

Model Questions for Fish Toxicology FSHM 3105 (1+1)

COURSE TEACHER

Mr. Zahoor Mushtaq



**Centurion
UNIVERSITY**

*Shaping Lives...
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**SCHOOL OF FISHERIES
CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMEN**

1. Multiple Choice Questions

S. NO		
1.	The fish known as the hero of aquatic toxicology is	
	Trout	
	Common carp	
	Fathead minnow	Yes
	Rohu	
2.	The accumulation of a toxin in a single trophic level is	
	Biomagnification	
	Bioaccumulation	Yes
	Bioconcentration	
	Bioamplification	
3.	The more toxic form of chromium in the aquatic environment is	
	Divalent	
	Trivalent	
	Hexavalent	Yes
	All of the above	
4.	Iron depositing bacteria multiply rapidly on fish gills at	
	Low temperature and the absence of iron	
	High temperature and the presence of iron	
	Low temperature and the presence of iron	Yes
	High temperature and the absence of iron	
5.	The lethal concentrations of arsenic to the fish are	
	0-3 mg/L	
	3-30 mg/L	Yes
	30-60 mg/L	
	60-100 mg/L	
6.	The methylation process due to bacteria takes place in	
	Mercury in the water column	
	Mercury in sediment	Yes
	Arsenic in the water column	
	Chromium in the water column	
7.	Receptor-mediated endocytosis (RME) is associated with	
	Heavy metals	
	Bacterial toxins	Yes
	Pore-forming toxins	
	All of the above	
8.	In which state is the Indian Institute of Toxicology Research (IITR) is located	
	Maharashtra	
	Odisha	
	Uttar Pradesh	Yes
	None of the above	

9.	Accumulation of only water-borne chemicals by an aquatic organism is	
	Bioaccumulation	
	Bioconcentration	Yes
	Biomagnification	
	Accumulation	
10.	Rachel Carson's famous book Silent springs is related to	
	Ecosystem conservation	
	Pesticide pollution	Yes
	Biodiversity conservation	
	None of the above	
11.	The ability of a microorganism to cause disease is	
	Virulence	
	Pathogenicity	Yes
	Infection	
	Invasion	
12.	Endotoxin is	
	LPS of Gram-negative bacteria with low toxicity	Yes
	LPS of Gram-negative bacteria with high toxicity	
	LPS of Gram-positive bacteria with low toxicity	
	LPS of Gram-positive bacteria with high toxicity	
13.	Usage of a drug named Thalidomide resulted in a tragedy due to its	
	Carcinogenicity	
	Teratogenicity	Yes
	Neoplasia	
	Mutagenicity	
14.	Concerned with the formulation of laws to minimize the effect of toxic chemicals on human health and the environment	
	Clinical toxicology	
	Industrial toxicology	
	Regulatory toxicology	Yes
	Analytical toxicology	
15.	Who is credited as the father of toxicology	
	Matheiu Orfila	
	Hippocrates	
	Dioscorides	
	Paracelsus	Yes
16.	Which of the following is an example of an organochlorine pesticide	
	Aldicarb and DDT	
	Carbaryl and Malathion	
	DDT	Yes
	DDT and Parathion	
17.	The poison that fixes, destroys and erodes the surface it comes in contact with is	
	Irritant poison	
	Systemic poison	
	Both irritant and systemic poison	

	Corrosive poison	Yes
18.	Oxidative stress in fish from lead toxicity is due to	
	Less reactive oxygen species (ROS) production	
	No ROS production	
	Excessive ROS production	Yes
	All of the above	
19.	The toxicity period that is usually less than the 10 per cent of a lifetime of an animal is	
	Sub-chronic	Yes
	Acute	
	Chronic	
	None of the above	
20.	A lethal dose is the	
	The lowest dose that causes the death	Yes
	The highest dose that causes the death	
	Equilibrium dose that causes death	
	None of the above	

2. Fill in the blanks

- I. The right----- differentiates a poison from a remedy. (**Dose**)
- II. ----- is a chemical substance that is foreign to the body. (**Xenobiotic**)
- III. Aldicarb is an -----pesticide inhibiting cholinesterase. (**organophosphate**)
- IV. ----- is a poisoning caused by the chemicals of the okadaic acid. (**Diarrhetic shellfish poisoning**)
- V. Sulfuric acid is an example of.....poison. (**Corrosive**)
- VI. Black lung disease in coal miners is an example of.....toxicity. (**Chronic**)
- VII. Toxoids are.....toxins. (**Inactivated**)
- VIII. Indian Institute of Toxicology Research (IITR) is located in..... (**Uttar Pradesh**)
- IX. ----- is the lowest dose that causes the death in animal (**Lethal dose**)
- X.-----credited as the father of toxicology. (**Paraselsus**)

3. Match the following

a)	<i>Father of forensic toxicology</i>	<i>Gram-negative bacteria</i>	j
b)	<i>Methylation</i>	<i>Teratogenicity</i>	h
c)	<i>Aluminium toxicity</i>	<i>Single massive dose</i>	i
d)	<i>Rachel Carson</i>	<i>DDT</i>	g
e)	<i>Fulminant poisoning</i>	<i>Bacterial toxins</i>	c
f)	<i>Receptor mediated endocytosis</i>	<i>Lead</i>	e
g)	<i>Endotoxin</i>	<i>Silent springs</i>	a
h)	<i>Organochlorine pesticide</i>	<i>Mercury</i>	d
i)	<i>Black Tail</i>	<i>Acidic water</i>	f
j)	<i>Thalidomide</i>	<i>Paracelsus</i>	b

4. Choose the correct answer or True/ False statement

- I. Matheu Orfila is credited as father of environmental toxicity (True/**False**)
- II. Lethal dose 50 is calculated from 100% death of test organisms (True/**False**)
- III. Virulence is the ability of microorganisms to cause disease (**True**/False)
- IV. Reactive oxygen species cause oxidative stress in fish (**True**/False)
- V. Malathion is an organophosphate pesticide inhibiting cholinesterase (**True**/False)
- VI. Hexavalent chromium is more toxic to the fish (True/**False**)
- VII. Arsenic compounds are more toxic to the fish in third oxidation state (**True**/False)
- VIII. Exotoxin is a heat labile protein with high toxicity (**True**/False)

5. Differentiation or define or abbreviations or statement:

- I. Acute vs Chronic toxicity
- II. Irritant vs corrosive poisons
- III. Life cycle of Methylmercury in water
- IV. Expand LD50
- V. Endocrine disruptors
- VI. Bacterial Toxins

6. Long answer questions

- I. Explain in brief Toxicokinetics of common aquatic toxins
- II. Discuss in brief about phytotoxins and toxic principles of various alkaloids
- III. Write in detail about mycotoxins and their impact on fish health
- IV. Write in detail about the classification and impact of pesticides in aquatic environment
- VI. Write in detail the procedure for collection and dispatching samples for toxicological cases
- VII. Write short note-any one
 - (a) Toxicodynamics
 - (b) Diagnosis of poisoning

