

FYUG PROGRAMME EXAMINATIONS, NOVEMBER 2024

(2024 Admission Regular)

SEMESTER I – MDC (ZOOLOGY)

ZO1MDC01B24 - ORNAMENTAL FISH FARMING

Time: 45 mnts.

Maximum Marks: 35

Answer all the 35 questions. Choose the correct option.

Q.No:	QUESTIONS	Ans	CO	LEVEL
1.	The scientific name of Molly is _____. a. <i>Poecilia reticulata</i> b. <i>Poecilia sphenops</i> c. <i>Xiphophorus hellerii</i> d. <i>Carassius auratus</i>		1	R
2.	Which of the following is an example of a live bearer? a. Guppy b. Goldfish c. Angelfish d. Neon Tetra		1	U
3.	Name the practice of breeding and raising fish for decorative purposes. a. Fishery management b. Ornamental fish farming c. Aquaponics d. Hydroponics		1	R
4.	Which of the following fish species exhibits brood parasitism by laying eggs in the nests of mouth brooding species? a. Salmon b. Cichlids c. Goldfish d. Guppies		2	U
5.	What is crucial for reducing stress in a fish kept in an aquarium? a. Overfeeding b. Providing proper hiding spots c. Keeping the tank bare d. Constant bright lighting		2	U
6.	How does photoperiod help fish in their breeding cycles? a. Match their breeding with seasonal light changes. b. Control their swimming speed. c. Increase their size. d. Find mates more easily.		2	R
7.	What type of foods do Mollies (<i>Poecilia</i> spp.) particularly appreciate in their diet? a. Only meaty foods b. A variety of plant-based foods, including spirulina flakes c. Exclusively algae d. Processed fish pellets only		2	U
8.	_____ is the art of arranging aquatic plants, rocks, and other elements in an aquarium. a. Aquaponics b. Aquascaping c. Hydroponics d. Terrarium Design		1	R
9.	Which of the following is a marine species? a. Clownfish b. Guppy c. Betta d. Molly		1	R
10.	What type of water conditions do tetras require for successful reproduction? a. Hard, alkaline water b. Soft, acidic water c. Brackish water d. Cold, fresh water		2	R
11.	Which of the following is a disease found in ornamental fish? a. Ich b. Fin rot c. Velvet disease d. All of the above		2	U

12.	Which of the following is an example of a mouthbrooding fish? a. Goldfish b. Cichlids c. Salmon d. Angelfish		2	R
13.	<i>Amphiprion</i> is commonly known as a. A type of freshwater fish b. A genus of clownfish c. A species of coral d. A family of marine invertebrates		1	R
14.	How do species that exhibit no parental care, like tetras and danios, ensure the survival of some of their offspring? a. By building protective nests b. By mouthbrooding their eggs c. By scattering a large number of eggs and relying on high fecundity d. By guarding their eggs until hatching		2	U
15.	What is the term for the mating system where species form long-term pair bonds and engage in cooperative brood care? a. Polygyny b. Monogamy c. Promiscuity d. Brood parasitism		2	U
16.	In a community aquarium, what strategy allows multiple fish species to coexist without intense competition? a) Aggressive behavior b) Resource partitioning c) Territoriality d) Predation		2	U
17.	What is a primary reason for the rising popularity of nano aquariums? a. They are suitable for large fish species. b. They are more affordable than traditional aquariums. c. They offer space efficiency and ease of maintenance. d. They require less equipment than standard aquariums.		1	U
18.	Insulating boxes for transport of fishes, are typically made of a. Styrofoam b. Plastic c. Steel d. Glass		4	R
19.	Live fish transport involves the following steps for maximum survival of the fishes a. Conditioning b. Packing c. Forwarding Techniques d. All of the above.		4	U
20.	Most common protozoan disease among the aquarium fishes are a. White spot disease b. Costiasis c. Chilodonella infestation d. All of the above.		3	U
21.	Which is NOT an advantage of live feed? a. They pollute the water b. They ensure better survival of fish larvae c. certain fish larvae feed only on live feed d. They can be cultured artificially.		3	U
22.	What pH level is generally optimal for breeding most freshwater species? a. 4.0-5.0 b. 10.0-11.0 c. 8.0-9.0 d. 6.5-7.5		2	R
23.	How does organic matter in water typically affect dissolved oxygen levels? a. It increases oxygen levels b. It decreases oxygen levels c. It has no effect on oxygen levels d. It stabilizes oxygen levels.		3	A
24.	What is the primary purpose of using additives in fish feed? a. To enhance flavour b. To improve shelf life c. To boost growth and health d. To change colour		4	An
25.	The conversion of feed into small pellets is called a. Pelletizer b. Pelleting c. Dye cutting d. None of the above		3	U
26.	Why is it important to adjust feeding regimes as fish grow? a. To reduce costs b. To meet their changing nutritional needs c. To simplify		2	U

	feeding schedules d. To minimize waste			
27.	What is the primary symptom of fin rot? a. Red spots on the body b. Clamped fins c. Frayed or decaying fins d. Lethargy		3	R
28.	What is a common treatment for ich? a. Salt bath b. Antibiotics c. Formalin treatment d. Increase in temperature.		3	R
29.	Dropsy is caused by a. <i>Pseudomonas punctata</i> b. <i>Aeromonas hydrophila</i> c. <i>Iridovirus</i> d. Both a & b		3	R
30.	Which of the following is a biosecurity measure to prevent disease introduction in an aquarium? a. Using untreated tap water b. Quarantining new fish before introduction c. Feeding fish with wild-caught food d. Ignoring water parameters.		4	An
31.	A process of getting rid of digested and undigested food from fishes before transport is a. Packing b. Conditioning c. Transport d. All of the above.		3	U
32.	What is the role of using an oxygen pump during fish transport? a. To increase water temperature b. To maintain high oxygen levels in the transport water c. To circulate water more effectively d. To reduce stress through aeration.		4	U
33.	Which of the following is an important factor in packing fish for transport? a. Amount of food provided b. Type of tank decorations c. Water quality and temperature d. Size of the transport container.		4	R
34.	What is a significant factor in the pricing strategy for ornamental fish? a. Seasonal changes b. Fish coloration c. Cost of production and supply chain logistics d. Popularity on social media.		4	An
35.	What is one of the main challenges faced by ornamental fish exporters? a. Overproduction b. Simple logistics c. High demand d. Fluctuating currency exchange rates		4	U

(35x1=35)

CO: Course Outcomes Level: R – Remember, U – Understand, Ap- Apply, An- Analyze, E- Evaluate, C- Create

FYUG PROGRAMME EXAMINATIONS, NOVEMBER 2024

(2024 Admission Regular)

SEMESTER I – MDC (ZOOLOGY)

ZO1MDC01B24 - ORNAMENTAL FISH FARMING

Time: 45 mnts.

Maximum Marks: 35

Answer all the 35 questions. Choose the correct option.

Q.No:	QUESTIONS	Ans	CO	LEVEL
1.	The scientific name of Guppy is _____. a. <i>Poecilia reticulata</i> b. <i>Betta splendens</i> c. <i>Xiphophorus hellerii</i> d. <i>Carassius auratus</i>		1	R
2.	Bubble nests are created by _____. a. Betta b. Guppy c. Goldfish d. Mollys		2	R
3.	Name the small, fleshy fin found in some species like tetras and catfish, located between the dorsal and caudal fins. a. Pectoral fin b. Adipose fin c. Pelvic fin d. Anal fin		2	U
4.	A typical fish heart havechambers. a. One b. Two c. Three d. Four		2	U
5.	What is the function of the swim bladder in fish? a. Digestion b. Oxygenation c. Buoyancy control d. Reproduction		2	R
6.	_____ is the art of arranging aquatic plants, rocks, and other elements in an aquarium a. Aquaponics b. Aquascaping c. Hydroponics d. Terrarium Design		1	R
7.	What is the term for fish swimming together for protection and improved foraging efficiency? a. Schooling b. Shoaling c. Migration d. Nesting		2	U
8.	What type of water conditions do tetras require for successful reproduction? a. Hard, alkaline water b. Soft, acidic water c. Brackish water d. Cold, fresh water		2	R
9.	Which of the following groups includes examples of indigenous ornamental fish species found in India? a. Cyprinids, Loaches, Salmonids, Sharks b. Cichlids, Anabantids, Catfish, Loaches c. Trout, Cichlids, Tetra, Anabantids d. Anabantids, Catfish, Eels, Rays		1	U
10.	What term describes the period from the 1930s to the 1950s when the hobby of keeping ornamental fish gained popularity? a. The Aquarium Revolution b. The Early Hobbyist Movement c. The Modern Aquarist Era d. The Fishkeeping Renaissance		1	R
11.	What does the scientific name <i>Amphiprion</i> refer to?		1	R

Q.No:	QUESTIONS	Ans	CO	LEVEL
	a. A type of freshwater fish b. A genus of clownfish c. A species of coral d. A family of marine invertebrates			
12.	In the reproductive strategy known as mouthbrooding, which of the following statements is true? a. Both parents always participate in mouthbrooding, with one incubating the eggs while the other guards the territory. b. The fertilized eggs are incubated in the mouth of one parent to protect them from predators, often by the female but sometimes by the male. c. Mouthbrooding occurs only in freshwater fish species, where eggs are incubated within nests built by the parents. d. During mouthbrooding, fertilized eggs are immediately attached to surfaces within the aquarium for protection.		2	U
13.	In a community aquarium, what strategy allows multiple fish species to coexist without intense competition? a. Aggressive behavior b. Resource partitioning c. Territoriality d. Predation		2	U
14.	What type of foods do Mollies (<i>Poecilia</i> spp.) particularly appreciate in their diet? a. Only meaty foods b. A variety of plant-based foods, including spirulina flakes c. Exclusively algae d. Processed fish pellets only		2	U
15.	In egg scattering, where does fertilization occur? a. Inside the parent's body b. In a nest c. Externally in the water d. Inside the eggs		2	U
16.	Which fish is often referred to as "Miss Kerala"? a. Koi b. Red Line Torpedo Barb c. Angelfish d. Platies		1	R
17.	Which of the following structures allows certain fish to breathe atmospheric air? a. Operculum b. Labyrinth organ c. Swim bladder d. Lateral line		2	U
18.	Which of the following is a characteristic of livebearers? a. They lay eggs b. They give birth to live young c. They require saltwater d. They have external fertilization.		2	R
19.	Which type of food is best for pregnant guppies? a. Flakes only b. Frozen food c. Live food and high-quality flakes d. Pellets only		3	U
20.	How can you tell if a guppy is pregnant? a. It changes color b. Its fins become longer c. It develops a gravid spot d. It starts swimming faster.		3	A
21.	Which water conditions are best for breeding angelfish? a. High pH and low hardness b. Low pH and soft water c. Neutral pH and hard water d. Salty water.		3	R
22.	What is a common issue when breeding guppies in a community tank? a. Overheating b. Aggressive behaviour c. Predation on fry d. Low oxygen levels.		3	R

Q.No:	QUESTIONS	Ans	CO	LEVEL
23.	What is the best approach to raising angelfish fry after hatching? a. Feed them adult food immediately b. Provide finely crushed flakes or liquid fry food c. Leave them to fend for themselves d. Do not feed them for the first week.		3	U
24.	How does high salinity generally affect freshwater fish? a. Enhances growth b. Causes stress or death c. Improves reproduction d. Increases appetite.		2	R
25.	 are the cheap natural sources of energy for fishes. a. Carbohydrates b. Fats c. Protein d. Vitamins		2	R
26.	Which method is commonly used to monitor pH levels in water? a. Dissolved oxygen meter b. Temperature gauge c. Salinity Refractometer d. pH meter or test strips.		3	U
27.	What is the impact of temperature fluctuations on breeding fish? a. Increases spawning success b. Enhances fry survival c. Causes stress and may inhibit spawning d. Improves water clarity.		3	U
28.	 also known as brine shrimp inhabit salt pans of high salinity a. Artemia b. Daphnia c. Moina d. Infusoria		2	R
29.	Chironomous larvae are also called as a. Tubifex worms b. Pupa c. Glow worms d. Blood worms.		2	U
30.	The source for Vitamin B complex in artificial feed of fish is a. Wheat b. Rice bran c. soya d. clam meal.		2	R
31.	The principle behind conditioning is that a. before packing, the fish should rid themselves of all food existing at different stages of digestion in their alimentary canal b. become accustomed to the conditions of overcrowding prevailing during transport c. both a & b d. None of the above.		3	U
32.	Red patches appear on skin and gills turn brown are symptoms of a. Gyrodactylosis b. Costiasis c. Chilodonella infestation d. None of the above.		3	R
33.	What is the primary goal of a quarantine period for newly acquired fish? a. To increase their growth rate b. To enhance feeding behaviour c. To improve their coloration d. To observe for signs of disease.		3	U
34.	Which material is commonly used for packing fish in transport bags? a. Plastic wrap b. Styrofoam c. Polyethylene bags d. Cardboard boxes.		4	R
35.	What is a crucial factor for sustaining income generation in the ornamental fish business? a. Exclusive focus on one species b. Diversifying product offerings and services c. Ignoring customer feedback d. Reducing marketing efforts.		4	U

(35x1=35)

CO: Course Outcomes Level: R – Remember, U – Understand, Ap- Apply, An- Analyze, E- Evaluate, C- Create

FYUG PROGRAMME EXAMINATIONS, NOVEMBER 2024

(2024 Admission Regular)

SEMESTER I – MDC (ZOOLOGY)

ZO1MDC01B24 ORNAMENTAL FISH FARMING

Time: 45 mnts.

Maximum Marks: 35

Answer all the 35 questions. Choose the correct option.

Q.No:	QUESTIONS	Ans	CO	LEVEL
1.	What is the scientific name of the Betta fish? a. <i>Betta splendens</i> b. <i>Betta pugnax</i> c. <i>Betta macrostoma</i> d. <i>Betta coccina</i>		1	R
2.	Which statement accurately describes the relationship between water temperature and egg incubation in aquatic species? a. Cooler water generally accelerates egg development. b. The incubation period is unaffected by environmental conditions. c. Warmer water generally accelerates egg development. d. Egg incubation time is solely determined by the species, not the environment.		2	U
3.	What type of water conditions do tetras require for successful reproduction? a. Hard, alkaline water b. Soft, acidic water c. Brackish water d. Cold, fresh water		2	R
4.	What is the primary function of fish scales? a. To aid in buoyancy b. To enhance sensory perception c. To protect the body and reduce friction when swimming d. To assist in oxygen exchange		2	U
5.	The correct sequence of water flow for respiration in organisms with gills is a. Water enters through the gill slits, passes over the gills, and exits through the mouth. b. Water enters through the mouth, passes over the gills, and exits through the gill slits. c. Water enters through the gills, passes over the gill slits, and exits through the mouth. d. Water enters through the gill slits, passes over the mouth, and exits through the gills.		2	U
6.	Which type of fish is born male and can change to female if the dominant female dies? a. Guppy b. Betta c. Clownfish d. Angelfish		1	R
7.	Which of the following features are sensory organs commonly found on the		1	U

Q.No:	QUESTIONS	Ans	CO	LEVEL
	upper jaw of Common Carp? a. Fins b. Barbels c. Scales d. Gills			
8.	Why is it important to adjust salinity levels in a breeding tank for brackish water species, like certain mollies? a. It prevents the spread of disease. b. It influences breeding and supports optimal fry development. c. It enhances the coloration of the fish. d. It increases the oxygen levels in the water.		2	U
9.	What is the term for the strategy where a species lays its eggs in the nest of another species, relying on them for parental care? a. Mutualism b. Symbiosis c. Brood parasitism d. Territorialism		2	R
10.	Which term describes fish that reproduce by laying eggs? a. Viviparous b. Oviparous c. Ovoviviparous d. Asexual		2	R
11.	Which of the following structures allows certain fish to breathe atmospheric air? a. Operculum b. Labyrinth organ c. Swim bladder d. Lateral line		1	R
12.	A species that is found naturally in a specific geographic region is called as a. Invasive species b. Indigenous species c. Non-native species d. Exotic species		1	U
13.	In a community aquarium, what strategy allows multiple fish species to coexist without intense competition? a. Aggressive behavior b. Resource partitioning c. Territoriality d. Predation		2	U
14.	What type of foods do Mollies (<i>Poecilia</i> spp.) particularly appreciate in their diet? a. Only meaty foods b. A variety of plant-based foods, including spirulina flakes c. Exclusively algae d. Processed fish pellets only		2	R
15.	The sucking disc is found in a. Remora b. Angelfish c. Guppy d. Clownfish		1	R
16.	The modified anal fin in male livebearers is called a. Gonopodium b. Dorsal fin c. Caudal fin d. Pectoral fin		1	R
17.	Which of the following is a plant-based food given to ornamental fishes? a. Lettuce b. Bloodworms c. Brine shrimp d. Daphnia		2	U
18.	Soon after birth, the young ones escape from their mother and enter the perforated basket, which can be collected and placed in separate tanks for further rearing. It is known as a a. Breeding trap b. Hide out c. Breeding house d. Brood stock		2	U

Q.No:	QUESTIONS	Ans	CO	LEVEL
19.	A develops near the vent of the female, which become black as development of embryo progresses. a. Black spot b. Gravid spot c. Appendage d. Larvae		3	R
20.	Spawning slates are used to artificially hatch eggs of a. Clown fish b. Box fish c. Angelfish d. Saw fish		2	U
21.	The breeding of angel fish is easy when its a. Natural breeding b. Induced breeding c. Artificial breeding d. Both a & b		2	U
22.	Which of the following is a common sign of stress in angelfish? a. Bright colors b. Spawning behavior c. Increased activity d. Excessive hiding		3	R
23.	Which of the following is a primary source of organic matter in breeding facilities? a. Tap water b. Fish food c. Aeration devices d. Substrate material		3	U
24.	The role of binders in a fish feed is to a. provide water stability to pellets b. prevent the leaching of nutrients c. bind the content in the pellets d. All of the above.		4	An
25.	Which type of container is best for long-distance transport of fish? a. Small plastic bags b. Styrofoam boxes with insulation c. Glass aquariums d. Metal containers		4	U
26.	What should be done if signs of disease are observed during the quarantine period? a. Immediately release the fish into the main tank b. Move the fish to a community tank c. Stop feeding the fish d. Treat the fish as needed and extend the quarantine		3	A
27.	Which practice is important to follow when receiving fish shipments? a. Open the bags immediately and mix them with tank water b. Place the fish directly into the main tank c. Acclimate the fish gradually to the new environment d. Feed the fish immediately.		3	R
28.	A small tank that is used to rehabilitate a new fish is called a. A quarantine tank b. A main tank c. A treatment tank d. All of the above.		3	R
29.	The least expensive method of tranquilization is to use a. warm water b. distilled water c. anesthetization d. cold water.		4	U
30.	Which freshwater fish species is popular in the ornamental fish trade? a. Clownfish b. Fighter fish c. Lion fish d. Surgeonfish		2	R
31.	Which of the following is a key component of a marketing strategy for ornamental fish?		3	R

Q.No:	QUESTIONS	Ans	CO	LEVEL
	a. Identifying target customers b. Focusing solely on online sales c. Ignoring competitors d. Limiting product variety.			
32.	What is a common practice to reduce ammonia buildup during transport? a. Adding salt to the water b. Using a lower stocking density c. Increasing water temperature d. Adding medications.		3	U
33.	An example of an arthropodan diseases is a. Dactylogyrosis b. Lernaeasis c. Ich disease d. Argulosis		2	R
34.	What symptom might indicate that a fish is suffering from swim bladder disease? a. Abnormal swimming behaviour b. Color changes c. Skin lesions d. Excessive feeding.		3	R
35.	Major biosecurity goals in fish farming are a. Animal management b. Pathogen management. c. People management d. all of the above.		4	U

(35x1=35)

CO: Course Outcomes Level: R – Remember, U – Understand, Ap- Apply, An- Analyze, E- Evaluate, C- Create