID = 5294]
3. A - II , B - IV , C - I , D - III [Option ID = 5295]
4. A - III , B - I , C - IV , D - II [Option ID = 5296]

5) Scientific name of kadal shrimp[Question ID = 1325][Question Description = 105_25_FIS_AUG22_Q05]

1. *Metapenaeus alcocki* [Option ID = 5297]
2. *Metapenaeus monoceros* [Option ID = 5298]
3. *Metapenaeus affinis* [Option ID = 5299]
4. *Metapenaeus dobsoni* [Option ID = 5300]

6) Identify the growth parameters in the von Bertalanffy age-length growth equation

- A. Curvature parameter
- B. Relative Condition factor
- C. Initial condition factor
- D. Asymptotic length
- E. Anabolic coefficient

Choose the **correct** answer from the options given below:

[Question ID = 1326][Question Description = 106_25_FIS_AUG22_Q06]

1. A, B and D only [Option ID = 5301]
2. A, C, and E only [Option ID = 5302]
3. A, C and D only [Option ID = 5303]
4. B, C and D only [Option ID = 5304]

7) Identify the species?



[Question ID = 1327][Question Description = 107_25_FIS_AUG22_Q07]

1. *Lambis scorpionus* [Option ID = 5305]
2. *Murex tribulus* [Option ID = 5306]
3. *Lambis crocata* [Option ID = 5307]
4. *Lambis lambis* [Option ID = 5308]

8) Fox's Surplus production model implies [Question ID = 1328][Question Description = 108_25_FIS_AUG22_Q08]

1. Yield per effort increases with increase in fishing effort [Option ID = 5309]
2. Yield per effort decreases and never approaches zero even at high fishing effort [Option ID = 5310]
3. Yield per effort decreases and reaches zero at certain higher level of fishing effort [Option ID = 5311]
4. Yield per effort remains same at all levels of fishing effort [Option ID = 5312]

9) Match List I with List II

List I	List II
A. <i>Erichthus</i>	I. Spiny lobster
B. <i>Glaucothoe</i>	II. Euphausid
C. <i>Phyllosoma</i>	III. Hermit crab
D. <i>Furcilia</i>	IV. Stomatopod

Choose the correct answer from the options given below:

[Question ID = 1329][Question Description = 109_25_FIS_AUG22_Q09]

1. A - III , B - IV , C - II , D - I [Option ID = 5313]
2. A - IV , B - III , C - I , D - II [Option ID = 5314]
3. A - IV , B - III , C - II , D - I [Option ID = 5315]
4. A - III , B - I , C - IV , D - II [Option ID = 5316]

10) What is the maximum sustainable yield (tonnes) of an unexploited stock with biomass of 35 tonnes and natural mortality rate of 0.8 per year?

[Question ID = 1330][Question Description = 110_25_FIS_AUG22_Q10]

1. 44 [Option ID = 5317]
2. 28 [Option ID = 5318]
3. 14 [Option ID = 5319]
4. 7 [Option ID = 5320]

11) What is TRUE for *Tenulosa ilisha*? [Question ID = 1331][Question Description = 111_25_FIS_AUG22_Q11]

1. It matures and spawns in marine water [Option ID = 5321]
2. It matures and spawns in freshwater [Option ID = 5322]
3. It matures in marine water and spawns in freshwater [Option ID = 5323]
4. It matures in estuary and spawns in freshwater [Option ID = 5324]

12) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A : Anemonefish is categorised as protandrous hermaphrodite.

Reason R : Anemonefish is born male first and then changes its sex to female during its life span.

In light of the above statements, choose the *correct* answer from the options given below

[Question ID = 1332][Question Description = 112_25_FIS_AUG22_Q12]

1. Both A and R are true and R is the correct explanation of A [Option ID = 5325]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 5326]
3. A is true but R is false [Option ID = 5327]
4. A is false but R is true [Option ID = 5328]

13) Which among the following has shorter value of relative gut length than others?[Question ID = 1333][Question Description = 113_25_FIS_AUG22_Q13]

1. *Hypophthalmichthys molitrix* [Option ID = 5329]
2. *Channa striata* [Option ID = 5330]
3. *Chanos chanos* [Option ID = 5331]
4. *Labeo rohita* [Option ID = 5332]

14) Identify the correct pair with respect to endocrine organ and its secretion[Question ID = 1334][Question Description = 114_25_FIS_AUG22_Q14]

1. Ultimobranchial gland - Calcitonin [Option ID = 5333]
2. Corpuscles of Stannius - Oxytocin [Option ID = 5334]
3. Chromaffin tissue - Prolactin [Option ID = 5335]
4. Pancreas - Adrenaline [Option ID = 5336]

15) Match List I with List II

List I	List II
A. Nest builder	I. <i>Hippocampus kelloggi</i>
B. Mouth brooder	II. <i>Poecilia reticulata</i>
C. Pouch brooder	III. <i>Oreochromis mossambicus</i>
D. Live bearers	IV. <i>Betta splendens</i>

Choose the correct answer from the options given below:

[Question ID = 1335][Question Description = 115_25_FIS_AUG22_Q15]

1. A - II , B - III , C - IV , D - I [Option ID = 5337]
2. A - III , B - II , C - IV , D - I [Option ID = 5338]
3. A - IV , B - III , C - II , D - I [Option ID = 5339]
4. A - IV , B - III , C - I , D - II [Option ID = 5340]

16) The cranial nerve which arises from the lateral side of the medulla oblongata and supplies the snout and jaws[Question ID = 1336][Question Description = 116_25_FIS_AUG22_Q16]

1. Trochlear [Option ID = 5341]
2. Abducens [Option ID = 5342]
3. Trigeminal [Option ID = 5343]
4. Vagus [Option ID = 5344]

17) Arrange the following stages of development in a typical teleost, starting from the earliest

- A. Gastrula
- B. Cleavage
- C. Blastula
- D. Fertilization
- E. Morula

Choose the *correct* answer from the options given below

[Question ID = 1337][Question Description = 117_25_FIS_AUG22_Q17]

1. B, D, C, A, E [Option ID = 5345]
2. D, B, E, A, C [Option ID = 5346]
3. B, D, E, A, C [Option ID = 5347]
4. D, B, E, C, A [Option ID = 5348]

18) Which of the following is *Ex situ* conservation method?[Question ID = 1338][Question Description =

118_25_FIS_AUG22_Q18]

1. Protected area [Option ID = 5349]
2. Ranching [Option ID = 5350]
3. Live gene bank [Option ID = 5351]
4. Biosphere reserve [Option ID = 5352]

19) Given below are two statements

Statement I: Rods of fish eye are sensitive to lowlight levels and provide low resolution.

Statement II: Cones of fish eye are less sensitive to light and require brighter light.

In light of the above statements, choose the *correct* answer from the options given below

[Question ID = 1339][Question Description = 119_25_FIS_AUG22_Q19]

1. Both Statement I and Statement II are true [Option ID = 5353]
2. Both Statement I and Statement II are false [Option ID = 5354]
3. Statement I is true but Statement II is false [Option ID = 5355]
4. Statement I is false but Statement II is true [Option ID = 5356]

20) Which of the following is NOT a characteristic of Peninsular Rivers?[Question ID = 1340][Question Description = 120_25_FIS_AUG22_Q20]

1. Seasonal flow [Option ID = 5357]
2. Meandering tendency often shifting their beds [Option ID = 5358]
3. Little erosional activity [Option ID = 5359]
4. Fed by rain only [Option ID = 5360]

21) Which of the following groups form dominant fishery along the northwest coast?

- A. Bombay duck
- B. White baits
- C. Non-penaetid prawns
- D. Lesser sardines
- E. Golden anchovy

Choose the *correct* answer from the options given below:

[Question ID = 1341][Question Description = 121_25_FIS_AUG22_Q21]

1. A, B and E only [Option ID = 5361]
2. A, C and E only [Option ID = 5362]
3. A, C and D only [Option ID = 5363]
4. B, C and D only [Option ID = 5364]

22) The most important catfish species of Pong reservoir are[Question ID = 1342][Question Description = 122_25_FIS_AUG22_Q22]

1. *Wallago attu* and *Clarias magur* [Option ID = 5365]
2. *Sperata seenghala* and *Ompok pabo* [Option ID = 5366]
3. *Sperata seenghala* and *Wallago attu* [Option ID = 5367]
4. *Ompok pabo* and *Clarias magur* [Option ID = 5368]

23) Given below are two statements

Statement I: River Teesta is one of the Transboundary Rivers of India.

Statement II: River Teesta shares its course with Bangladesh and Nepal.

In light of the above statements, choose the *correct* answer from the options given below

[Question ID = 1343][Question Description = 123_25_FIS_AUG22_Q23]

1. Both Statement I and Statement II are true [Option ID = 5369]
2. Both Statement I and Statement II are false [Option ID = 5370]
3. Statement I is true but Statement II is false [Option ID = 5371]
4. Statement I is false but Statement II is true [Option ID = 5372]

24) Sciaenids are mainly caught by[Question ID = 1344][Question Description = 124_25_FIS_AUG22_Q24]

1. Dol net [Option ID = 5373]
2. Shore seine [Option ID = 5374]
3. Trawl net [Option ID = 5375]
4. Drift gill net [Option ID = 5376]

25) Rich species diversity of marine algae along the Indian coast belongs to[Question ID = 1345][Question Description = 125_25_FIS_AUG22_Q25]

1. Rhodophyceae [Option ID = 5377]
2. Phaeophyceae [Option ID = 5378]
3. Chlorophyceae [Option ID = 5379]
4. Cyanophyceae [Option ID = 5380]

26) The average annual growth of fisheries sector in the country since 2014-15 is

[Question ID = 1346][Question Description = 126_25_FIS_AUG22_Q26]

1. 8.5 % [Option ID = 5381]
2. 6.5% [Option ID = 5382]
3. 10.9% [Option ID = 5383]
4. 12.7% [Option ID = 5384]

27) What is the fish production of India (in million metric tonnes) during 2019-20 ?

[Question ID = 1347][Question Description = 127_25_FIS_AUG22_Q27]

1. 10.8 [Option ID = 5385]
2. 14.2 [Option ID = 5386]
3. 16.8 [Option ID = 5387]
4. 9.2 [Option ID = 5388]

28) Global fish production (2018) is estimated to be about[Question ID = 1348][Question Description = 128_25_FIS_AUG22_Q28]

1. 192 mmt [Option ID = 5389]
2. 168 mmt [Option ID = 5390]
3. 152 mmt [Option ID = 5391]
4. 179 mmt [Option ID = 5392]

29) World aquaculture production (in mmt) during 2018 is[Question ID = 1349][Question Description = 129_25_FIS_AUG22_Q29]

1. 82 [Option ID = 5393]
2. 71 [Option ID = 5394]
3. 96 [Option ID = 5395]
4. 52 [Option ID = 5396]

30) Amino acid Glycine is a/an[Question ID = 1350][Question Description = 130_25_FIS_AUG22_Q30]

1. Non essential amino acid [Option ID = 5397]
2. Essential amino acid [Option ID = 5398]
3. Semi-essential amino acid [Option ID = 5399]
4. Fatty acid [Option ID = 5400]

31) Nitrogen waste excreted in the form of NH_3 in fish amounts to

[Question ID = 1351][Question Description = 131_25_FIS_AUG22_Q31]

1. 50 % [Option ID = 5401]
2. 65 % [Option ID = 5402]
3. 95 % [Option ID = 5403]
4. 83 % [Option ID = 5404]

32) Fertilized eggs of carps look

[Question ID = 1352][Question Description = 132_25_FIS_AUG22_Q32]

1. Opaque [Option ID = 5405]
2. Transparent [Option ID = 5406]
3. Iridescent [Option ID = 5407]
4. White [Option ID = 5408]

33) Which of the following (with respect to trouts) can be transported to long distances without losing viability?

[Question ID = 1353][Question Description = 133_25_FIS_AUG22_Q33]

1. Unfertilized eggs [Option ID = 5409]
2. Alevins [Option ID = 5410]
3. Fertilized eggs [Option ID = 5411]
4. Fry [Option ID = 5412]

34) Which of the following is a female hormone ?[Question ID = 1354][Question Description = 134_25_FIS_AUG22_Q34]

1. Estradiol [Option ID = 5413]
2. Methyl testosterone [Option ID = 5414]
3. Ethyl testosterone [Option ID = 5415]
4. Nor ethindrone [Option ID = 5416]

35) Triploid fish is a

[Question ID = 1355][Question Description = 135_25_FIS_AUG22_Q35]

1. A fertile fish and capable of producing young ones [Option ID = 5417]
2. Hermaphrodite [Option ID = 5418]
3. Semi-fertile [Option ID = 5419]
4. Sterile fish [Option ID = 5420]

36) Saprolegniasis in fish is caused by[Question ID = 1356][Question Description = 136_25_FIS_AUG22_Q36]

1. Bacteria [Option ID = 5421]
2. Fungus [Option ID = 5422]
3. Virus [Option ID = 5423]
4. Protozoan [Option ID = 5424]

37) WSSV was predominantly seen and much damage caused in[Question ID = 1357][Question Description = 137_25_FIS_AUG22_Q37]

1. Freshwater prawn [Option ID = 5425]
2. White leg shrimp [Option ID = 5426]
3. Tiger shrimp [Option ID = 5427]
4. Indian white shrimp [Option ID = 5428]

38) *Epinephelus tauvina* sex reversal begins at the age of[Question ID = 1358][Question Description = 138_25_FIS_AUG22_Q38]

1. 2nd year [Option ID = 5429]
2. 3rd year [Option ID = 5430]
3. 4th year [Option ID = 5431]
4. 6th year [Option ID = 5432]

39) Carboxypeptidases belong to the group[Question ID = 1359][Question Description = 139_25_FIS_AUG22_Q39]

1. Exopeptidases [Option ID = 5433]
2. Endopeptidases [Option ID = 5434]
3. Cystine proteases [Option ID = 5435]
4. Serine proteases [Option ID = 5436]

40) Match List I with List II

List I	List II
Group	Larval stage
A. Freshwater mussel	I. Megalopa
B. Crab	II. Puerulus
C. Lobster	III. Mysis
D. Freshwater prawn	IV. Glochidium
	V. Zoea

Choose the correct answer from the options given below:

[Question ID = 1360][Question Description = 140_25_FIS_AUG22_Q40]

1. A - IV, B - II, C - I, D - III [Option ID = 5437]
2. A - IV, B - I, C - II, D - V [Option ID = 5438]
3. A - III, B - I, C - II, D - IV [Option ID = 5439]
4. A - V, B - I, C - II, D - III [Option ID = 5440]

41) Chose the correct statements

- A. Groundnut cake is usually used as lipid source
- B. Groundnut cake is used as protein source
- C. Rice bran is used as carbohydrate source
- D. Rice bran is used as protein source
- E. Wheat flour is used as a binder

Choose the *correct* answer from the options given below

[Question ID = 1361][Question Description = 141_25_FIS_AUG22_Q41]

1. A, B and E only [Option ID = 5441]
2. B, D and E only [Option ID = 5442]
3. B, C and E only [Option ID = 5443]
4. A, D and E only [Option ID = 5444]

42) Given below are two statements

Statement I: HCG is a synthetic hormone

Statement II: Ovaprim is a synthetic hormone

In light of the above statements, choose the *correct* answer from the options given below

[Question ID = 1362][Question Description = 142_25_FIS_AUG22_Q42]

1. Statement I and Statement II are true [Option ID = 5445]
2. Statement I and Statement II are false [Option ID = 5446]
3. Statement I is true and Statement II is false [Option ID = 5447]
4. Statement I is false and Statement II is true [Option ID = 5448]

43) Values of alkalinity (mg/l) that adversely affect the spawning and hatching of carps are[Question ID = 1363][Question Description = 143_25_FIS_AUG22_Q43]

1. Less than 100 [Option ID = 5449]
2. More than 300 [Option ID = 5450]
3. 100 - 150 [Option ID = 5451]
4. 150-200 [Option ID = 5452]

44) Mahua oil cake acts as[Question ID = 1364][Question Description = 144_25_FIS_AUG22_Q44]

1. Poison and manure [Option ID = 5453]
2. Poison only [Option ID = 5454]
3. Manure only [Option ID = 5455]
4. As disinfectant [Option ID = 5456]

45) Yellow head virus (YHV) predominantly infects which of the following?

[Question ID = 1365][Question Description = 145_25_FIS_AUG22_Q45]

1. Catla [Option ID = 5457]
2. Freshwater prawn [Option ID = 5458]
3. Tiger prawn [Option ID = 5459]
4. Whiteleg shrimp [Option ID = 5460]

46) Which one of the following is a natural hermaphrodite?

[Question ID = 1366][Question Description = 146_25_FIS_AUG22_Q46]

1. Pearl spot [Option ID = 5461]
2. Tilapia [Option ID = 5462]
3. Pangasius [Option ID = 5463]
4. Sea bass [Option ID = 5464]

47) White tail disease in freshwater prawn is caused by[Question ID = 1367][Question Description = 147_25_FIS_AUG22_Q47]

1. *Vibrio sp* [Option ID = 5465]
2. Mrnv and xsv [Option ID = 5466]
3. Yellow head virus [Option ID = 5467]
4. WSSV [Option ID = 5468]

48) GIFT tilapia was produced by which of the following?

[Question ID = 1368][Question Description = 148_25_FIS_AUG22_Q48]

1. Hybridization [Option ID = 5469]
2. Selective breeding [Option ID = 5470]
3. Back crossing [Option ID = 5471]
4. Ploidy [Option ID = 5472]

49) Which of the following group of water bodies are less utilised in India for aquaculture?

[Question ID = 1369][Question Description = 149_25_FIS_AUG22_Q49]

1. Reservoirs [Option ID = 5473]
2. Major tanks [Option ID = 5474]
3. Ponds [Option ID = 5475]
4. Minor tanks [Option ID = 5476]

50) Selective breeding technique was followed while developing[Question ID = 1370][Question Description = 150_25_FIS_AUG22_Q50]

1. Super male tilapia [Option ID = 5477]
2. Super salmon [Option ID = 5478]
3. Jayanthi rohu [Option ID = 5479]
4. Catla-rohu hybrid [Option ID = 5480]

51) Ag processing cells are[Question ID = 1371][Question Description = 151_25_FIS_AUG22_Q51]

1. Eosinophils [Option ID = 5481]
2. Basophiles [Option ID = 5482]
3. Lymphocytes [Option ID = 5483]
4. Macrophages [Option ID = 5484]

52) Which one of these acute phase proteins has strong affinity to iron?[Question ID = 1372][Question Description = 152_25_FIS_AUG22_Q52]

1. Albumin [Option ID = 5485]
2. Ceruloplasmin [Option ID = 5486]
3. C-reactive protein [Option ID = 5487]
4. Transferrin [Option ID = 5488]

53) Specific humoral defense in teleost is mediated by

[Question ID = 1373][Question Description = 153_25_FIS_AUG22_Q53]

1. Macrophages [Option ID = 5489]
2. Antibody [Option ID = 5490]
3. T cells [Option ID = 5491]
4. Interferon [Option ID = 5492]

54) The only anaesthetic currently approved by the USFDA for use on food fish is

[Question ID = 1374][Question Description = 154_25_FIS_AUG22_Q54]

1. MS-222
[Option ID = 5493]
2. Benzocaine
[Option ID = 5494]
3. Quinaldine
[Option ID = 5495]
4. Clove oil
[Option ID = 5496]

55) When a drug or chemical is applied in water to cure fish disease, what will be bioavailability of that drug[Question ID = 1375][Question Description = 155_25_FIS_AUG22_Q55]

1. 100% [Option ID = 5497]
2. < 100%> [Option ID = 5498]
3. > 100% [Option ID = 5499]
4. 0% [Option ID = 5500]

56) Detoxification of drugs and chemicals in fish is predominantly carried out by[Question ID = 1376][Question Description = 156_25_FIS_AUG22_Q56]

1. Gills [Option ID = 5501]
2. Liver [Option ID = 5502]
3. Kidney [Option ID = 5503]
4. Intestine [Option ID = 5504]

57) The fish are exposed to the test chemical for a period of 96 hours is to study[Question ID = 1377][Question Description = 157_25_FIS_AUG22_Q57]

1. Chronic toxicity [Option ID = 5505]
2. Sub-chronic toxicity [Option ID = 5506]
3. Acute toxicity [Option ID = 5507]
4. Genotoxicity [Option ID = 5508]

58) Broken back condition or scoliosis arises, if fish are fed with diets deficient in[Question ID = 1378][Question Description = 158_25_FIS_AUG22_Q58]

1. Vitamin A [Option ID = 5509]
2. Vitamin C [Option ID = 5510]
3. Vitamin B12 [Option ID = 5511]
4. Essential fatty acids [Option ID = 5512]

59) The use of intermediate hosts for development is a common feature of which parasitic group?

[Question ID = 1379][Question Description = 159_25_FIS_AUG22_Q59]

1. Ciliated protozoans [Option ID = 5513]
2. Monogeneans [Option ID = 5514]
3. Nematodes [Option ID = 5515]
4. Branchiurans [Option ID = 5516]

60) *Aphanomyces invadans*, which causes seasonal epizootics in wild and farmed fish, is a[Question ID = 1380][Question Description = 160_25_FIS_AUG22_Q60]

1. Bacteria [Option ID = 5517]
2. Virus [Option ID = 5518]
3. Parasite [Option ID = 5519]
4. Fungi [Option ID = 5520]

61) A non-tumorous enlargement of an organ/tissue as a result of an increase in size rather than number of constituent cell is[Question ID = 1381][Question Description = 161_25_FIS_AUG22_Q61]

1. Hypertrophy [Option ID = 5521]
2. Hyperplasia [Option ID = 5522]
3. Atrophy [Option ID = 5523]
4. Neoplasia [Option ID = 5524]

62) Among these which is NOT considered as cardinal sign of inflammation?

[Question ID = 1382][Question Description = 162_25_FIS_AUG22_Q62]

1. Pain [Option ID = 5525]
2. Redness [Option ID = 5526]
3. Opsonisation [Option ID = 5527]
4. Heat [Option ID = 5528]

63) An emerging virus associated with high mortality in cultured tilapia[Question ID = 1383][Question Description = 163_25_FIS_AUG22_Q63]

1. IPNV [Option ID = 5529]
2. TiLV [Option ID = 5530]
3. KHV [Option ID = 5531]
4. HPV [Option ID = 5532]

64) *Ichthyophthirius multifiliis* is

[Question ID = 1384][Question Description = 164_25_FIS_AUG22_Q64]

1. Crustacean parasite [Option ID = 5533]
2. Protozoan parasite [Option ID = 5534]
3. Cestode parasite [Option ID = 5535]
4. Nematode parasite [Option ID = 5536]

65) Which of the following is a bacterial disease of salmonid fishes?

[Question ID = 1385][Question Description = 165_25_FIS_AUG22_Q65]

1. Whirling disease [Option ID = 5537]
2. White Spot disease [Option ID = 5538]
3. Enteric red mouth disease [Option ID = 5539]
4. Gas bubble disease [Option ID = 5540]

66) Hardness of water is due to the presence of salts of[Question ID = 1386][Question Description = 166_25_FIS_AUG22_Q66]

1. Potassium [Option ID = 5541]
2. Chlorine [Option ID = 5542]
3. Magnesium [Option ID = 5543]
4. Boron [Option ID = 5544]

67) Which among these biogeochemical cycle is the slowest one?[Question ID = 1387][Question Description = 167_25_FIS_AUG22_Q67]

1. Nitrogen [Option ID = 5545]
2. Potassium [Option ID = 5546]
3. Phosphorus [Option ID = 5547]
4. Sulphur [Option ID = 5548]

68) Which among the following states has highest mangrove cover in the country?[Question ID = 1388][Question Description = 168_25_FIS_AUG22_Q68]

1. Gujarat [Option ID = 5549]
2. Kerala [Option ID = 5550]
3. Maharashtra [Option ID = 5551]
4. West Bengal [Option ID = 5552]

69) During primary treatment in sewage treatment plants, which of the operation initially takes place?

[Question ID = 1389][Question Description = 169_25_FIS_AUG22_Q69]

1. Removal of organic matter [Option ID = 5553]
2. Removal of fine suspended particles [Option ID = 5554]
3. Removal of floating materials [Option ID = 5555]
4. Removal of harmful bacteria [Option ID = 5556]

70) Identify the correct sequence of genesis in which the lentic series evolved[Question ID = 1390][Question Description = 170_25_FIS_AUG22_Q70]

1. Creeks - brooks - streams - rivers [Option ID = 5557]
2. Streams - rivers - Creeks - brooks [Option ID = 5558]
3. Lakes - ponds - bogs - swamps [Option ID = 5559]
4. Lakes - swamps - bogs - ponds [Option ID = 5560]

71) Who among these defined lake as a body of standing water and occupying basin and lacking continuity with the sea?

[Question ID = 1391][Question Description = 171_25_FIS_AUG22_Q71]

1. S A Forbes [Option ID = 5561]
2. S R Carpenter [Option ID = 5562]
3. G E Hutchinson [Option ID = 5563]
4. F A Forel [Option ID = 5564]

72) Which of the following ocean current is NOT a cold current?[Question ID = 1392][Question Description = 172_25_FIS_AUG22_Q72]

1. Peruvian Current [Option ID = 5565]
2. Antarctica Current [Option ID = 5566]
3. Oyashio Current [Option ID = 5567]
4. Kuroshio Current [Option ID = 5568]

73) A measurement of 5 ppm concentration is equivalent to[Question ID = 1393][Question Description = 173_25_FIS_AUG22_Q73]

1. 5 g/mL [Option ID = 5569]
2. 5 mg/mL [Option ID = 5570]
3. 5 µg/L [Option ID = 5571]
4. 5 mg/L [Option ID = 5572]

74) Which of these process accelerate the productivity of ponds and lakes due to excess nutrients?[Question ID = 1394]

[Question Description = 174_25_FIS_AUG22_Q74]

1. Transpiration [Option ID = 5573]
2. Eutrophication [Option ID = 5574]
3. Oligotrophication [Option ID = 5575]
4. Deforestation [Option ID = 5576]

75) The principle of sedimentation of soil particles in soil texture analysis is based on[Question ID = 1395][Question Description = 175_25_FIS_AUG22_Q75]

1. Stokes' law [Option ID = 5577]
2. Bernoulli's principle [Option ID = 5578]
3. Voncoffs' principle [Option ID = 5579]
4. Liebig's law of the minimum [Option ID = 5580]

76) The presence of *Escherichia coli* in water in high amount is a strong indication of

[Question ID = 1396][Question Description = 176_25_FIS_AUG22_Q76]

1. Industrial pollution [Option ID = 5581]
2. Sewage or animal waste contamination [Option ID = 5582]
3. Hardness of water [Option ID = 5583]
4. Presence of chlorine in water [Option ID = 5584]

77) Biomagnification is a well-known phenomenon abundantly occur with[Question ID = 1397][Question Description = 177_25_FIS_AUG22_Q77]

1. Heavy metals [Option ID = 5585]
2. Hydrogen sulphide [Option ID = 5586]
3. Methane [Option ID = 5587]
4. Ammonia [Option ID = 5588]

78) Which of the following is a major cause of increasing ocean acidification?[Question ID = 1398][Question Description = 178_25_FIS_AUG22_Q78]

1. Rising concentration of carbon dioxide [Option ID = 5589]
2. Rising sea level [Option ID = 5590]
3. Eutrophication [Option ID = 5591]
4. Decreasing dissolved oxygen concentrations [Option ID = 5592]

79) Which of the following lagoon/estuary is incorrectly matched to the place they are situated?[Question ID = 1399][Question Description = 179_25_FIS_AUG22_Q79]

1. Hooghly-Matlah estuarine system - West Bengal [Option ID = 5593]
2. Mandovi-Zuari estuarine system - Karnataka [Option ID = 5594]
3. Vembanad lake - Kerala [Option ID = 5595]
4. Chilka lake - Odisha [Option ID = 5596]

80) Cyanobacteria generates various *cyanotoxins*, the most widespread toxin among them is[Question ID = 1400][Question Description = 180_25_FIS_AUG22_Q80]

1. Domoic Acid [Option ID = 5597]
2. Brevetoxin [Option ID = 5598]
3. Microcystin [Option ID = 5599]
4. Ciguatoxin [Option ID = 5600]

81) Among the following, the chemical hazard in fishery product is[Question ID = 1401][Question Description = 181_25_FIS_AUG22_Q81]

1. Bones [Option ID = 5601]
2. Glass [Option ID = 5602]
3. Saxitoxin [Option ID = 5603]
4. *Clostridium botulinum* [Option ID = 5604]

82) Shark skin has a protective coating of a calcareous deposit called[Question ID = 1402][Question Description = 182_25_FIS_AUG22_Q82]

1. Calcium carbonate [Option ID = 5605]
2. Calcium silicate [Option ID = 5606]
3. Calcium phosphate [Option ID = 5607]
4. Shagreen [Option ID = 5608]

83) Among the following, the Faecal indicator organism is[Question ID = 1403][Question Description = 183_25_FIS_AUG22_Q83]

1. *Staphylococcus aureus* [Option ID = 5609]
2. *Escherichia coli* [Option ID = 5610]
3. *Vibrio cholera* [Option ID = 5611]
4. *Listeria monocytogens* [Option ID = 5612]

84) Struvite formation in canned fish can be prevented by the addition of[Question ID = 1404][Question Description = 184_25_FIS_AUG22_Q84]

1. Magnesium ammonium phosphate [Option ID = 5613]
2. Sodium benzoate [Option ID = 5614]
3. Ethylene diamine tetra acetate [Option ID = 5615]
4. Sodium chloride [Option ID = 5616]

85) Dun spoilage in the cured fish products is caused by the growth of[Question ID = 1405][Question Description =

185_25_FIS_AUG22_Q85]

1. *Drosophila casei* [Option ID = 5617]
2. *Sporendonema epizoum* [Option ID = 5618]
3. *Aspergillus* spp [Option ID = 5619]
4. *Salmonella typhi* [Option ID = 5620]

86) The radiation dose required for the complete destruction of *Clostridium botulinum* is[Question ID = 1406][Question Description = 186_25_FIS_AUG22_Q86]

1. 0.5 M rads [Option ID = 5621]
2. 2.5 M rads [Option ID = 5622]
3. 4.5 M rads [Option ID = 5623]
4. 5 M rads [Option ID = 5624]

87) Thaw exudates and cooking losses in frozen products can be reduced by the addition of

[Question ID = 1407][Question Description = 187_25_FIS_AUG22_Q87]

1. Phosphate [Option ID = 5625]
2. BHA [Option ID = 5626]
3. Ascorbic acid [Option ID = 5627]
4. Propyl gallate [Option ID = 5628]

88) Intiation codon in Protein synthesis is[Question ID = 1408][Question Description = 188_25_FIS_AUG22_Q88]

1. AUG [Option ID = 5629]
2. UGA [Option ID = 5630]
3. GUA [Option ID = 5631]
4. UAG [Option ID = 5632]

89) The Amino acid responsible for the sweet taste is[Question ID = 1409][Question Description = 189_25_FIS_AUG22_Q89]

1. Arginine [Option ID = 5633]
2. Lysine [Option ID = 5634]
3. Glycine [Option ID = 5635]
4. Proline [Option ID = 5636]

90) The gamma radiation dose sufficient to reduce disinfestations in dried fish is[Question ID = 1410][Question Description = 190_25_FIS_AUG22_Q90]

1. 1 KGy [Option ID = 5637]
2. 2 KGy [Option ID = 5638]
3. 5 KGy [Option ID = 5639]
4. 10 KGy [Option ID = 5640]

91) Boiled fish paste product of Japan is

[Question ID = 1411][Question Description = 191_25_FIS_AUG22_Q91]

1. Kamaboko [Option ID = 5641]
2. Chikuwa [Option ID = 5642]
3. Hampen [Option ID = 5643]
4. Satsumaage [Option ID = 5644]

92) Which among the following is an indicator of spoilage in shrimp ?

[Question ID = 1412][Question Description = 192_25_FIS_AUG22_Q92]

1. Indole [Option ID = 5645]
2. Cadaverine [Option ID = 5646]
3. Histamine [Option ID = 5647]
4. Putreseine [Option ID = 5648]

93) Match List I with List II

List I	List II
A. Artificial rubber filling compound	I. Isinglass
B. Fish maws	II. Factice
C. Ambergris	III. Trepang
D. Beache-de-mer	IV. Sperm whale

Choose the correct answer from the options given below:

[Question ID = 1413][Question Description = 193_25_FIS_AUG22_Q93]

1. A - III , B - II , C - IV , D - I [Option ID = 5649]

2. A - II , B - I , C - IV , D - III [Option ID = 5650]
3. A - III , B - II , C - I , D - IV [Option ID = 5651]
4. A - I , B - IV , C - III , D - II [Option ID = 5652]

94) Match List I with List II

List I	List II
A. Sequestrants	I. Aluminium sulphate
B. Anticaking agents	II. Glycerol
C. Humectants	III. Calcium phosphate
D. Firming agent	IV. EDTA

Choose the correct answer from the options given below:

[Question ID = 1414][Question Description = 194_25_FIS_AUG22_Q94]

1. A-III, B-IV, C-I, D-II [Option ID = 5653]
2. A-IV, B-III, C-II, D-I [Option ID = 5654]
3. A-IV, B-III, C-I, D-II [Option ID = 5655]
4. A-I, B-II, C-III, D-IV [Option ID = 5656]

95) Match list I with List II

List I	List II
A. Histidine	I. Cadaverine
B. Lysine	II. Histamine
C. Tyrosine	III. Putresein
D. Ornithine	IV. Tyramine

Choose the correct answer from the options given below:

[Question ID = 1415][Question Description = 195_25_FIS_AUG22_Q95]

1. A-IV, B-III, C-II, D-I [Option ID = 5657]
2. A-IV, B-III, C-I, D-II [Option ID = 5658]
3. A-III, B-IV, C-I, D-II [Option ID = 5659]
4. A-II, B-I, C-IV, D-III [Option ID = 5660]

96) Which of the following can be used to catch specific species of fish?

[Question ID = 1416][Question Description = 196_25_FIS_AUG22_Q96]

1. Turtle exclusion devices [Option ID = 5661]
2. Trawl efficiency devices [Option ID = 5662]
3. FAD assisted purse seine [Option ID = 5663]
4. Gill net [Option ID = 5664]

97) Coracle is a dominant craft in which reservoir?

[Question ID = 1417][Question Description = 197_25_FIS_AUG22_Q97]

1. Tungabhadra [Option ID = 5665]
2. Gobindasagar [Option ID = 5666]
3. Rihand [Option ID = 5667]
4. Ujjani [Option ID = 5668]

98) Inshore fishing vessels operate up to [Question ID = 1418][Question Description = 198_25_FIS_AUG22_Q98]

1. 10 fathoms [Option ID = 5669]
2. 20 fathoms [Option ID = 5670]
3. 30 fathoms [Option ID = 5671]
4. 40 fathoms [Option ID = 5672]

99) The desired hull shape in protected waters is

[Question ID = 1419][Question Description = 199_25_FIS_AUG22_Q99]

1. Round bottomed [Option ID = 5673]
2. Flat bottomed [Option ID = 5674]
3. V-shaped bottom [Option ID = 5675]
4. Pontoon hulls [Option ID = 5676]

100) Arrange the following in ascending order of breaking load in 3-stranded fibre rope

- A. Polyamide
- B. Polyester
- C. Polyvinyl alcohol
- D. Polyethylene
- E. Polypropylene

Choose the *correct* answer from the options given below

[Question ID = 1420][Question Description = 200_25_FIS_AUG22_Q100]

1. A, C, D, E, B [Option ID = 5677]
2. D, E, A, B, C [Option ID = 5678]
3. C, D, E, B, A [Option ID = 5679]
4. B, C, D, E, A [Option ID = 5680]

101) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Most twisted netting twines are 3 stranded

Reason R: Fibres are twisted in S direction, yarns in Z and twines in S direction

In light of the above statements, choose the *correct* answer from the options given below

[Question ID = 1421][Question Description = 201_25_FIS_AUG22_Q101]

1. Both A and R are true and R is the correct explanation of A [Option ID = 5681]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 5682]
3. A is true but R is false [Option ID = 5683]
4. A is false but R is true [Option ID = 5684]

102) Arrange the otter boards in decreasing order of their aspect ratio

- A. Rectangular flat otter board
- B. Rectangular V otter board
- C. Oval profile otter board
- D. Suberkrub otter board

Choose the *correct* answer from the options given below

[Question ID = 1422][Question Description = 202_25_FIS_AUG22_Q102]

1. A, C, D, B [Option ID = 5685]
2. D, B, C, A [Option ID = 5686]
3. C, A, D, B [Option ID = 5687]
4. B, C, D, A [Option ID = 5688]

103) Match List I with List II

List I	List II
A. Mothership	I. Pot vessels
B. Carrier vessel	II. Seine netters
C. Trap setter	III. Fishery research vessel
D. Seines	IV. Factory mother ship

Choose the correct answer from the options given below:

[Question ID = 1423][Question Description = 203_25_FIS_AUG22_Q103]

1. A-II, B-III, C-I, D-IV [Option ID = 5689]
2. A-III, B-IV, C-II, D-I [Option ID = 5690]
3. A-III, B-IV, C-I, D-II [Option ID = 5691]
4. A-IV, B-III, C-I, D-II [Option ID = 5692]

104) Match List I with List II

List I	List II
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A. Ludhia	I. Karnataka
B. Rampani	II. West Bengal
C. Batchari	III. Tamil Nadu
D. Kilakaral boat	IV. Gujarat

Choose the correct answer from the options given below:

[Question ID = 1424][Question Description = 204_25_FIS_AUG22_Q104]

1. A-II, B-III, C-I, D-IV [Option ID = 5693]
2. A-III, B-IV, C-II, D-I [Option ID = 5694]
3. A-IV, B-I, C-II, D-III [Option ID = 5695]
4. A-IV, B-III, C-I, D-II [Option ID = 5696]

105) Match List I with List II

List I	List II
A. Seasoning	I. Galvanotaxis
B. Light fishing	II. Bait
C. Electric fishing	III. Fish attraction
D. Line fishing	IV. Timber

Choose the correct answer from the options given below:

[Question ID = 1425][Question Description = 205_25_FIS_AUG22_Q105]

1. A-II, B-III, C-I, D-IV [Option ID = 5697]
2. A-III, B-IV, C-II, D-I [Option ID = 5698]
3. A-IV, B-I, C-II, D-III [Option ID = 5699]
4. A-IV, B-III, C-I, D-II [Option ID = 5700]

106) If the Pearson's correlation coefficient (r) is 0.9, what is the value of coefficient of determination?[Question ID = 1426][Question Description = 206_25_FIS_AUG22_Q106]

1. 0.3 [Option ID = 5701]
2. 0.45 [Option ID = 5702]
3. 0.81 [Option ID = 5703]
4. 0.18 [Option ID = 5704]

107) Method of sampling which involves dividing the population into sub-populations that may differ in important ways[Question ID = 1427][Question Description = 207_25_FIS_AUG22_Q107]

1. Simple random sampling [Option ID = 5705]
2. Systematic sampling [Option ID = 5706]
3. Stratified sampling [Option ID = 5707]
4. Cluster sampling [Option ID = 5708]

108) Threshold value for significance used in hypothesis testing is[Question ID = 1428][Question Description = 208_25_FIS_AUG22_Q108]

1. Estimator [Option ID = 5709]
2. Point estimate [Option ID = 5710]
3. Standard error [Option ID = 5711]
4. Critical value [Option ID = 5712]

109) Which of the following is TRUE for binomial distribution?[Question ID = 1429][Question Description = 209_25_FIS_AUG22_Q109]

1. Binomial distribution is discrete in nature [Option ID = 5713]
2. Binomial distribution has infinite events [Option ID = 5714]
3. Binomial distribution has infinite outcomes [Option ID = 5715]
4. Every trial is an independent trial [Option ID = 5716]

110) Which of the following pairs of variables have negative correlation under normal conditions?

- A. Length and weight of fish
- B. Catch per unit effort and fishing effort
- C. Price and supply of fish

D. Price and Demand of fish

E. Temperature and depth of the ocean

Choose the *correct* answer from the options given below:

[Question ID = 1430][Question Description = 210_25_FIS_AUG22_Q110]

1. A, B and D only [Option ID = 5717]
2. B, D and E only [Option ID = 5718]
3. B, C and D only [Option ID = 5719]
4. A, C and E only [Option ID = 5720]

111) Ratio of the sample standard deviation to the sample mean[Question ID = 1431][Question Description = 211_25_FIS_AUG22_Q111]

1. Standard error [Option ID = 5721]
2. Co-efficient of variation [Option ID = 5722]
3. Mean deviation [Option ID = 5723]
4. Variance [Option ID = 5724]

112) Arrange the following stages of product adoption process by a consumer in sequence

A. Trial

B. Interest

C. Awareness

D. Evaluation

Choose the *correct* answer from the options given below

[Question ID = 1432][Question Description = 212_25_FIS_AUG22_Q112]

1. C, A, B, D [Option ID = 5725]
2. D, A, B, C [Option ID = 5726]
3. C, B, D, A [Option ID = 5727]
4. B, C, A, D [Option ID = 5728]

113) A group of people in the product adoption process who enjoy being at the leading edge and buy into new products at an early stage[Question ID = 1433][Question Description = 213_25_FIS_AUG22_Q113]

1. Early majority [Option ID = 5729]
2. Late majority [Option ID = 5730]
3. Innovators [Option ID = 5731]
4. Laggards [Option ID = 5732]

114) Pradhan Mantri Matsya Sampada Yojana (PMMSY) was launched in the year[Question ID = 1434][Question Description = 214_25_FIS_AUG22_Q114]

1. 2017 [Option ID = 5733]
2. 2018 [Option ID = 5734]
3. 2019 [Option ID = 5735]
4. 2020 [Option ID = 5736]

115) Match List I with List II

List I	List II
A. CRZ-1A	I. Relatively undisturbed land areas
B. CRZ-1B	II. Low tide line upto 12 nautical miles
C. CRZ-III	III. Inter tidal zone
D. CRZ-IVA	IV. Ecologically sensitive areas

Choose the correct answer from the options given below:

[Question ID = 1435][Question Description = 215_25_FIS_AUG22_Q115]

1. A - IV, B - III, C - I, D - II

[Option ID = 5737]

2. A - IV, B - II, C - I, D - III

[Option ID = 5738]

3. A - III, B - IV, C - II, D - I

[Option ID = 5739]

4. A - IV, B - I, C - II, D - III

[Option ID = 5740]

116) If the demand for Hilsa shad remains same irrespective of change in the price, the price elasticity of demand in such situation is said to be[Question ID = 1436][Question Description = 216_25_FIS_AUG22_Q116]

1. Unit elastic [Option ID = 5741]
2. Perfectly elastic [Option ID = 5742]
3. Perfectly inelastic [Option ID = 5743]
4. Inelastic [Option ID = 5744]

117) Potential Fishing Zone advisories are provided by[Question ID = 1437][Question Description = 217_25_FIS_AUG22_Q117]

1. ICAR-CMFRI [Option ID = 5745]
2. ESSO-INCOIS [Option ID = 5746]
3. ISRO [Option ID = 5747]
4. Fishery Survey of India [Option ID = 5748]

118) Capital which can only be put to a single specific use is called[Question ID = 1438][Question Description = 218_25_FIS_AUG22_Q118]

1. Sunk capital [Option ID = 5749]
2. Fixed capital [Option ID = 5750]
3. Working capital [Option ID = 5751]
4. Floating capital [Option ID = 5752]

119) The Marine Products Export Development Authority (MPEDA), a statutory body functions under which Ministry in Government of India?

[Question ID = 1439][Question Description = 219_25_FIS_AUG22_Q119]

1. Ministry of Agriculture and Farmers Welfare [Option ID = 5753]
2. Ministry of Food Processing Industry [Option ID = 5754]
3. Ministry of Commerce and Industry [Option ID = 5755]
4. Ministry of Fisheries, Animal Husbandry and Dairying [Option ID = 5756]

120) Given below are two statements

Statement I: Agriculture Education and Research is the legislature powers enlisted in the Union List in the Indian Constitution

Statement II: Fisheries beyond territorial sea is the legislature powers enlisted in the Concurrent List in the Indian Constitution

In light of the above statements, choose the *correct* answer from the options given below

[Question ID = 1440][Question Description = 220_25_FIS_AUG22_Q120]

1. Both Statement I and Statement II are true [Option ID = 5757]
2. Both Statement I and Statement II are false [Option ID = 5758]
3. Statement I is true but Statement II is false [Option ID = 5759]
4. Statement I is false but Statement II is true [Option ID = 5760]