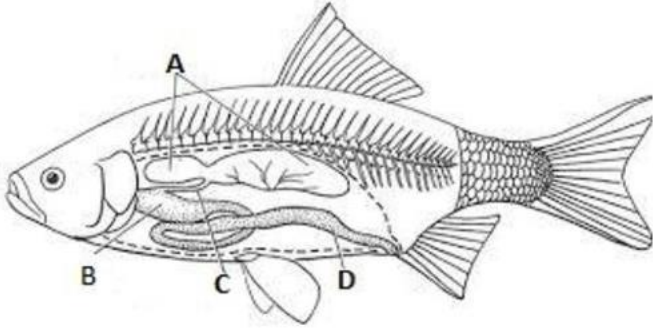


PREVIEW QUESTION BANK

Module Name : FISHERIES SCIENCES-ENG
Exam Date : 09-Jul-2023 Batch : 10:00-12:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	3101	Study the parts (A, B, C and D) labeled in the given picture and identify the category of fish from the options given below :  1. Monorhinous fish 2. Physostomous fish 3. Physoclistous fish 4. Cartilagenous fish A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
2	3102	Meckel's cartilage supports which of the following in early development of shark ? 1. Inner ear 2. Upper jaw 3. Lower jaw 4. Gill cover A1 : 1 A2 : 2 A3 : 3	4.0	1.00

		A4 : 4		
Objective Question				
3	3103	Identify the correct sequence of blood flow in a typical teleost : 1. Conus arteriosus → Atrium → Ventricle → Sinus venosus 2. Sinus venosus → Atrium → Ventricle → Bulbus arteriosus 3. Conus arteriosus → Ventricle → Atrium → Sinus venosus 4. Sinus venosus → Ventricle → Atrium → Bulbus arteriosus A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
4	3104	Arrange the following fishes starting the early maturity to late maturity period under ideal conditions. (A) Whale shark (B) Rohu (C) Indian mackerel (D) Sturgeon (E) Tilapia Choose the correct answer from the options given below : 1. (E), (B), (A), (D), (C). 2. (B), (C), (A), (D), (E). 3. (B), (A), (D), (C), (E). 4. (E), (C), (B), (D), (A). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

5	3105	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Rectal gland, a specialised anatomical structure, is present in marine elasmobranchs. Reason (R) : Rectal gland secretes vasopressin which helps in osmoregulation. In light of the above statements, choose the <i>correct</i> answer from the options given below. - Both (A) and (R) are true and (R) is the correct explanation of (A). - Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is true but (R) is false. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

6	3106	Identify the larva given in the picture :  - Phyllosoma - Nauplius - Veliger - Megalopa A1 : 1 A2 : 2	4.0	1.00
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		A3 : 3		
		A4 : 4		

Objective Question

7	3107	The depressed central area on the planispiral coiled shell of <i>Nautilus</i> is called : 1. Whorl 2. Columella 3. Varix 4. Umbilicus A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

8	3108	Haemoglobin in teleosts is : 1. Monomeric 2. Dimeric 3. Trimeric 4. Tetrameric A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

9	3109		4.0	1.00
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Given below are two statements :

Statement (I) : Pleurobranchs of a typical prawn are attached to abdominal segments bearing pleopods.

Statement (II) : A typical prawn has three pleurobranchs.

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both **Statement (I)** and **Statement (II)** are true.
2. Both **Statement (I)** and **Statement (II)** are false.
3. **Statement (I)** is true but **Statement (II)** is false.
4. **Statement (I)** is false but **Statement (II)** is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

10 3110

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : Sharks are categorized under the class Elasmobranchii.

Reason (R) : Sharks have gill slits positioned laterally on either side of the head.

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**.
2. Both **(A)** and **(R)** are correct but **(R)** is NOT the correct explanation of **(A)**.
3. **(A)** is correct but **(R)** is not correct.
4. **(A)** is not correct but **(R)** is correct.

A1 : 1

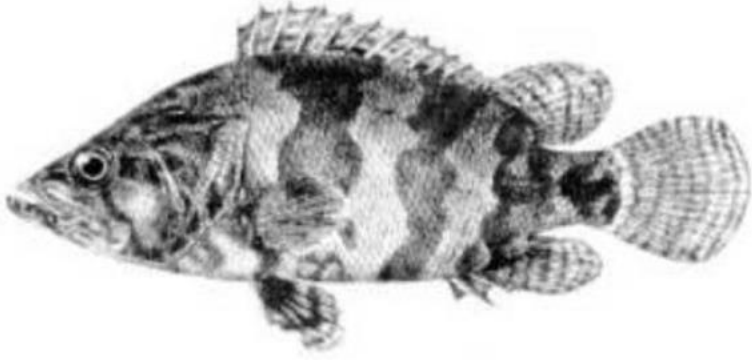
A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

11	3111	Identify the family of the fish species given in the picture  1. Cichlidae 2. Terapontidae 3. Nandidae 4. Latidae A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

12	3112		4.0	1.00
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Match **List-I** with **List-II**

List-I	List-II
(Common name)	(Family)
(A) Periwinkles	(I) Buccinidae
(B) Whelks	(II) Ampullariidae
(C) Chanks	(III) Littorinidae
(D) Apple snails	(IV) Turbinellidae

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

- (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (IV), (B) - (II), (C) - (I), (D) - (III)
- (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

13	3113		4.0	1.00
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Choose the penaeid shrimps from the following groups :

- (A) *Parapenaeopsis styliifera*
- (B) *Acetes indicus*
- (C) *Aristeus alcocki*
- (D) *Solenocera hextii*
- (E) *Nematopalaemon tenuipes*

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

- 1. (B), (C) and (E) only.
- 2. (A), (B) and (D) only.
- 3. (A), (C) and (D) only.
- 4. (B), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

14 3114

The presence of a sucking disc with 10-28 transverse movable laminae on the head is the striking taxonomic feature of which family ?

- 1. Rachycentridae
- 2. Echeneidae
- 3. Catostomidae
- 4. Sphyrnidae

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

15 3115

4.0 1.00

Arrange the following fishes based on number of dorsal fin spines they have, starting from the least to the most :

- (A) *Mugil cephalus*
- (B) *Sillago sihama*
- (C) *Arius arius*
- (D) *Sphyraena barracuda*
- (E) *Oreochromis mossambicus*

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

- 1. (C), (A), (D), (B), (E).
- 2. (C), (E), (A), (B), (D).
- 3. (E), (C), (B), (D), (A).
- 4. (A), (E), (B), (D), (C).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

16 3116

As per the analytical models of fish stock assessment, presence of too many old fish in the stock is an indicative of :

- 1. Growth overfishing
- 2. Recruitment overfishing
- 3. Underfishing
- 4. Eumetric fishing

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

17 3117

4.0 1.00

Which among the following models do not require biological data inputs for fish stock assessment ?

- (A) Surplus production model
- (B) Thompson and Bell prediction model
- (C) Relative response model
- (D) Yield per recruit model
- (E) Swept area method

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

- 1. (A), (B), (D) and (E) only.
- 2. (A), (C) and (E) only.
- 3. (B), (C), (D) and (E) only.
- 4. (B), (D) and (E) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

20	3120	As per FAO World Aquaculture and Fisheries Statistics (2022), which country leads in inland waters capture production in the year 2020 ? 1. China 2. India 3. Indonesia 4. Bangladesh A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
21	3121		4.0	1.00

Arrange the following west flowing Indian rivers from northernmost to southernmost based on their joining point to Arabian Sea :

- (A) Narmada
- (B) Mahi
- (C) Periyar
- (D) Tapi

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

- 1. (A), (D), (C), (B).
- 2. (B), (D), (A), (C).
- 3. (B), (A), (D), (C).
- 4. (C), (A), (B), (D).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

22 3122

Suckermouth catfish or Pleco, an exotic fish species frequently being recorded in Indian waters, is native to :

- 1. South America
- 2. North America
- 3. China
- 4. Africa

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

23 3123

4.0

1.00

The most productive fishing area which produces largest global marine capture fish is :

1. Northwest Atlantic
2. Northeast Atlantic
3. Northwest Pacific
4. Northeast Pacific

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

24 3124

Lobsters are most abundant and form a significant fishery in the state of :

1. Andhra Pradesh
2. Karnataka
3. Goa
4. Gujarat

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

25 3125

The most dominant species of *Labeo* in the river Cauvery is :

1. *Labeo dyocheilus*
2. *Labeo boga*
3. *Labeo kontius*
4. *Labeo calbasu*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

26	3126	What is the world latest fish production as per FAO, 2022 ? 1. 89 mmt 2. 232 mmt 3. 214 mmt 4. 184 mmt A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

27	3127	World latest aquaculture production (2022) is : 1. 98.5 mmt 2. 87.5 mmt 3. 224 mmt 4. 124 mmt A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

28	3128	Total Indian fish production (2021-22) is : 1. 16.25 mmt 2. 14.2 mmt 3. 10.8 mmt 4. 22. 4 mmt A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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A4 : 4

Objective Question

29 3129

What is the total value of fish and fishery products exported to overseas countries from India in 2021-22 ?

1. Rs. 37,585.6 crores
2. Rs. 47,0285 crores
3. Rs. 67,585 crores
4. Rs. 57,586.5 crores

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

30 3130

What is the contribution of Indian fisheries to national economy (GVA/GDP) and to Agricultural economy respectively in 2021-22 ?

1. 2.1% and 8.89%
2. 1.0% and 4.78%
3. 1.1% and 6.72%
4. 0.98% and 5.36%

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

31 3131

Breeding and hatchery technology of the following fish was developed by the CMFRI :

1. Seabass
2. Pearl spot
3. Tilapia
4. Cobia

A1 : 1

4.0

1.00

		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
32	3132	Which of the following fish variety was developed through selective breeding by the Worldfish Center (ICLARM) ? 1. Seabass 2. Jayanthi rohu 3. GIFT Tilapia 4. GI Scampi A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
33	3133	Which among the following fishes is relatively a new introduction in Indian freshwater aquaculture ? 1. Catla 2. Tilapia 3. Rohu 4. Pangasius A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
34	3134		4.0	1.00

The weight of fish produced divided by the feed is given as :

1. Food conversion efficiency
2. Food conversion ratio
3. Protein efficiency ratio
4. Specific growth rate

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

35	3135	Which of the following fish is carnivorous fish ?	4.0	1.00
		1. Tilapia 2. Pacu or roopchand 3. Mullet 4. Mrigal		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

36	3136	Which of the following variety of fish was developed by the CIFA through selective breeding ?	4.0	1.00
		1. GIFT Tilapia 2. GI Common carp 3. GI Mrigal 4. Jayanthi rohu		
		A1 : 1		
		A2 : 2		
		A3 : 3		

		A4 : 4		
Objective Question				
37	3137	The energy values (kcal/g) available from nutrients, protein and lipid are ? 4 and 5 5 and 4 5 and 9 9 and 4 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
38	3138	Which component of the energy in the food less the energy lost in faeces, urine and gills? - Metabolizable energy - Gross energy - Basal energy - Net energy A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
39	3139	Which group of fish are primarily cultured in Japan, Europe and North America, and are largely marine fishes ? - Herbivores - Omnivores - Plankton feeders - Carnivores A1 : 1	4.0	1.00

		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

40	3140	In biofloc system of culture, what is more important ? 1. C : P ratio 2. N : P ratio 3. C : N ratio 4. C : K ratio A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

41	3141	Indian major carps were bred for the first time through induced breeding in the year ? 1. 1969 2. 1957 3. 1973 4. 1947 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

42	3142	Adhesive eggs are seen in case of which fish ? 1. Catla 2. Mrigal 3. Common carp 4. Tilapia	4.0	1.00
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		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
43	3143	The scientist/s who developed the hypophysation technique for breeding of Indian major carps for the first time in India ? 1. S L Hora 2. T V R Pillay 3. V G Jhingran 4. Alikunhi K H and H Choudhri A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
44	3144	In the induced breeding of Indian major carps, which of the following statements are correct ? (A) Pituitary glands are preferred over Ovaprim. (B) Ovaprim is ready to use liquid form available in 10 ml vial, has consistency and given reliable results. (C) Ovatide is an indigenous, cost effective hormonal formulation. (D) GnRH is a steroidal hormone belongs to class of substances called peptides. Choose the correct answer from the options given below : 1. (A) and (B) only 2. (C) and (D) only 3. (B) and (C) only 4. (A) and (D) only A1 : 1	4.0	1.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

45 3145

4.0

1.00

Match **List-I** with **List-II**

List-I	List-II
(Shellfish)	(Larval stage)
(A) Crab	(I) Phyllosoma
(B) Lobster	(II) Zoea
(C) Scampi	(III) Glochidium
(D) Freshwater mussel	(IV) Megalopa

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

- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)
- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

46 3146

4.0

1.00

Match **List-I** with **List-II**

List-I	List-II
(Feed ingredients)	(Used as a source of)
(A) Groundnut cake	(I) Binder
(B) Tapioca floor	(II) Protein
(C) Ethoxyquin	(III) Carbohydrate
(D) Rice bran	(IV) Antioxidant

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (IV), (B) - (II), (C) - (III), (D) - (I)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (II), (B) - (I), (C) - (IV), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

47 3147

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : Extruded feed manufacture, high temperature high moisture and high pressure are used.

Reason (R) : In extruded feed production, small air pockets are formed inside pellets and they float in the water.

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

- Both (A) and (R) are true and (R) is the correct explanation of (A).
- Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
- (A) is true but (R) is false.
- (A) is false but (R) is true.

A1 : 1

4.0 1.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

48	3148	Given below are two statements : Statement (I) : Too many species used in freshwater aquaculture in India, which is not a good sign. Statement (II) : Diversification of species is necessary in the Indian freshwater aquaculture. In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are correct. - Both Statement (I) and Statement (II) are incorrect. Statement (I) is incorrect but Statement (II) is correct. Statement (I) is correct but Statement (II) is incorrect. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

49	3149	Given below are two statements : Statement (I) : African catfish is a fast growing one and recommended for culture in India. Statement (II) : Pangasius catfish is a suitable species for freshwater aquaculture. In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are correct. Statement (I) is incorrect and Statement (II) is correct. Statement (I) is correct but Statement (II) is incorrect. - Both Statements (I) and Statement (II) are incorrect. A1 : 1	4.0	1.00
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A2 : 2

A3 : 3

A4 : 4

Objective Question

50 3150

4.0

1.00

Given below are two statements :

Statement (I) : Gold fish eggs are adhesive.

Statement (II) : Common carp eggs are adhesive.

In light of the above statements, choose the *most appropriate* answer from the options given below.

1. Both **Statement (I)** and **Statement (II)** are correct.
2. Both **Statement (I)** and **Statement (II)** are incorrect.
3. **Statement (I)** is correct but **Statement (II)** is incorrect.
4. **Statement (I)** is incorrect but **Statement (II)** is correct.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

51 3151

4.0

1.00

Utilising a living microorganism to break down an environmental pollutant is referred to:

1. Microremediation
2. Nanoremediation
3. Bioremediation
4. Macroremediation

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

52	3152	Where is the ozone layer located in the atmosphere ? 1. Troposphere 2. Stratosphere 3. Mesosphere 4. Ionosphere A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

53	3153	When was the Ganga Action Plan (GAP) introduced in India ? 1. 1980 2. 1985 3. 1988 4. 1991 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

54	3154	How many parts per million (ppm) does a concentration of 0.01% represent ? 1. 1 ppm 2. 10 ppm 3. 100 ppm 4. 1000 ppm A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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A4 : 4

Objective Question

55	3155	Species which are threat to biodiversity are ? 1. Keystone species 2. Invasive species 3. Flagship species 4. Indicator Species A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

56	3156	Which of the following is a waterborne disease ? 1. Typhoid 2. Measles 3. Sarcoma 4. Arthritis A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

57	3157	The area in deep lakes which is beyond the influence of the shore or bottom is termed as: 1. Aphotic zone 2. Profoundal zone 3. Limnetic zone 4. Disphotic zone A1 : 1	4.0	1.00
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		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

58	3158	All of the following species are considered coliforms, except : 1. <i>Enterobacter aerogenes</i> 2. <i>Klebsiella pneumonia</i> 3. <i>Salmonella typhi</i> 4. <i>Escherichia coli</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

59	3159	Which of the following salts is the main cause of permanent hardness of water ? 1. Magnesium sulphate 2. Magnesium bicarbonate 3. Magnesium carbonate 4. Calcium Sulphate A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

60	3160		4.0	1.00
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The book 'Silent Spring', which was written by Rachel Carson, documented :

1. Adverse environmental effects caused by pesticides
2. Adverse environmental effects caused by ozone depletion
3. Adverse environmental effects caused by heavy metals
4. Adverse environmental effects caused by radioactive pollutants

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

61	3161	Nephelometer is used to measure : 1. Dissolved oxygen 2. Carbon dioxide 3. pH 4. Turbidity A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

62	3162	Increase in concentration of chemical substance along the trophic level of food chain is called : 1. Bioconcentration 2. Bioremediation 3. Biomagnification 4. Biotransformation A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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		A4 : 4		
Objective Question				
63	3163	Synecology is a study of inter relationship between environment and : 1. Individual plant 2. A population 3. A community 4. Individual animal A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
64	3164	Montreal protocol is related to : 1. Global warming 2. Ozone layer depletion 3. Sustainable development 4. Food security A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
65	3165	Which of the following ocean current is associated with Indian Ocean ? 1. Agulhas Current 2. Canary Current 3. Kurile Current 4. Florida Current A1 : 1 A2 : 2	4.0	1.00

A3 : 3

A4 : 4

Objective Question

66	3166	A universal process of directional change in community composition on an ecological time scale is called : 1. Displacement 2. Evolution 3. Succession 4. Extinction A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

67	3167	In most freshwater lakes, the algal productivity is limited by the availability of which of the following inorganic ions ? 1. Carbon 2. Nitrogen 3. Phosphorus 4. Sulphur A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

68	3168		4.0	1.00
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How many bio-geographical regions are present in India ?

1. 3
2. 4
3. 7
4. 10

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

69	3169	Large body of water, sometimes with a narrow mouth, that is almost completely surrounded by land is called : 1. Estuary 2. Gulf 3. Strait 4. Cape A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

70	3170	Mapping of ocean bottom features is called : 1. Bathymetry 2. Thermometry 3. Geometry 4. Oceanometry A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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A4 : 4

Objective Question

71	3171	Which fish disease is not listed in OIE list ? 1. Infection with viral haemorrhagic septicaemia virus 2. Infection with Gyrodactylus salaris 3. Infection with Aphanomyces invadans 4. Infection with Ichthyophthirius multifiliis A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

72	3172	Programmed cell death is called : 1. Necrosis 2. Apoptosis 3. Pyknosis 4. Karyolysis A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

73	3173	B cells and T cells are type of : 1. Neutrophils 2. Basophils 3. Lymphocytes 4. Antibodies A1 : 1	4.0	1.00
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		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

74	3174	Which one of the following is an acute phage protein ?	4.0	1.00
		1. Complement 2. Antigen 3. Antibody 4. CRP		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

75	3175	Which of the following is called as transboundary movement of disease ?	4.0	1.00
		1. Panzootic 2. Epizootic 3. Enzootic 4. Zoonotic		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

76	3176	Which of the following is a gram positive pathogenic bacteria ?	4.0	1.00
		1. <i>Yersinia ruckeri</i> 2. <i>Aeromonas hydrophila</i> 3. <i>Streptococcus iniae</i> 4. <i>Flavobacterium columnare</i>		

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

77	3177	Which one is involved in specific immune system ? 1. Lymphocytes 2. Monocytes 3. Neutrophils 4. Basophils A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

78	3178	Which of the following is not a prophylaxis measure in aquaculture ? 1. Probiotic 2. Antibiotic 3. Immunostimulant 4. Biosecurity A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

79	3179		4.0	1.00
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Which one is not a nucleic acid based technique ?

1. PCR
2. LAMP
3. FAME
4. RFLP

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

80	3180	Oxytetracycline antibiotics inhibits : 1. DNA synthesis 2. Protein synthesis 3. Carbohydrate synthesis 4. Lipid synthesis A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

81	3181	Which one of the following spoilages does not occur in canned products ? 1. Blue discoloration 2. Curding 3. Dun spoilage 4. Struvite formation A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

82	3182	Given below are two statements : Statement (I) : Only hot and cold process are used for preparation of dyeing bath for fishing net. Statement (II) : Hot, cold and cutch methods are used for preparation of dyeing bath for fishing net. In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are true. - Both Statement (I) and Statement (II) are false. Statement (I) is true but Statement (II) is false. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

83	3183	Given below are two statements : Statement (I) : Verandah nets are basically barriers. Statement (II) : Chinese dip nets are widely used in Kerala backwaters. In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are true. - Both Statement (I) and Statement (II) are false. Statement (I) is true but Statement (II) is false. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

84	3184	Food Safety Standard Authority of India (FSSAI) was formed in which year ? 2006 2008 2005 2009 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

85	3185	Given below are two statements : Statement (I) : Otter boards in gill nets are used for horizontal opening. Statement (II) : Floats and sinkers are used for vertical opening. In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are true. - Both Statement (I) and Statement (II) are false. Statement (I) is true but Statement (II) is false. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

86	3186		4.0	1.00
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Given below are two statements :

Statement (I) : Fish marinates are preserved in a mixtures acetic acid and salt.

Statement (II) : Scromboid food borne illness may occur due to eating the tuna.

In light of the above statements, choose the **most appropriate** answer from the options given below.

1. Both **Statement (I)** and **Statement (II)** are true.
2. Both **Statement (I)** and **Statement (II)** are false.
3. **Statement (I)** is true but **Statement (II)** is false.
4. **Statement (I)** is false but **Statement (II)** is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

87 3187

4.0 1.00

Match **List-I** with **List-II**

List-I	List-II
(Disease symptoms due to toxins)	(Causative factor)
(A) Amnesic shellfish poisoning (ASP)	(I) <i>Alexandrium catenella</i>
(B) Diarrheal shellfish poisoning (DSP)	(II) <i>Karenia brevis</i>
(C) Neurotoxic shellfish poisoning (NSP)	(III) $C_{44}H_{68}O_{13}$
(D) Paralytic shellfish poisoning (PSP)	(IV) Domoic acid

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

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
3. (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
4. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)

A1 : 1

A2 : 2

		A3 : 3			
		A4 : 4			
Objective Question					
88	3188	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Life buoy is a life safety appliance. Reason (R) : It is designed to be thrown to a person in water, to provide buoyancy and prevent drowning. In light of the above statements, choose the <i>correct</i> answer from the options given below. - Both (A) and (R) are true and (R) is the correct explanation of (A). - Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is true but (R) is false. (A) is false but (R) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4		4.0	1.00
Objective Question					
89	3189	Acceptable limit of Total Volatile Base Nitrogen (TVB-N) in fish muscle is : 35-40 mg/100g 30-35g/100g 25-30mg/100g 40-45mg/100g A1 : 1 A2 : 2 A3 : 3 A4 : 4		4.0	1.00
Objective Question					
90	3190			4.0	1.00

Arrange steps involved in ATP breakdown during post-mortem changes in fish.

- (A) AMP-IMP-
- (B) ATP-ADP-
- (C) Inosine-Hypoxanthine-
- (D) Xanthine-Uric Acid-

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

1. (D), (B), (C), (A).
2. (C), (B), (A), (D).
3. (B), (A), (C), (D).
4. (C), (B), (D), (A).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

91 3191

What are the prerequisite programs of HACCP to practice in fish processing industry ?

- (A) Fishing
- (B) GMP
- (C) SSOP
- (D) Pest control program

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

1. (B), (C) and (D) only.
2. (A), (B) and (D) only.
3. (A), (B), (C) and (D).
4. (B) and (C) only.

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

A4 : 4

Objective Question

92	3192	Most of the food spoilage pathogens are : 1. Psychrophiles 2. Thermophiles 3. Mesophiles 4. Psychrotrophs A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

93	3193	TCBS agar is used for the isolation of : 1. <i>Aeromonas hydrophila</i> 2. <i>Vibrio cholerae</i> 3. <i>Escherichia coli</i> 4. <i>Listeria monocytogenes</i> A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

94	3194	ISO 22000 refers to which of the following ? 1. QMS 2. HACCP 3. FSMS 4. NABL A1 : 1 A2 : 2	4.0	1.00
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A3 : 3

A4 : 4

Objective Question

95 3195

4.0

1.00

Pink spoilage in salted fish is caused by :

1. *Sarcina*
2. *Serriata*
3. *Sporendonema*
4. *Micrococcus*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

96 3196

4.0

1.00

Match **List-I** with **List-II**

List-I	List-II
(Amino acid)	(Nature of amino acid)
(A) Methionine	(I) Predominate amino acid in fish
(B) Glycine	(II) Non-protein amino acid
(C) Taurine	(III) Simple amino acid
(D) Lysine	(IV) Sulfur containing amino acid

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

1. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
2. (A) - (IV), (B) - (II), (C) - (III), (D) - (I)
3. (A) - (IV), (B) - (I), (C) - (II), (D) - (III)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

97 3197

Statement (I) : Seine net is very long net, designed to surround the fish school.

Statement (II) : Beach seine is known as round haul seine.

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

1. Both **Statement (I)** and **Statement (II)** are true.
2. Both **Statement (I)** and **Statement (II)** are false.
3. **Statement (I)** is true and **Statement (II)** is false.
4. **Statement (I)** is false and **Statement (II)** is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

98 3198

Which is the specific spoilage organism in fresh fish ?

1. *Shewanella*
2. *Shigella*
3. *Staphylococcus*
4. *Aeromonas*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

99 3199

4.0

1.00

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : Any message prefixed with MAYDAY concern safety.

Reason (R) : It indicates that a ship, aircraft, or other vehicle is threatened by grave and imminent danger and request immediate assistance.

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

1. Both (A) and (R) are true and (R) is the correct explanation of (A).
2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
3. (A) is true but (R) is false.
4. (A) is false but (R) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

100	3200	Which is the responsible organism for listeriosis?	4.0	1.00
		1. <i>Listeria ivanovii</i> 2. <i>L. grandensis</i> 3. <i>L. monocytogenes</i> 4. <i>L. seeligeri</i>		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

101	3201		4.0	1.00

Match **List-I** with **List-II**

List-I	List-II
(Fatty acid)	(Function)
(A) Linolenic acid	(I) Eye and brain health
(B) Alpha Linoleic acid (ALA)	(II) Heart health
(C) Eicosapentaenoic acid (EPA)	(III) Omega – 6 fatty acid
(D) Docosahexaenoic acid (DHA)	(IV) Essential fatty acid

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (IV), (B) - (II), (C) - (III), (D) - (I)
- (A) - (IV), (B) - (III), (C) - (I), (D) - (II)
- (A) - (IV), (B) - (III), (C) - (II), (D) - (I)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

102 3202

An additive used to control fungal infestation in dry fish :

- Sorbitol
- Polyphosphate
- Citric acid
- Potassium sorbate

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

103 3203

4.0 1.00

4.0 1.00

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : Rigor mortis is caused by the breakdown of the glycogen of the muscle into lactic acid.

Reason (R) : It is a sign of freshness.

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

1. Both (A) and (R) are true and (R) is the correct explanation of (A).
2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
3. (A) is true but (R) is false.
4. (A) is false but (R) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

104 3204

Name the sensory method recommended for fish quality testing in fish landing centers ?

1. Deo-trio test
2. Torry scheme
3. FSSAI grading
4. EU grading

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

105 3205

4.0 1.00

Which is the authorized body to issue the health certificate for seafoods ?

1. MPEDA
2. FSSAI
3. EIA
4. BIS

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

106 3206

What is the annual fishing mortality rate, if the fishing effort is 8000 vessels and catchability coefficient is 5×10^{-4} per vessel per year ?

1. 2.0
2. 4.0
3. 1.6
4. 3.2

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

107 3207

4.0

1.00

Choose the non-parametric tests among the following :

- (A) Mann-Whitney test
- (B) Pearson correlation
- (C) Spearman's rank correlation
- (D) t-test
- (E) The *Wilcoxon* signed-rank test

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

- 1. (A), (C) and (D) only.
- 2. (A), (C) and (E) only.
- 3. (B), (D) and (E) only.
- 4. (B), (C) and (E) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

108 3208

In which of the following distribution, mean is equal to variance ?

- 1. t distribution
- 2. Poisson distribution
- 3. Binomial distribution
- 4. Chi-square distribution

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

109 3209

4.0 1.00

An aquarium contains 4 goldfishes, 6 swordtails and 10 tetras. What is the probability that a fish randomly selected is a goldfish or a tetra ?

1. $\frac{2}{7}$
2. $\frac{5}{7}$
3. $\frac{7}{10}$
4. $\frac{1}{4}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

110 3210

Arrange the following acts chronologically starting from the earliest to the latest of their introduction.

- (A) The Biological Diversity Act
- (B) Environment (Protection) Act
- (C) Indian Fisheries Act
- (D) Coastal Aquaculture Authority Act
- (E) Wildlife (Protection) Act

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

1. (C), (E), (A), (B), (D).
2. (B), (C), (E), (D), (A).
3. (C), (E), (B), (D), (A).
4. (C), (E), (B), (A), (D).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

111 3211

4.0

1.00

Match **List-I** with **List-II**

List-I	List-II
(Scientist)	(Concept)
(A) Rogers and Shoemaker	(I) Intelligence
(B) Daniel Benor	(II) Communication
(C) Edgar Dale	(III) Training and Visit
(D) Wechsler	(IV) Cone of Experience

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

- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)
- (A) - (III), (B) - (II), (C) - (I), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (IV), (B) - (III), (C) - (II), (D) - (I)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

112 3212

Which two groups of people together constitute the maximum percentage share in the product adoption process ?

- Innovators and Early majority
- Early majority and Late majority
- Early adopters and Early majority
- Late majority and Laggards

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

113 3213

4.0 1.00

Which is the basic unit of rural society ?

1. Village
2. Community
3. Population
4. Family

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

114 3214

A navigation journey flagged off in March 2022 from Mandvi to disseminate fisheries schemes to coastal and, promoting sustainable fisheries and protection of marine ecosystems :

1. Sagar Nidhi
2. Sagar Mitra
3. Sagar Parikrama
4. Sagar Matsyajeevi

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

115 3215

‘CADALMIN’ is the trademark of :

1. ICAR-CMFRI
2. ICAR-CIBA
3. Fishery Survey of India
4. National Institute of Oceanography

A1 : 1

A2 : 2

4.0

1.00

		A3 : 3		
		A4 : 4		

Objective Question

116	3216	Largest market for Indian frozen shrimp exports during 2021-22 is : 1. Thailand 2. United States of America 3. Japan 4. China A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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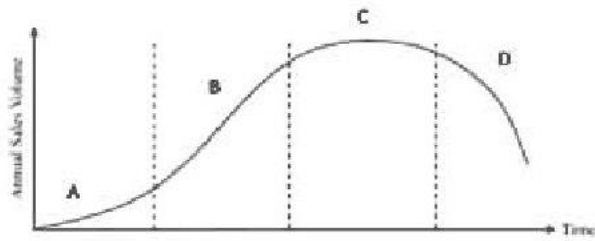
Objective Question

117	3217	Given below are two statements : Statement (I) : Monopsony is a perfect competition. Statement (II) : Monopoly is an imperfect competition. In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

118	3218		4.0	1.00
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Study the product life cycle diagram as given. If A, B, C and D represent different stages of product life cycle, which stage is most expensive stage ?



1. Stage A
2. Stage B
3. Stage C
4. Stage D

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

119 3219

Breakeven point is the ratio of which of the following cost to contribution margin per unit ?

1. Capital cost
2. Variable cost
3. Fixed cost
4. Product of capital cost and variable cost

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

120 3220

4.0 1.00

TRIPS, associated with WTO stands for :

1. Tariff-Related Aspects of Intellectual Property Rights
2. Trade-Related Aspects of International Property Rights
3. Trade-Related Aspects of Intellectual Property Rights
4. Tourism-Related Intellectual Property Rights

A1 : 1

A2 : 2

A3 : 3

A4 : 4