

B.Sc. Final Exam (First semester), 2017/2018

Environmental chemistry

Day: Sunday, 16/01/2018 (1-3 hrs.)

Time: 120 minutes

Max. Markers: 50

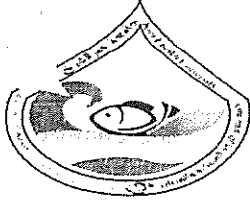
Dr. Mohamed A. S. Abdel-Razek, Dr. Moustafa S. SaadAllah and Dr. Asmaa M. Ragab

Just, answer five questions from the following in short:

1. Explain how hydroxyl free radical effects on the environment. gave an example, explaining with chemical reactions
2. Several individual or combined processes contribute to the presence of different species that affect the composition and properties of natural waters. Mention including examples?
3. Explain the biologically mediated processes and its Effects?
4. What are the major polluters in industrialized countries?
5. Just, Define five from the following scientific expression:  
(Mineralized – Bioaccumulation – Transformations – Metabolic Processes – Xenobiotic - Brackish/Saline water - Dissolved oxygen - Toxicant – Toxin - Poison)
6. Define biodegradation of chemical pollutants? And explain in points, How does it happen?

Best Wishes





امتحان أسماك الزينة  
المستوى الرابع



Faculty of Aquatic and Fisheries Sciences

Subject: Ornamental fish production (2017-2018)

Final-term Exam

Time allowed: 2 hours

Answer the following questions:

1- A. Choose the correct answer:

(12 degrees)

If you have an aquarium of 60 x 30 cm offering 1800 cm<sup>2</sup> of surface area can hold  
(30 fishes of 2.5 cm, or 18 fish of 5 cm, or 10 fish of 7.5 cm size)

If you have an aquarium of 80 x 30 x 40 cm can use light intensities for about 10 hours  
(100 watt, or 180 watt, or 10 watt size)

B. Define the following terms:

Mop – Egg Scatters - Livebearers - Plecostomus

2 – A. Write short notes on artificial foods of ornamental fishes?

(10 degrees)

B. How to differentiate between male and female ornamental fish of the same species?

3– A. Discuss the factors causing natural Hatchery and Spawning?

(14 degrees)

B. Find the odd word out and correct the following sentences:

1) Size of an aquarium is designed in such a way that depth will be twice as long as its length and height.

2) Goldfish-First ornamental fish to be kept, its bred in tropical waters.

3) Fighting fish is one of Egg buriers.

4) We must be placing each one male Koi Fish individual in the aquarium.

5) Angel fish need to high PH degree.

6) Molly and guppy are of Ovoviviparous.

4 –A. Live foods do still have a number a specific uses in fish keeping. Discuss.

(14 degrees)

B. Complete the following sentences:

1- Filters are of three types: ....., ....., .....

2- The fry of Discus fish swimming near of the parents for

3- Sodium thio sulphate is used to.....

4- Arowana fish are .....

5- .....that is kept as pets in confined spaces of an aquarium or a garden pool with the purpose of enjoying their beauty for fun and fancy.

Good Luck

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences  
Department of Aquaculture

Subject: Feed Manufacturing Technology  
Time: 2 hours  
Date: 15/1/2018  
Level: Two



Final exam during academic year 2017/2018

Please answer the following questions: (50 marks).

❖ First question: Put a sign (✓) or (×) In front of the next sentence with correcting the error of them (21 marks):

- 1- The object of aquaculture should be to produce the maximum weight in the shortest time with any cost ( ).
- 2- The major components of feedstuffs are minerals and vitamins ( ).
- 3- Animals store most of their energy as carbohydrates ( ).
- 4- For calculating analytical data on a dry matter basis, it is necessary to know the protein content ( ).
- 5- Catabolism of protein in fish leads to release of urea ( ).
- 6- Most fish have the enzyme cellulase which is necessary for the digestion of cellulose ( ).
- 7- Corn gluten feed is usually low in protein ( ).
- 8- Fish meals are often overcooked, causing contamination with Salmonella bacteria ( ).
- 9- The pellet should be firm with a water stability of at least 10 minutes ( ).
- 10- Sodium and potassium salts of propionic, benzoic or sorbic acids, are commonly available antimicrobials ( ).
- 11- Sun-drying is one way of drying moist feed to form a dry product which can be stored ( ).
- 12- Increase in temperature may reduce the availability of the amino acids in feeds.
- 13- Most fungal growth occurs at relative humidity above 85% ( ).
- 14- Vitamins should be kept in the coolest place available ( ).

❖ Second question: (18 marks).

- A- Why protein is the most important component of the diet of fish?
- B- Symptoms of deficiency of fatty acids in the diets of fish?
- C- Minerals probably not so important a component of the diet of fish and shrimp?
- D- Fish eat much more food during the summer than in winter, why?
- E- What are the reasons that make you change the installation of the diet?
- F- Formic acid is a good choice making fish silage, Explain?

❖ Third question (11 marks): Explained by only drawing with writing data.

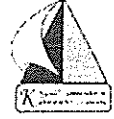
- A- Worksheet for diet formulation.
- B- Simple system for the manufacture of fish silage.

With my best wishes

Prof. Dr. Malik M. Khalafalla

مقدمة في علوم الثروة السمكية  
المستوى الأول

Kafr El-Sheikh University Subject: An introduction in fish resource Sciences  
Faculty of Aquatic and Fisheries Sciences Time: 2 hours  
Department of Aquaculture Date: 14/1/2018  
Level: One



Final exam during academic year 2017/2018

Please answer the following questions: (50 marks).

❖ First question: Complete the following sentences (20 marks):

- 1) It is believed that the original fish is a .....
- 2) The first bany fish is known as the .....
- 3) Marine food fishes like .....
- 4) Fishes have number of harmful effect like .....
- 5) Top minnows fish was .....
- 6) NMFS: .....
- 7) Diadromous fish was .....
- 8) Aquaculture currently supplies .....% of the total global production
- 9) Aquatic animal food proteins are highly .....
- 10) In ..... only part of the world where consumption is declining.
- 11) World per capita fish consumption increased from an average of 9.9 kg in the 1960s to ..... kg in 2013
- 12) Global total capture production in 2014 was .....
- 13) ..... is the largest market for imported fish and fishery products.
- 14) In the medium to long term, the major challenge facing marine fisheries is .....
- 15) The Arab States combined have more than ..... km of shoreline
- 16) The Arab States have access to three major seas, .....
- 17) Only ..... of all freshwater serves most of life's needs.
- 18) Freshwater systems can be classified as .....
- 19) Over 70% of the world catch from the sea comes from the ..... Ocean.
- 20) The ..... is the third largest ocean.

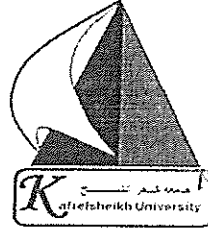
❖ Second question - Writing about : (20 marks).

- A) Fish contribute directly to several of Millennium Development Goals?(Explain) .
- B) World per capita fish consumption impressive development in 2013? Explain .
- C) What are the greatest threats to the sustainability of inland fishery resources?
- D) Inland fresh and brackish water Recourses in the Arab region?

❖ Third question (10 marks): Explained by only drawing with writing data.

- A) Fish waste relationship with different organisms
- B) World capture fisheries and aquaculture production.

With my best wishes  
Prof. Dr. Malik M. Khalafalla



**Instructions**

- 1- Please answer all questions
- 2- Diagrams must be drawn wherever necessary
- 3- Figures mentioned on the right indicate full marks

**Question (1)**

(20 degrees)

- a- Compare between DNA and RNA as genetic materials
- b- Mention major enzymes involved in DNA replication and the function of each.

**Question (2)**

(20 degrees)

- a- Short notes on RNA splicing and alternative splicing.
- b- How does mutation affect the RFLP pattern.

**Question (3)**

(10 degrees)

- a- What do you know about homoplasmy and heteroplasmy?

*Good Luck to all of you*

المستوى الثالث  
تقدير البرقيات المائية

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences  
Department of Aquaculture

Subject: Aquatic Larval Feeding

Time: 2 hours

Date: 10/1/2018

Level: Three



Final exam during academic year 2017/2018

Please answer the following questions: (50 marks).

❖ First question (9 marks):

A- What is the central role of micro-algae in mariculture?

B- Mention the major classes and genera of micro-algae cultured in aquaculture?

C- What are the generalized conditions for culturing micro-algae?

❖ Second question : (16 marks).

D- Flow diagram of purification steps of single cell algae?

E- Growth phases of micro-algae cultures?

F- Fertilizers?

G- Waste products from the food industry?

❖ Third question: (Choose only four): (16 marks).

A- Threats facing fish eggs?

B- Live feed is essential to the early stages of developing larvae.  
(Why)?

C- Essentially of dietary phospholipid in fish larval feeding?

D- The reasons for the difficulty of maintaining fish larvae?

E- Micro diet specification?

❖ Fourth question : Explained by only drawing with writing data (9 marks).

A- Live cycle of Nile tilapia?

B- Effect of dietary phospholipid on sea bass larval development, on growth?

C- Changes in intestinal enzymatic activities during sea bass larvae development?

With our best wishes  
Prof. Dr. El-Sayed B. Belal  
Prof. Dr. Malik M. Khalafalla

لغة الإنجليزية  
الجامعة الإسلامية

Kafr El-Sheikh University

Faculty of Fisheries

First Year

Subject: English

Name: .....



Date: 10/01/2018

Time Allowed: 2 Hr

Total Mark: 60

Final Exam, 1 Page

Academic Number: .....

**I-Answer the following questions:**

- 1-What is a school of dolphins?
- 2-How does a dolphin feel in an aquarium?
- 3-Why are some lakes very salty?
- 4-What does an environmental engineer do?
- 5-How do some factories pollute the environment??

**II-Fill in the blanks with suitable words:**

- 1-Sometimes people catch a dolphin for a large .....
- 2-Modern telephones have the numbers on.....
- 3- Ali is a Muslim. This is his..... Maria is a Christian.
- 4- To say that we regret something in the present, we say.....
- 5- If you want to attend the university, you have to send an.....
- 6- .....food has salt in it.
- 7- The synonym of "emotion" is.....
- 8- "A month of Sundays" means.....
- 9- We say.....when we welcome someone who has returned.
- 10-Dolphins are social animals, living together in groups called.....

**III-Correct the verbs between brackets:**

- 1- While I (walk) through the park with Maisie last night, a man (snatch) her bag.
- 2-They (not speak) to each other since they quarrelled.
- 3- After I (work) for sometime , I (hear) a knock at the door.
- 4-Look! Sara (go) to the movies.

**IV- Translate the following text from English into Arabic:**

There is a lot of salt on the earth, and it mixes very well with water. There is some salt in all water. Water on the land runs into lakes and rivers. The water from most lakes goes into rivers. These rivers run into the seas and oceans. They carry a little salt with them. Some of the ocean water moves into the air and clouds. It evaporates. Salt can not evaporate. It stays in the ocean.

**V- Write on ONE only of the following:**

- 1-A Human Resources Manager.
- 2-Write a paragraph about an animal that lives in the ocean. What does this animal look like? Where does it live? What does it eat?

**Best of Luck**

**Dr Ayman Elhalafawy**

تفريخ الحيوانات المائية  
السطح الرابع

Kafreish University  
Faculty of Aquatic and Fisheries Sciences  
Course: Aquaculture hatching & propagation  
Academic level: 4<sup>th</sup> year, 1<sup>st</sup> semester  
Program: Aquaculture



Date: January 8, 2018  
Time: 2 hours  
Total marks: 50 mark  
Academic number:  
Student name:

**Q. I. (30 mark)**

**A. Complete the following sentences:** (10 marks, 2 for each point)

- 1- .....is used for collection of fish eggs from natural sources.
- 2-.....are the fish types present in certain site.
- 3- ..... is the dopamine antagonist in ovaprim.
- 4- ..... is a method used for production of sterile catfish fries.
- 5- Fertilized egg of common carp is .....in color.

**B. Compare between each of the following:** (10 marks, 5 for each point)

- 1- Spermiogenesis and spermiation.
- 2- Homoplastic and heteroplastic injection of pituitary gland extract in fish.

**C. Discuss the natural breeding of finfish with diagram only** (10 marks)

**Q. II. (20 mark)**

**A. Answer the following with (V) or (x):** (10 marks, 2 for each point)

1. Flooded condition increase the spawning of carps. ( )
2. From April to July is the natural breeding season of catfish ( )
3. Pangasius fries are stocked in earthen pond to avoid cannibalism ( )
4. Testosterone hormone stimulates formation of follicles in female's ovary ( )
- 5- Shadow zones are the best sites for spawn collection from rivers ( )

**B. Please, read the following sentences and answer the questions:** (10 marks)

You are admitted to visit a tilapia hatchery; the owner would like to formulate 30 kg ration for production of monosex fries.

- 1- What is the size of required fries? Why? (4 marks)
- 2- What is the required volume of ethyl alcohol 95%? (2 marks)
- 3- What is the required amount of TM? (2 marks)
- 4- Mention the ideal environmental conditions required during preparation of this ration. (2 marks)

ALL THE BEST

R.A. Mohamed

Radi A. Mohamed



السلامة الحيوية للقداء  
المستوى الرابع

Course: Food Safety Enhancement Program/

Hazard Analysis Critical Control Point

Level: 4 Sp. Fish Processing and Biotechnology

Allowed time: 2 hour

Date: 8 / 1 / 2018

Final Exam



جامعة كفر الشيخ  
كلية علوم الثروة السمكية و المصايد

Answer the following questions

First Question: (10 marks)

Mention briefly (in points) the different types and examples for the hazards that could be found in food.

Second Question: (15 marks)

A- Mention the main general requirements for use of naturally occurring antimicrobial substances as food preservatives

B-. Exemplify (in a table) the types, causative agent and symptoms of marine biotoxins, which could be found in the seafood.

Third Question: (10 marks)

A- Discuss, in points, the suggested prerequisite programs that could be required for the HACCP plan?

B- Give brief accounts on the definition, types and reaction of food allergy and intolerance agents.

Forth Question: (15 marks)

A. Point out the main effective antimicrobial agents that could be extracted from plant and microbial origins

B. Illustrate with a schematic diagram the possible handling procedure and application protocols of plant materials to be used for food preservation

Good luck and best wishes

Prof. Ahmed A. Tayel

التكنولوجيا  
البيئية

**Course: Food Inspection Techniques**

**Level: 4 Sp. Aquaculture**

**Allowed time: 2 hour**

**Date: 4 / 1 / 2018**

**Final Exam**



جامعة كفر الشيخ  
كلية علوم الثروة السمكية و المصايد

**Answer the following questions**

**First Question: (10 marks)**

In a walk-through inspection, mention in points the general checkpoints which you should notice in: 1) Facility assessment 2) Product assessment

**Second Question: (15 marks)**

- A. What are the main types of food inspection? specify their definitions and the differences between them.
- B- Illustrate in brief the main principles of the Hazard Analysis Critical Control Point (HACCP) system.

**Third Question: (10 marks)**

Illustrate with a diagram the main procedures and considerations involved in conducting inspections of food production facilities

**Forth Question: (15 marks)**

What are the essential required areas of knowledge and skill for the food inspector? and how could he respond to non-compliance and violations?

Good luck and best wishes

*Prof. Ahmed A. Tayel*

المشروعات الزراعية الصغيرة  
المسألة الثانية

Kafrelsheikh University  
Faculty of Aquatic and  
Fisheries Sciences



Subject: Small  
Agricultural Projects  
Level: Second year  
students  
Time: 2 hours

Exam Committee:

Prof. Dr./ Said Mahdy; Prof. Dr./ Mostafa Abdelrahman; Prof. Dr./ Fawzy Magouz

**- Please write short notes on only six of the following points:**

- 1- The general processes for fish cage management during the culture season.
- 2- Features of bees breeding as an economic project.
- 3- Infectious diseases of Muscovy ducks with consider to cause, symptoms and prevention and treatment program.
- 4- The required notes for the success of Muscovy duck's projects.
- 5- Features that are introduced by the animal insurance fund to the animal breeders.
- 6- The items of the administrative expenses of marine floating cages project.
- 7- Composition of bee's honey.
- 8- Consideration that must be taken into account when choosing meat animals for fattening.

**Good luck**

علم النانو تكنولوجيا  
المستوى الثالث

*Kafrelsheikh University*  
*Faculty of Science*  
*Chemistry Department*

*Subject: Nanotechnology*  
*Time: 2 hours*  
*Level: Three*



**Final Exam for Nanotechnology Academic year 2017/2018**

Answer the following questions:

- 1- Put true or false and correct:
  - a- The reactivity of nanomaterials is due to the high surface to density ratio.
  - b- The dimensions of nanomaterials between 1-20  $\mu\text{m}$ .
  - c- Oxidation of silver ion produces silver nanoparticles.
  - d- The color of the nanoparticles changed with the change in density.
  - e- FT-IR spectroscopy is used to know the morphology of materials.
- 2-
  - A) The electric properties of nanomaterials are higher than the bulk (Discuss).
  - b) Write on the top-down methods to prepare nanoparticles.
- 3- The diffraction pattern of ZnO was measured with x-ray radiation of wavelength of 1.315  $\text{\AA}$ . The first order Bragg diffraction peak was found at an angle  $2\theta$  of 50.5 degrees. Calculate the spacing between the diffracting planes and the size of the ZnO nanoparticles.
- 4- Compare between top-down and bottom-up techniques for nanomaterials preparations.
- 5- Propose a suitable method to prepare Au and Ag nanoparticles and discuss the conditions to control the size.

*With my best wishes*

*Dr. Hamdy El-Sheshtawy*

المستوى الأول  
ميكروبيولوجيا

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences

Subject: Microbiology

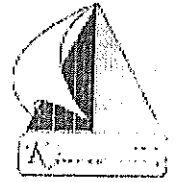
Time: 2 hours

Date: 3/1/2018

Level: One

First term exam during academic year 2017/2018

Full marks : 50 Pages : 1



1-Complete the following:

[ 10 Marks]

- 1) Bacterial cytoplasmic membrane is composed of .....and.....
- 2) Bacteria are classified according to the way they obtain energy ( nutrition) as ..... or .....
- 3) Pili ( fimbriae ) are responsible for the .....while Flagella are organs of .....
- 4) Bacterial endospores are highly resistant to 1-.....2- .....and .....
- 5) The bacterial growth phases are 1- .....2-.....3-.....and 4-.....

2- Mark the following sentences with (v) or (x) :

[ 5 Marks]

- 1) Archaea are Prokaryotes. ( )
- ) Capsule plays role in the virulence of pathogenic bacteria. ( )
- 3) Optimum condition for Bacterial growth is darkness. ( )
- 4) Transposons are present in certain bacteria. ( )
- 5) Naked viruses do not have envelope . ( )

3-Choose from column (A) the appropriate sentence at column (B):

[ 10 Marks]

A		B	
1	Pathogenicity	a	have septated hyphae and reproduce Sexually by basidiospores
2	BASIDIOMYCETES	b	Helical, Polyhedral and Complex as bacteriophage
3	Sporangiospores are	C	fish pathogen Causes Bacterial Kidney Disease
4	Viruses have different shapes as	d	is the ability to induce disease
5	Branchiomyces sanguinis is	e	Includes exotoxins and endotoxins
6	Gene transfer can be	f	unicellular fungi
7	Bacterial Cell Wall'	g	Fungal fish pathogen Causes Gill Rot Disease
8	Renibacterium salmoninarum is	h	Fungal Asexual spores
9	Yeast are	I	by Conjugation
10	Toxic virulence factors	k	Maintains the bacterial shape and protects the cell from lysis.

4-Write short notes on:

[ 15 Marks]

- 1) Prokaryotes [ 6 ]
- 2) Viruses general characters. [ 5 ]
- 3) Bacterial Plasmid. [ 4 ]

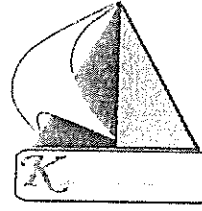
5-Enumerate the following:

[ 10 Marks]

- 1) Five Gram negative fish pathogen describing one of them in details. [ 6 ]
- 2) Types of flagella arrangement. [ 4 ]

With my best wishes

Dr. Amany Diab



**Answer the following questions:**

**Question 1 : Question 1 : :**

**Mention the correct answer:**

1. A ship her tonnages between 1000 – 8000  
(Oil tankers – General cargo – Heavy Left ship)
2. A method of fishing in which net is used in circle fish.  
(Other trawling – Weirs traps – seining)
3. The state with the largest interest in international sea borne trade are  
(Category A – Category B – Category C)
4. Details about the crew members responsibilities  
(Muster list – Muster station – Crew list)
5. The crew must be embarked the life raft which lunched by davit through.  
(embarkation deck – jump from 4.5 meter – embarkation ladder)
6. Anti-seasickness tablets in survival craft for each person.  
(4 tablets – 8 tablets – 6 tablets)
7. The life buoy shall be constructed that buoyancy is not reduced by not more than  
(5% - 14.5% - nothing)

8. The thermal protective aids easily donned without assistance  
(in the water – on embarkation deck – in survival craft)
9. Orange buoyant smoke signals inside survival craft  
(6 – 4 – 2)
10. For extinguished the fire class B used  
(water – foam – dry powder)

**Question 2 :**

**Compare between the following:**

- A- Rocket parachute flares and Hand flares.
- B- Fire protected lifeboats and Self-contained air support system.
- C- LOA & LBP (Length over all and length between perpendicular)
- D- Longlining & weirs and Traps.
- E- Flash point & ignition point and Self/auto ignition point.

**Question 3 :**

**A - Complete the following .**

1. A person is considered to be hypothermic if their temperature ....., and the signs and symptoms are ....., ....., .....
2. The sides of fire triangle are ....., ....., and ..... but the sides of fire extinguishing are ....., ....., .....
3. The water one from difficulties facing survivals inside survival craft so, what you have ....., ..... and what you do ....., ....., ....., ..... and .....
4. From the marks to find land ....., ....., ....., ....., and .....

**B – Calculate the following :**

- 1 - A ship of full displacement 20000 tons , find dead weight if the light displacement 6200 tons

2 -- The same ship has total depth 14 meter with free board 5 meter , what is her draft ?

**Question 4 :**

- A- State the causes of oil pollution on the ship and explain the elements of emergency plan for marine pollution.
- B- Write about the responsibilities of safety officer.
- C- Give short notes about general requirements for all fire detection.
- D- What the components of detectors system and state the types of heat sensors.





**Q. I. (20 mark)**

**Q-I-A- Answer the following with (✓) or (x): (10 marks, 2 for each point)**

- 1- Open thelycum female shrimp has no lateral plates ( ).
- 2- The abdominal flap in male crab is round shape ( ).
- 3- Juvenile lobster swim in the bottom ( ).
- 4-Adult crabs should be identified after molting ( ).
- 5- Protozoa of shrimp is non-feeding stag ( ).

**Q-I-B- Compare between each of the following: (10 marks, 5 for each point)**

- 1- Galveston and Japanese system of shrimp production (live feed and survival rate).
- 2- Post transportation formalin dip of shrimp and prawn.

**Q. II. (30 mark)**

**Q-II-A- Complete the following sentences: (10 marks, 2 for each point)**

- 1- Moulting inhibiting hormone is secreted from .....
- 2- The early maturing ovary of crab is.....colour.
- 3- The ready to hatch lobster eggs are..... colour.
- 4- The optimum growth temperature of bivalve is.....
- 5- ..... is present in male penaeids at the 2<sup>nd</sup> pleopod.

**Q-II-B- Write short notes on the following (10 marks, 5 for each point)**

- 1- Escape behaviour of lobster.
- 2- Maturation of crustacean's testes and its feedback mechanism (Diagram only).

**Q-II-C- Please, read the following and answers the questions: (10 marks)**

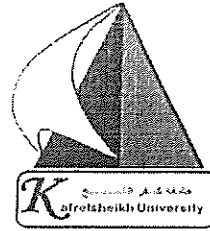
You are admitted to visit a crab broodstock. The crabs are housed in cement tanks. Crabs showed great differences in size. Some crabs were suffering from fitting.

- 1- What is the expected problem? (4 M)
- 3-How can you deal with such condition? (6 M)

All the best

Radi A. Mohamed

R.A. Mohamed



Answer the following questions:

**Q1:**

- 1- Overfishing is one of the most important threats to Africa's Aquatic ecosystems. Explain. (10 degrees)
- 2- Explain the physiological adaptations of fish to low oxygen. (10 degrees)

**Q2:**

- 1- Based on energy cost, swimming can be classified into three groups. Discuss. (10 degrees)
- 2- Mention the principal pressures acting on aquatic biodiversity and explain one of them. (10 marks)
- 3- Short notes on:  
The impacts of predators in streams (10 marks)

Answer The Following Questions:

1- Define:

(12 marks)

- |                    |              |
|--------------------|--------------|
| A) Aquatic Animals | C) Health    |
| B) Epidemiology    | D) Morbidity |

2- Discuss Briefly:

(13 marks)

- A) Factors Affecting Aquatic Animals Quarantine.
- B) Requirements for Importation Point.
- C) Spreading of Infectious Diseases.

3- Differentiate Between:

(12 Marks)

- A) Quarantine and Biosecurity.
- B) Quarantine Clearance and International Aquatic Animal Health Certificate.
- C) Risk Analysis and Period of Quarantine.

4- Write short notes on:

(13 Marks)

- A) Aquatic Animals Handling.
- B) Tank Sheet.
- C) Logbooks.

GOOD LUCK

El-TRAS  
Wael

Professor Doctor/ Wael El-Tras

مقدمة عن علم وتكنولوجيا الغذاء

Kafrelsheikh Uni.  
Fac. Of Aquatic and Fisheries Science  
Level: 2  
Subject: Introduction to Food Science and Technology  
Name:

المسور الثاني



28  
Date: .../12/2017  
Time: 2 hours  
Total marks: 50  
Academic Number:

Final exam during academic year 2017/2018

Board of examiners: Prof. Dr. Samir Metwally, Prof. Dr. Abd-Elbaset Salama, Prof. Dr. Amin K. Ammar.

**Answer the following questions:**

(15marks)

**First question:**

**A- Define:**

Food additive - Food canning - Food spoilage - Stable foods.

**B- Mention:**

- 1- Function of food.
- 2- Sources of food.
- 3- Causes of food spoilage.
- 4- Importance of food preservation.
- 5- Principles for choosing the best suitable raw materials for processing.

(15 marks)

**Second question:**

**A- Mention the propose of:**

- 1- Blanching in food canning.
- 2- Thermal processing in food canning.

**B- Complete the following sentences**

- 1- All animal proteins are of ..... biological value.
- 2- True yeasts metabolize sugar producing ..... and ..... gas.
- 3- Bacteria generally prefer ..... acid foods like ..... and .....
- 4- Principles of food preservation ....., ..... and .....
- 5- Grading of fruit ..... vegetables according to ....., ..... or .....
- 6- The reasons of can swell ....., ..... and .....
- 7- Methods of food preservation by heat such as ....., ..... and .....
- 8- Methods of food preservation by chemical substances such as .... and .....

(20 marks)

**Third question:**

**A- Choose the correct answer from the brackets:**

- 1- It is the latent heat needed to convert material from the solid to liquid phase and vice  
a- (latent heat of fusion), b- (latent heat of evaporation), c- (latent heat of sublimation)
- 2- It is the heat transfer from the hot to the cold molecules in solids  
a- (Conduction), b- (Radiation), c- (Connection)
- 3- Increases the pressure on the liquid consists of gas  
a- (Compressor), b- (Condenser), c- (Expansion valve)
- 4- Is the collection of everything that is not regular food.  
a- (Function food), b- (Regular food), c- (Specialty food)
- 5- Tunnel dryers used to drying.  
a- (Liquid foods), b- (Solid foods), c- (Semi liquid foods)
- 6- They most men in light industry, students and workers in stores  
a- (Energy activity is limited), b- (Energy average activity), c- (Energy activity thumping)
- 7- The food division dairy products, protein foods, fruits and vegetables, food carbohydrates belong to.  
a- (The first group), b- (The second group), c- (The third group)

**B- Define:**

Good manufacturing practice (GMP) - British thermal unit (BTU) - Food drying

,,, Good Luck ,,,

— Metwally

Salama

كساء وجيلد الفزار  
المعونة الشابة

Kafrelsheikh University  
Faculty of Aquatic and Fisheries Science  
Department of Fish processing and biotechnology  
Subject: Food Chemistry and Analysis.  
Time Allowed: 2 hs.  
Code: .....



Full marks: 50  
Date 27/12/2017  
Pages (1)

**Please, answer the following questions:**

**Q1-Write fully about:** (20marks, 5 each)

- Myofibrillar and sarcoplasmic protein of sea food.
- Positive and negative effects of using pesticides.
- Four plate test for detection of antibiotic residues in fish flesh.
- Cold shorting.

**Q2- Complete the following sentences:** (16 marks, 1 each space)

A- Factors affecting accumulation of heavy metals in fish.

- .....
- .....
- .....

B- Cadmium is .....cause a risk for human health as  
..... , ..... and ..... disease while  
Aluminium cause .....disease.

C- Stroma protein consist of ..... , ..... and  
.....Which ..... characterized ..... by  
.....

D- Quality index method (QIM) means.....  
Giving score of ..... , ..... and .....

**Q3: Enumerates the following:** (8 marks, 2each)

- Source of fish contamination with heavy metals.
- Factors affecting rigor mortis.
- Public health hazards of antibiotic residues in food.
- Factors affecting fat content of fish.

**Q4: Give examples for the following:** (6marks, 2 each)

- Non protein nitrogen compounds.
- Antibiotic used in aquacultures.
- Types of pesticides.

Best wishes  
Dr. Ghada Kirrella  
Ghada Kirrella

طريقه وتكنولوجيا الصيد  
المستوى الثالث



Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences  
Final Exam  
Academic Year: 2017-2018  
Board Exam

Subject: Fishing Gear Technology  
Time allowed: 2 hours  
Level : 3

Answer the following questions: (50 marks)

1- A- Define the following : (20 marks)

- |              |                 |                      |
|--------------|-----------------|----------------------|
| 1) Chuming   | 2) Webbing      | 3) Ghost fishing     |
| 4) 5 Deniers | 5) Soaking time | 6) fishing technique |

B- Write short notes on the following:

- 1) Entanglement    2) Hanging ratio    3) Klondyker    4) Beacon

2- A – Longline designs are in the form of two styles. (18 marks)  
Compare between them .

B - Discarding is a phenomenon in most fisheries. Define and discuss the reasons of discarding.

3- Match between column "A" and its suitable sentence in column "B". (12 marks)

- | <u>Column A</u> | <u>Column B</u>                                    |
|-----------------|--|
| 1) Jig lines    | 1) bottom fishing gears                            |
| 2) Basket traps | 2) over hangs the trawl upper panel over lower one |
| 3) Longlines    | 3) a vertical fish detection and depth device      |
| 4) Sonar        | 4) a Vigneron Dahl system component                |
| 5) Shore clams  | 5) used for squid fishing                          |
| 6) Canopy       | 6) a horizontal fish detection device              |
|                 | 7) may be picked by hands                          |
|                 | 8) passive fishing gears                           |

Good Luck  
D . El-Azab Badr



**A. Define and explain the following?**

- 1) market
- 2) Economics
- 3) The Economic Problem
- 4) Resources
- 5) Efficiency
- 6) opportunity cost
- 7) Scarcity

**B. Describe and Compare?**

- 1) Perfect competition - Monopolistic competition-Oligopoly -Monopoly
- 2) Substitute good - Complementary good - Inferior good
- 3) Cyclical Unemployment - Structural Unemployment - Frictional unemployment
- 4) Microeconomics - Macroeconomics
- 5) Positive Economics - Normative Economics
- 6) Unemployment - Employment - labor force
- 7) Physical capital - Human capital

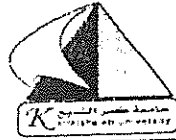
**C. Draw the following graphs?**

- 1) Demand Curve & Supply Curve and Equilibrium of Supply and Demand
- 2) The circular flow of economic activities
- 3) Production Possibilities Frontier

**D. What are the three basic economic questions?**

**E. What are the four factors of production? What are the Payments to these factors?**

**Best Wishes**



**A. Define and explain the following?**

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- 2) Economics
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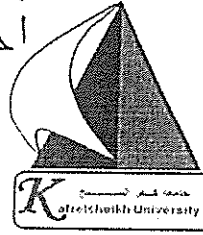
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- 2) The circular flow of economic activities
- 3) Production Possibilities Frontier

**D. What are the three basic economic questions?**

**E. What are the four factors of production? What are the Payments to these factors?**

**Best Wishes**





Answer the following questions:

1. First question

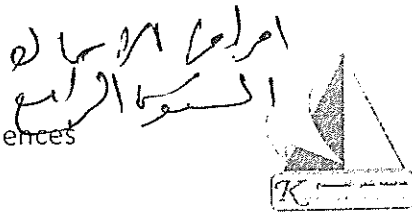
(30 degrees)

- a- Write short note on phage therapy.
- b- Explain different methods for diagnosis of shrimp viral diseases.
- c- Photobioreactors for marine microalgae can be divided into different types based on their location. Discuss.

2. Second question

(20 degrees)

- a- Explain different methods of isolation and identification of sponge-associated bacteria.
- b- Depending on the purpose of the gene transfer studies transgenes can be grouped into three major types. Discuss.

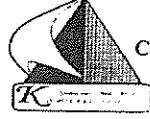


Answer The Following Questions:

- 1-Mention: (13 marks)
- A) Three fungal fish diseases describing the diagnosis of one of them in details.
  - B) Factors affecting fish immunity and susceptibility to diseases.
  - C) Four fish diseases that have public health importance.
- 2-Write short notes on clinical signs and P/M lesions: (12 marks)
- A) Mycobacteriosis.
  - B) Edwardsiella septicemia.
  - C) Motile Aeromonas septicemia.
- 3- Mention the etiological agent and line of prophylaxis: (13 marks)
- A) S.V.C.V.
  - B) Yellow grub disease.
  - C) Black tail disease
- 4- Write short notes on the pathognomonic lesion and differentiation under microscope: (12 Marks)
- A) Trichodiniosis
  - B) Chilodonellosis.
  - C) Cryptocaryoniosis.

GOOD LUCK

Professor Doctor/ Wael El-Tras



**Answer the following questions:**

**Q1-Define the following points:**

(each 2 mark)

- 1-Heavy water.
- 2-Atmospheric deposition .
- 3-Harmful algal bloom.
- 4-Latent heat of fusion.
- 5-Ghost fishing.

**Q2-Write short notes on:**

(each 3 mark)

- 1-Sodium Adsorption Ratio.
- 2-Flocculation.
- 3-Biological Oxygen Demand.
- 4-Transpiration.

**Q3- Calculate the following:**

( each 6 mark)

- 1- The heat required to convert 5 gm of ice at -20c to water vapor at 100c in calories.
- 2- The total pressure at 30cm depth of water at 25c in meter of mercury.  
(density of water at 25C is 0.9997g/cm<sup>3</sup>&density of mercury is 13.594g/cm<sup>3</sup>.)

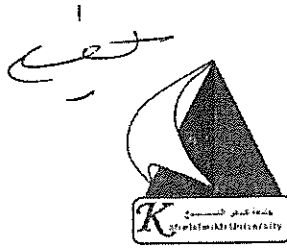
**Q4-Explain the following:**

(each 4 mark)

- 1-Carbonate Equilibrium of water .
- 2- thermal stratification of water body.
- 3-Disadvantages of aquaculture in desert.
- 4-Sublimation & deposition.

*Best Wishes*

*Dr. Mohamed Mamdoh*



Answer the following questions:

1- Write on the following:

(15 degrees , 5 of each )

- A. Salmonella spp. as food borne pathogens.
- B. Factors Affecting Spoilage of Fresh Fish.
- C. Discuss The significance of rigor mortis of fish.

2- In Table comper between:

(15 degrees , 5 of each )

- A. Glycolysis and Belly bursting of fish.
- B. Reddening and Sliming spoilage in salted fish.
- C. The fresh and decomposed fish.

3- Enumerate and discuss Fully TWO of each of the following:

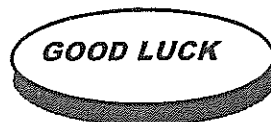
(10 degrees , 5 of each)

- A. The Intrinsic factors refer to characteristic of the food affecting that on microbial growth.
- B. The main sources of microbial contamination of fish and fish products.

4- Give Reason for the following

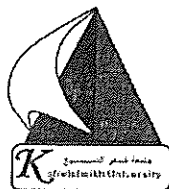
(10 degrees , 2.5 of each)

- A. Larger fish spoil more slowly than small fish.
- B. Lean fish keep longer than fatty fish.
- C. Enterococci better indicator of sanitary quality than other organisms.
- D. Canning of the fish as a methode of preservation.



Prof. Dr. / Ibrahim Ibrahim Alhawary

استاذ



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(15 degrees , 5 of each )

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- B. Factors Affecting on Spoilage of Fresh Fish.
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Prof. Dr. / Ibrahim Ibrahim Alhawary

Handwritten signature in Arabic script.

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences  
Department of Aquaculture  
Level: One

Subject: Aquaculture Engineering  
(Elective Course 2)

Time: 2 hours  
Date: 23/8/2017



Summer semester exam during academic year 2016/2017

❖ Please answer the following questions: (50 marks).

❖ First question - Fill the gaps between sentences: (14 marks).

1. Circular tanks are operated by injecting water flow tangentially to the tank wall at the tank outer radius so that the water spins around the tank center, creating .....
2. .... is inward radial flow component at the tank bottom and an outward radial flow at the tank surface
3. This inward radial flow along the bottom of the tank carries settleable solids to the center drain and thus creates ..... property so desired in circular tanks.
4. The magnitude of the irrotational zone depends on:
  - a. ....
  - b. ....
  - c. ....
5. The impulse force, and thus the rotational velocity in the tank, can be regulated by adjusting the ..... or ..... and/or .....
6. The TSS concentration discharged through the bottom drain averaged ..... mg/L ( $\pm$  standard error), while the TSS concentration discharged from the sidewall averaged only .....mg/L
7. The sidewall discharge, which represented .....% of the total flow, but only .....TSS, would probably not require any further treatment

❖ Second question : Answer the following questions (36 marks):

- ❖ Compare tank hydraulics that resulted from following different water injection.
- ❖ Mention several ways of construction fish tanks drain.

With my best wishes

Dr. Wael Elmessery



Answer The Following Questions:

1- Enumerate seven septicaemic fish diseases describing diagnosis one of them in details. (9 marks)

2- Write short notes on:

(12 marks)

- A) Self-perpetuating infection.
- B) Saprolegniasis clinical signs.
- C) Economical importance of Emphysematous Putrefactive Disease of Catfish.
- D) Saddle back disease pathological picture on skin and gills.

3- Compare between clinical signs and P/M lesions of Mycobacteriosis and Ichthyophonus disease. (4 Marks)

4- Write short notes on:

(9 Marks)

- A) Forms of viral haemorrhagic septicemia (VHS).
- B) Life cycle of myxosoma cerebralis.
- C) Parasitic print of crustacean diseases of fish.

5- How can you diagnose and treat (Ich) disease. (6 Marks)

6- Enumerate blood parasitic disease and explain one of them. (10 Marks)

**GOOD LUCK**



ميكروبيولوجيا الغذاء

Answer the following questions:

المسئول الدكتور ابراهيم

1- Write on the following:

(15 degrees , 5 of each )

- A. Factors affecting shelf life of fish and discuss ONE of them.
- B. Enteric indicators organisms
- C. Extrinsic factors refer to the environment surrounding the food.

2- Give short notes on the following:

(15 degrees , 5 of each)

- A- The types of fish spoilage discuss ONE of them .
- B- Methods used for fish storage and preservation and discuss Fully TWO of them.
- C- The methods used to control microorganisms in food.

3- In Table comper between:

(10 degrees , 5 of each)

- A - Putrifaction and Rancidity of fish.
- C- Humidity and Water activity affecting on microbial growth.

4- Fill in the spaces:-

(10 degrees)

- A- Frozen fish should be maintained below .....1.....during .....2..... and .....3.....
- B - According to their importance, bacteria can be classified into.....4....., .....5....., .....6.....
- C - Foods can be contaminated with different types of microorganisms coming from outside sources such as: .....7....., .....8....., .....9....., and .....10.....



Prof. Dr. / Ibrahim Ibrahim Alhawary



مدرسة في علم  
وتكنولوجيا الغذاء  
Kafrelsheikh Uni.  
Fac. Of Aquatic and Fisheries Science  
Level: 2  
Subject: Introduction to Food Science and Technology  
Name: \_\_\_\_\_



23/8/2017  
Date: 23/8/2017  
Time: 2 hours  
Total marks: 50  
Academic Number: \_\_\_\_\_

Final exam during academic year 2016/2017

Board of examiners: Prof. Dr. Abd-Elbaset Salama, Prof. Dr. Amin K. Ammar.

Answer the following questions:

First question:

(20 marks)

A- Define:

Food – Food additive -Fermented Food – food spoilage- Food canning – Food drying –Protein- Stable foods.

B- Mention:

- 1- Function of food.
- 2- Sources of food.
- 3- General methods of food preservation.
- 4- Main steps of food canning.
- 5- The major causes of food spoilage.
- 6- The reasons of canned food spoilage.

Second question:

(10 marks)

Mention :-

- 1- The purpose of blanching in food canning.
- 2- The purpose of adding salt and sugar solution in food canning.
- 3- The purpose of thermal processing.
- 4- The requirements of food preservatives.
- 5- The main advantages of food sun drying.

Third question:

(20 marks)

A- Define:

Regular food- British thermal unit (BTU) - latent heat of fusion-  
Good manufacturing practice (GMP).

B- Complete the following sentences:

- 1- There are three main ways of heat transfer are ....., ....., and .....
- 2- The steps to development a new foods are ....., ....., ....., and .....
- 3- In industrial refrigeration methods used is the compression system. It consists of the following parts: ....., ....., ....., ....., and .....

C- Compare between:

- 1-Slow and quick (fast) thawing.
- 2- Freezing and cooling.

A.A. Salama  
Dr. Amin K. A

,,, Good Luck ,,,



لجنة الممتحنين: أ.د/فوزي الدناصوري

أ.د/محمود فواز

أ.م. د/رشدي العدوي

إجمالي الدرجات ( ٥٠ درجة)

( ١٧ درجة)

أجب عن جميع الأسئلة التالية:  
السؤال الأول:

أ- إذا علمت أن مزرعة سمكية تعمل في ظل الإحتكار وكانت دالة التكاليف الكلية لها كالتالي :

$$TC = 2Q^2$$

ودالة الإيراد الكلي كنت كالتالي :

$$TR = 20Q - 3Q^2$$

المطلوب : ١- مستوى الإنتاج الذي يحقق له أقصى ربح .

٢- أقصى ربح يحققه .

٣- دالة الإيراد المتوسط .

٤- سعر الذي يبيع به الوحدة نتيجة تحقيق أقصى ربح ممكن .

ب- تكلم عن سوق المنافسة تكلمة موضحة بالرسم البياني موقف تربية مزرعة سمكية تعمل خلاله .  
ج- قارن بالتفصيل بين المخاطرة Risk والتعيين Uncertainty مع بيان أهم الأساليب المستخدمة لمواجهة الأحداث غير المنظورة.

السؤال الثاني:

( ١٧ درجة)

أ- هناك الكثير من المشاكل والمعوقات التي تعترض تنمية مشروعات القطاع السمكي في مصر" وضحتها، مع بيان أهم الوسائل للنهوض بها.

ب- "المشروع السمكي بحاجة إلى تمويل سواء للبدء أو لتسديد نفقاته الدورية" في ضوء هذه العبارة و دراستك بين أهم مصادر تمويل المشروعات السمكية، أهدافه، ومناهج البحث عند دراسته، وأهم مشاكله .

ج- قارن بين الجمعيات التعاونية والشركات الرأسمالية التي تعمل في مجال المشروعات الثروة السمكية.

د- وضح بالرسم البياني كامل البيانات مع الشرح الموجز الأنواع المختلفة للكفاءة.

السؤال الثالث:

( ١٦ درجة)

أ- عرف المشروع مع بيان أهم عناصره، والدور الذي يقوم به في الاقتصاد الوطني.

ب- يؤدي الاستزراع السمكي عدة أدوار اقتصادية مهمة" وضحتها، مع بيان أهم المعوقات التي تواجهه .

ج- قارن بين التقييم المالي والتقييم الاقتصادي والتقييم الاجتماعي لمشروعات الثروة السمكية

د- أذكر المفهوم وطريقة القياس والأهمية التطبيقية لكل من :

مرونة الإنتاج - معدل العائد الداخلي - مرونة التكاليف - نسبة المنافع / التكاليف .

مع أطيب التمنيات بالنجاح والتفوق

ش.د. رشدي العدوي

ف.د. فوزي الدناصوري

لجنة الممتحنين

هندسة الاستزراع  
المستوى الأول

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences  
Department of Aquaculture  
Level: One

Subject: Aquaculture Engineering  
(Elective Course2)

Time: 2 hours  
Date: 11/6/2017

Second semester exam during academic year 2016/2017



1. Please answer the following questions: (50 marks).

2. First question - Fill the gaps between sentences: (10 marks).

1. In aquaculture, two types of pumps are commonly encountered..... and .....
2. Pitot-Static Gauge consists of a wall tap' into the pipe that measures the ..... and a small tube placed to face into the flow that.....
3. Orifice plate and Venturi tube both estimate flow based upon.....
4. Doppler sensors measure the ..... shifts caused by liquid flow.
5. Ultrasonic level sensors emit sound waves, and the liquid surface reflects the sound waves back to the source. The ..... is proportional to the liquid level.

3. Second question : Solve the following problems (20 marks):

1. Calculate the total fish numbers in  $100 \text{ m}^3$  culture tank assuming that the tilapia's length is 17 cm and weight 50 gm.
2. A fish size of 50 g has a specific growth during one day of 31 g resulting in waste production measured as  $\text{SS} = 6.2\text{g}$ . The acceptable level of SS in the outlet is set to 25 mg/l. Calculate the necessary water flow out ( $Q_0$ ).

4. Third question : answer the following questions (20 marks):

1. Define total suspended solids and classify the different types of solids found in water according to its size.
2. Draw schematically series and parallel ponds.

With my best wishes

Dr. Wael Elmessery



Answer the following questions :-

First Question:-

Degree (12)

Choose the correct answer :-

- 1-The value of ..... property depends on the extent or the size of a system.  
(A) Intensive (B) Extensive (C) Density (D) Porosity
- 2-..... is defined as the mass of particles of occupied by a unite volume.  
(A) Bulk density (B) Solid density (C) Porosity (D) Mass balance
- 3-The void space in food materials can be described by the equation .....  
(A)  $1 - \frac{\text{Bulk density}}{\text{Solid density}}$  (B)  $\frac{\text{Bulk density}}{\text{Solid density}}$  (C)  $1 - \frac{\text{Solid density}}{\text{Bulk density}}$  (D)  $1 - \frac{\text{Bulk density}}{\text{Solid density}}$
- 4-Heating or cooling processes involving ..... may occur where the temperature remains constant.  
(A) Latent heat (B) Sensible heat (C) Heat capacity (D) Temperature
- 5-..... occurs due to density differences caused by temperature gradients within the system.  
(A) Free convection (B) Force convection (C) Radiation (D) Conduction
- 6-..... Occurs between two surfaces by the emission and later absorption of electromagnetic waves.  
(A) Free convection (B) Force convection (C) Radiation (D) Conduction

Second Question:-

Degree (19)

- 1- Define the follows:-

Moisture content - Mass balance - Energy balance

- 2- A membrane separation system is used to concentrate total solids (TS) in a liquid food from 10% to 30%. The concentration is accomplished in two stages with the first stage resulting in release of a low-total-solids liquid stream. The second stage separates the final concentration product from a low-total-solids stream, which is returned to the first stage. Determine the magnitude of the recycle stream when the recycle contains 2% TS, the waste stream contains 0.5% TS, and the stream between stages 1 and 2 contains 25% TS. The process should produce 100 kg/min of 30% TS.

Third Question:-

Degree (19)

- 1- What types of heat exchangers used in the food industry?
- 2- One face of a stainless-steel plate 1 cm thick is maintained at 110°C, and the other face is at 90°C. Assuming steady-state conditions, calculate the rate of heat transfer per unit area through the plate. The thermal conductivity of stainless steel is 17 W/(m °C).



**أجب عن الاسئلة الآتية :-**

( 20 درجة )

**المسؤال الأول :-**

من خلال دراسة الجدوى التسويقية للمشروع أجب عن الآتى :-

- 1- مفهوم دراسة الجدوى التسويقية .
- 2- الدراسات المكتبية والميدانية اللازمة لدراسة الجدوى التسويقية .
- 3- اساليب التنبؤ بالطلب الوصفية .

( 20 درجة )

**السؤال الثانى :-**

من خلال دراسة الجدوى الفنية للمشروع أجب عن الآتى :-

- 1- المراحل التى تمر بها دراسة الجدوى الفنية مع التوضيح بالرسم .
- 2- تقدير احتياجات المشروع من الافراد .
- 3- عوامل اختيار موقع المشروع .

( 20 درجة )

**السؤال الثالث :-**

من خلال دراسة الجدوى المالية أجب عن الآتى :-

- 1- تحديد بنود التكاليف الاستثمارية .
- 2- تحديد أهم بنود إيرادات المشروع المتوقعة .
- 3- مصادر التمويل قصير الأجل .

انتمتع الامثلة

مع اطيب الامنيات والنجاح



السؤال الأول  
- كذا كذا

Answer the following questions

I- Write short notes on:

- 1- Internal phosphorus cycling.
- 2- Various ways in which algae have evolved to overcome nutrients depletion and grazing.
- 3- Effect of CO<sub>2</sub> in lakes on PH.

{12 marks}

II- Illustrate with diagrams:

- 1-Cyanobacterial blooms.(causes and results)
- 2-Eutrophication and global climate changes.
- 3- Light zonation .

{15 marks}

III- Complete the following:

- 1- When the mean depth of certain lake is 4.2 meter and its area are 240 km<sup>2</sup>. the volume of this lake is .....
- 2- When the Redfield Ratio in grams is 38.7 C : 6.4 N : 1 P . The Redfield molar Ratio in the same water is .....C: .....N: 1 P.

{8 marks}

IV- Write fully on :

- 1- SAHFOS and its importance.
- 2- Temporal and Spatial variation in zooplankton abundance.
- 3- Classification of lakes according to richness.

{15 marks}

Best Wishes  
Dr. Mohamed Mamdoh

Kafrelsheikh University  
Faculty of Aquatic and Fisheries Sciences  
Course: principles of aquaculture  
Academic level: 1<sup>st</sup> year, 2<sup>nd</sup> semester  
Program: Aquaculture



Date: June 7, 2017  
Time: 2 hours  
Total marks: 50 mark  
Academic number:  
Student name:

Q. I. (30 mark)

A. Complete the following sentences: (10 marks, 2 for each point)

- 1- Highly alkaline water should be treated with .....for proper aquaculture.
- 2-silver carb is suffering from consumer refusal due to .....
- 3- ..... is process of aquatic harvest from large water bodies with help of population dynamics.
- 4- Embankment slope of Loamy silt soil dyke is .....
- 5- .....is process of removing decomposed materials and feed remnant from pond bottom.

B. Compare between each of the following: (15 marks)

- 1- Aquaculture systems (water salinity) (9).
- 2- Primary and secondary sources of fish infection (6)

C. Write short notes on each of the following: (10 marks, 5 for each point)

- 1- Materials used for inorganic dry ponds fertilisation.
- 2- Mechanism of growth and health monitoring in fish farm.

Q. II. (20 mark)

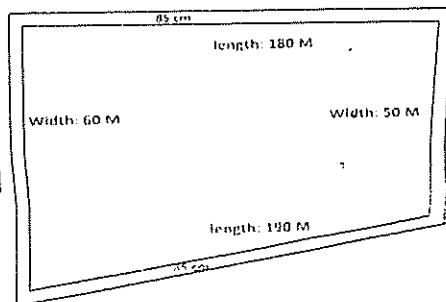
A. Answer the following with (v) or (x) and correct the wrong one: (10 marks, 2 for each point)

1. The fish should have the same feeding behaviours in polyculture farm ( ).
2. Linear type race-way is better than lateral type fish farming ( ).
3. Testing of soil suitability for pond construction is performed throughout ground water, water permeability and squeeze tests respectively ( ).
4. The dyke crest and slope should be free from plants or grasses ( ).
- 5- Rivaldi valve control the height of water column in fish pond ( ).

B. Please, read the following and answer the question: (10 marks)

You are admitted to visit a fish farm. The pond was designed according to the following diagrams.

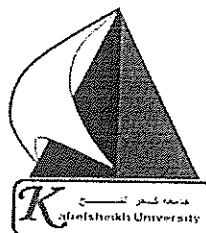
After careful study of the pond, please mention only five faults in this pond construction.



ALL THE BEST

Radi A. Mohamed

*R. A. Mohamed*



Instructions

- 1- Please answer all questions
- 2- Diagrams must be drawn wherever necessary
- 3- Figures mentioned on the right indicate full marks

صانه وتربية الأحياء المائية  
المسكوكه انشاح

Question (1)

(20 degrees)

- a) What is the problem concerning **telomers** in DNA replication? And how can the cell solve this problem?
- b) Explain the main **modifications** of RNA to produce a functional mRNA

Question (2)

(20 degrees)

- a) How these base **substitutions** affect the **protein** produced by the **gene**?
- b) "**Maternal effect** is a component of the environmental effect in studying the basic equation for genetic improvement" explain.

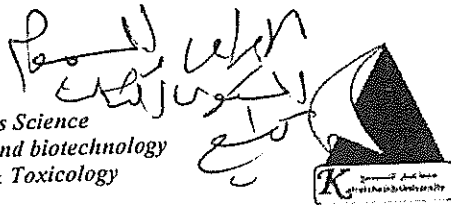
Question (3)

(10 degrees)

- Discuss the major **traits** under selection in aquaculture breeding programmes.

Good Luck to all of you





**Answer the following questions:**

1- Marine biotoxins are naturally occurring chemicals, caused by certain types of toxic algae that accumulate in fish and shellfish. (15 degree)

- A- Enumerate the Categories of Marine biotoxins.
- B- Discuss Fully Scombrototoxic fish poisoning.
- C- Control and Prevention of marine biotoxins

2- Bacterial food poisoning is defined as acute gastroenteritis resulting from the ingestion of food contaminated with food poisoning organisms and/or their toxins. (10 degree)

- A. Classifie the bacterial food poisoning according to their way to produce food poisoning.
- B. Discuss Fully Clostridium botulinum in seafood.

**3- Write on the following:**

(15 degree)

- A. Enumerate anti nutritive factors in food and defferenatiate between them.
- B. Control of Mycotoxin in food and feed
- C. Possible sources of contamination of fish & fish products with pesticides.

**4- Complete the following:**

(10 degree)

- A. Methods of application of sanitizer. 1- ..... 2- ..... 3- ..... 4- ..... 5- .....
- B. Recommendations with Using Methyl Testosterone treatment in tilapia farming are 1- ..... 2- ..... 3- ..... 4- ..... 5- .....
- C. Effect of Food Irradiation on Nutrition and Taste... 1- ..... 2- ..... 3- .....
- D. The toxic effect of high concentration of non essential metals in fish & fish products are summarized as.. 1- ..... 2- ..... 3- ..... 4- .....
- E. Health effects of cadmium in humans by intake of fish .1- ..... 2- ..... 3- .....

to win

Prof Dr. Ibrahim Alhawary  
Best Wishes



**I. Circle the correct answer (20 mark).**

1. The electronic distribution of carbon atom in the hybridized state is:

a. $1s^2 2s^2 2p^2$	b. $1s^2 2s^1 2p^3$	c. $1s^2 2sp^4$	d. none of the above
---------------------	---------------------	-----------------	----------------------

2. The tertiary carbon atom is a carbon attached to:

a. three other carbons	b. two other carbons	c. one other carbon	d. none of the above
------------------------	----------------------	---------------------	----------------------

3. The type of hybridization in ethyne is:

a. $sp^3$ hybridization	b. $sp^1$ hybridization	c. $sp^2$ hybridization	d. none of the above
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4. The bond angle in ethene is:

a. $120^\circ$	b. $180^\circ$	c. $109.5^\circ$	d. none of the above
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5. The type of hybridization in ammonia is:

a. $sp^1$ hybridization	b. $sp^2$ hybridization	c. $sp^3$ hybridization	d. none of the above
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6. The general chemical formula of alkynes is:

a. $C_n H_{2n-2}$	b. $C_n H_{2n}$	c. $C_n H_{2n+2}$	d. none of the above
-------------------	-----------------	-------------------	----------------------

7. The IUPAC name for the formula  $BrCH_2(F)CHCH_2(Me)CHCH_2I$  is:

a. 4-bromo-3-fluoro-1-iodo-2-methyl pentane	b. 1-iodo-4-bromo-2-fluoro-3-methyl pentane
c. 1-bromo-2-fluoro-4-iodo-3-methyl pentane	d. none of the above

8. The number of structural isomers of the chemical formula  $C_3H_8$  are:

a. two structural isomers	b. three structural isomers
c. five structural isomers	d. none of the above

9. Alkanes, including cycloalkanes are:

a. nonpolar and soluble in water	b. polar and insoluble in water
c. nonpolar and insoluble in water	d. none of the above

10. The functional group of alkanes is:

a. a C-C double bond	b. a C-C triple bond	c. a C-C single bond	d. none of the above
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**II. Circle the correct answer and explain your answer by chemical equation in each case (30 mark).**

1. Reaction of 2 molecules of 1-bromoethane with 2Na gives:

a. n-butane + 2NaBr	b. iso-butane + 2NaBr	c. neu-butane + 2NaBr	d. none of the above
---------------------	-----------------------	-----------------------	----------------------

2. Combustion of ethane gives:

a. $CO_2 + H_2O + 213 \text{ Kcal/mole}$	b. $CO_2 + 2H_2O + 213 \text{ Kcal/mole}$
c. $CO_2 + 3H_2O + 213 \text{ Kcal/mole}$	d. none of the above

3. Reaction of 1,3-butadiene with ethene gives:

a. cyclohexane	b. cyclohexene	c. cyclohexyne	d. none of the above
----------------	----------------	----------------	----------------------

4. Reaction of 1,5-dibromopentane with Zn/HCl under heating gives:

a. cyclopentane	b. cyclopentene	c. cyclopentyne	d. none of the above
-----------------	-----------------	-----------------	----------------------

5. Reaction of 1-bromopropane with KOH/EtOH gives:

a. 1-propyne	b. 1-propene	c. 1-propanol	d. none of the above
--------------	--------------	---------------	----------------------

6. Reaction of calcium carbide with  $2H_2O$  gives:

a. ethane + $Ca(OH)_2$	b. ethane + $Ca(OH)_2$	c. ethyne + $Ca(OH)_2$	d. none of the above
------------------------	------------------------	------------------------	----------------------

7. Reaction of ethyne with  $H_2O/HgSO_4/H_2SO_4$  gives:

a. ethylene	b. ethane	c. acetaldehyde	d. none of the above
-------------	-----------	-----------------	----------------------

8. Reaction of benzene with Conc.  $HNO_3$ /Conc.  $H_2SO_4$  gives:

a. benzene sulphonic acid	b. nitrobenzene	c. nitrosobenzene	d. none of the above
---------------------------	-----------------	-------------------	----------------------

9. Reaction of benzene with  $CH_3Cl/AlCl_3$ /heat gives.

a. methyl benzene	b. methylidene benzene	c. methylene benzene	d. none of the above
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10. Reaction of toluene with  $Br_2$ /heat ( $h\nu$ ) gives.

a. tribromomethyl benzene	b. dibromomethyl benzene
c. monobromomethyl benzene	d. none of the above

أجب على الأسئلة التالية:

١ - يعد قطاع الثروة السمكية في مصر واحداً من أهم مصادر الإقتصاد القومي، حيث ان مشروعات الثروة السمكية تعتبر من المشروعات ذات الكثافة العددية الكبيرة مما يسهم في توفير الآلاف من فرص العمل فضلاً عن تحقيق الإكتفاء الذاتي من الغذاء البروتيني الآمن ومن ثم التصدير للخارج، الأمر الذي يحتاج الى تضافر جميع الجهود من جانب قطاعات الدولة والقطاع الخاص وذلك للنهوض بهذا القطاع.

(١٥ درجة)

أ - اشرح بالتفصيل كيفية النهوض بالثروة السمكية

ب - دور الهيئة العامة لتنمية الثروة السمكية في تنمية هذا القطاع.

٢ - تعتبر خطط التنمية المتواصلة للبحيرات ( مثل بحيرة قارون - وادي الريان - المنزلة - ادكو - البرلس - مريوط ) من اهم العوامل لغرض مضاعفة الإنتاج السمكي في مصر.

(١٥ درجة)

أ- ماهي اهم المشكلات التي تواجه البحيرات.

ب- الطرق القانونية لحل مثل هذه المشكلات.

ت- اذكر اهم الاجراءات التي نصت عليها القوانين التي تنظم تلوث المياه ومعوقات الصيد.

(١٠ درجات)

٣- في جدول كيف تفرق بين:

أ- الصيد الامن والصيد المخالف.

ب- القانون البحري العام و القانون البحري الخاص.

٤ - الشروط والمحظورات الواجب توافرها في المتقدم بطلب تصريح صيد الزريعة الطبيعية طبقا لقرار رقم ٩٢٧ لسنة ٢٠١٥.

(١٠ درجات)

٥- ماذا يقصد بالعبارات التالية :

(١٠ درجات)

أ- الرخصة: .....

ب- بطاقة الصيد: .....

ت- المصب المائي: .....

ث- البحيرات: .....

ج- سفينة الصيد: .....

ح- سفينة المصنع: .....

خ- اهم الاتفاقيات الدولية التي اشتركت فيها مصر ١- ..... ٢- ..... ٣- .....

د- اهم مناطق الاستزراع السمكي طبقا للقرار الوزاري رقم ٣٢٩ لسنة ١٩٨٥ بمحافظة كفر الشيخ ١- ..... ٢- ..... ٣- ..... ٤- .....

انتهت الاسئلة

Prof Dr. Ibrahim Alhawary



اجب عن الاسئلة الآتية

السؤال الأول

Define the following expressions:

Fluid-The buoyant force-Apparent weight-phase of wave

السؤال الثاني

Discuss Young's Interference experiment and prove that the path length difference depends on the distance "d" between the light sources  $S_1$  and  $S_2$

السؤال الثالث

Prove that when light goes through a media its frequency is the same as it is in vacuum

السؤال الرابع

Describe Archimedes's principle?

السؤال الخامس

Choose the correct answer: If bodies A and B are NOT in thermal equilibrium with a third body T, then:

- (a) A and B are in thermal equilibrium with each other
- (b) A and B are not in thermal equilibrium with each other
- (c) A and T are in thermal equilibrium with each other
- (d) B and T are in thermal equilibrium with each other

امتحان التغذية المائية  
الاسماك

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences  
Department of Aquaculture  
Subject: Nutrition of Aquatic Animals  
Time Allowed: 2 hours



Full marks: 50  
Date: 31/5/2017  
Level: Three  
Pages: one  
Code: 0110111

Final exam during academic year 2016/2017

Please answer the following questions: (50 marks)

❖ First question - Explain the following statements (18 marks):

- A. Fish can be grouped into four main categories, according to the type of food which they prefer?
- B. Proteins may be classified into three main groups according to their shape, solubility and chemical composition?
- C. Polyunsaturated fatty acids may be divided into three major families?
- D- Water-soluble vitamins toxicities are unlikely?
- E- Energy needs of fish are less than those for most warm-blooded species?
- F- Feed formulation challenges?

❖ Second question: (20 marks).

- A. How can you selecting supplementary feeds?
- B. How to estimate optimum dietary essential amino acid levels?
- C. Biological function of Sodium, Potassium and Chlorine?
- D. Dose-response experiments, involving some of rules (mention it)?
- E. Deleterious effects of Antinutritional factors (ANFs)?

❖ Third question: Explained by only drawing with writing data (12 marks).

- A. Generalized schematic diagram of an aquaculture pond natural food web.
- B. Typical dose response curve
- C. Generalized view of nitrogen balance in fish.

With my best wishes

Prof. Dr. Malik M. Khalafalla

جامعة كفر الشيخ

كلية علوم الثروة السمكية والمصايد          المادة : حقوق الإنسان

المستوى الأول          الزمن : ساعتان

امتحان دور مايو للعام الجامعي ٢٠١٦/٢٠١٧

- أجب عن سؤالين فقط مما يأتي :

- ١- السؤال الأول :تكلم عن حقوق ذوي الاحتياجات الخاصة في الشريعة الإسلامية؟
- ٢- السؤال الثاني : تكلم عن الأساليب الديمقراطية لنشأة الدساتير ؟
- ٣- السؤال الثالث : تكلم عن شروط استحقاق الأرملة والمطلقة للمعاش ؟

مع أطيب تمنياتي بالتوفيق والنجاح ،،،،،،،،،

أ.د/ زكى زيدان ،

جامعة كفر الشيخ

المادة : حقوق الإنسان

كلية علوم الثروة السمكية والمصايد

الزمن : ساعتان

المستوى الأول

امتحان دور مايو للعام الجامعي ٢٠١٦/٢٠١٧

- أجب عن سؤالين فقط مما يأتي :

- ١- السؤال الأول : تكلم عن حقوق ذوي الاحتياجات الخاصة في الشريعة الإسلامية؟
- ٢- السؤال الثاني : تكلم عن الأساليب الديمقراطية لنشأة الدساتير ؟
- ٣- السؤال الثالث : تكلم عن شروط استحقاق الأرملة والمطلقة للمعاش ؟

مع أطيب تمنياتي بالتوفيق والنجاح ،،،،،،،،،،

أ.د/ زكي زكي زيدان ،



**Final Exam**

**Answer the following questions**

**First Question:** (8 marks)

Illustrate in points the main processing and preservation methods for fish.

Give short accounts about the basics of five from them.

**Second Question:** (15 marks)

Give short accounts (preferably in tables) to clarify the following questions:

1. The main types of salting process and their basics.
2. The main methods used for fish glazing, their advantages and disadvantages.
3. The advantages of using clean ice to chill fish
4. What are the main types of salts and their basic properties?

**Third Question:** (12 marks)

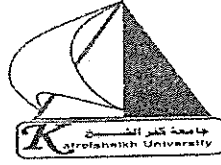
- 1- Compare (preferably in table) between the main advantages and disadvantages of Block ice and Flake ice in fish cooling
- 2- Compare (preferably in table) between the main advantages and disadvantages of aluminum cans and Tin-free steel (TFS) containers

**Forth Question:** (15 marks)

- 1- What is fish surimi, illustrate in a flowchart its basic processing steps
- 2- Discuss briefly the main Parameters and Factors that influence the efficacy of fish Chilling
- 3- How could you improve the efficiency of fish drying?
- 4- What are the main causes of fish spoilage and how could you minimize them?



الدرجة : ٦٠ درجة  
التاريخ: ٢٩/٥/٢٠١٧  
عدد الصفحات: صفحة واحدة



جامعة كفر الشيخ  
كلية علوم الثروة السمكية والمصايد  
مادة: مهارات التواصل  
الزمن: ساعتان

### السؤال الأول:-

- أ- تكلم عن مفهوم التواصل - اتجاهات التواصل  
ب- وضح كيفية تحقيق أي هدف في الحياة  
ج- اشرح وظائف اللغة

### السؤال الثاني:-

أ- ضع علامة (✓) أو (x) مع تصحيح العبارة الخاطئة:-

- ١- تستمر عملية التواصل بين الفرد والآخرين والبيئة من حونه منذ الميلاد حتي الوفاة ( )  
٢- تقتضي المخاطرة المحسوية التغير السريع المفاجئ ( )  
٣- عملية البداية في المخاطرة المحسوية صعبة والحفاظ عليها أسهل ( )  
٤- لا بد من الحصول علي قدر من الراحة والاستجمام لمكافئة الذات وتنمية الطاقة ( )  
٥- من أنماط مهارات التواصل الفعال تبادل الدور " ضع نفسك دائماً مكان الطرف الآخر" ( )

ب- وضح بالرسم فقط نموذج التدفق النفسي ثلاثي القنوات

ج- أكمل ما يلي :-

- ١- من مبادئ الإقدام علي المخاطرة المحسوية (أ).....(ب).....(ج).....  
٢- من خصائص التدفق النفسي (أ).....(ب).....(ج).....  
٣- من الأسباب النفسية لاضطرابات النطق والكلام (أ).....(ب).....(ج).....

بالتوفيق والنجاح الباهر

د/ محمود العطار



امام محمد بن عبد الوهاب

Kafrelsheikh University  
Faculty of Aquatic and Fisheries Sciences  
Course: Behavioural Ecology (0110122)  
Academic level: 3<sup>rd</sup> year, 2<sup>nd</sup> semester  
Program: Aquaculture



Date: May 28, 2017  
Time: 2 hours  
Total marks: 50 mark  
Academic number:  
Student name:

Q. I. (30 mark)

A. Complete the following sentences: (10 marks, 2 for each point)

- 1- .....is the habits and costumes of fish.
- 2- ..... is responsible for the degree and strength of response.
- 3- ..... is male swimming merry around female and exhibits his brilliant colours.
- 4- ..... is an increase in behavioural response due to fearful stimuli.
- 5- Feed deprivation should be done before transportation of adult fish by .....hours.

B. Compare between each of the following: (10 marks, 5 for each point)

- 1- External and internal stimulus.
- 2- Sexual maturity in Nile tilapia reared in lakes and ponds.

C. Write short notes on each of the following: (10 marks, 5 for each point)

- 1- Operant conditioning.
- 2- Importance of Shelter-seeking behaviour.

Q. II. (20 mark)

A. Answer the following with (v) or (x) and correct the wrong one: (10 marks, 2 for each point)

1. Behavioural ecology aimed to enhance the survival of fries ( ).
2. Sharks and tuna can control their body temperature ( ).
3. Isolation has no role in expression of inherited behaviour of fish ( ).
4. Demersal fish seldom leave sea bed to the center or surface water ( ).
- 5- Territorial aggression resulted in intersexual selection between females ( ).

B. Please, read the following and answer the questions: (10 marks)

You are admitted to visit an aquarium; the fish showed that some fishes swim in an oblique position with head directed to tank bottom. Some other fishes showed swelling in abdominal region.

- 1- What is the expected problem? (4 marks)
- 2- Mention the causes of such problem. (4 marks)
- 3- Provide the lines of remedy for such problem. (2 marks)

ALL THE BEST

Radi A. Mohamed

R. A. Mohamed



## Final Exam

Time: 2 hours

Full marks (50 Points)

Answer the following questions:

Q # 1. (12 Points; 4 points each)

Describe in details the following three ways of estimating total stock size:

1. Sampling surveys, 2. Mark recapture studies, 3. Depletion method

Q # 2. (8 Points)

Compare Fishery dependent and Fishery independent data in fishery biology regarding:

1- Quality,

2- Quantity

3- Cost,

4- Which one should be used for better fisheries management:

Q # 3 (5 points)

CORRECT the FALSE facts below based on following relation of prawn total length and carapace length

$$TL = 19.3 + 4.435 (CL)$$

a- The slope, or gradient, of the regression line reflects the fact that total length increases 19.3 times with every unit increase in carapace length.

b- The value of the intercept is not equal to zero, which means that the two length measurements are proportional over the whole size range of prawns.

Q # 4. (25 points; 5 points each)

Write short notes about "ONLY FIVE" of the following:

1- Ford Walford plot

2- Modal progression analysis

3-  $L_{\infty}$  in Von Bertalanfy growth model and ways to estimate it

4- Disadvantages of marking re-capture experiments

5- Disadvantages of length frequency distribution as index of growth

6- Hard parts on which growth lines can be found in different organisms

7- Types of "Tags" used in mark recapture studies

Good Luck

**Please answer the following questions: (50 marks).**

❖ **First question (15 marks):**

**A: Defined the following terms (5 marks).**

- 1- Hydrology    2- Triploblastic animals    3- Gill rakers  
4- Omnivorous fish    5- Potadromous fish

**B: Put a True or False by the statements with error correction (10 Marks)**

- 1- Aristotle called the "Father of modern taxonomy." ( )  
2- The most common forms in fish is spin shape ( )  
3- Teeth are well developed in herbivorous fishes ( )  
4- 5-7 gills are found in teleosts (bony) fishes ( )  
5- Closed type of circulatory system is found in fishes ( )  
6- Cartilaginous fish are ureotelic animals and store low levels of urea in their blood. ( )  
7- The majority of living fishes are bony fishes ( )  
8- Mirror carp is the result of a mating between Scaly carp and Stripped carp ( )  
9- Tilapia fish have a low tolerance for oxygen deficiency ( )  
10- Positive movement of fish caused by the current water ( )

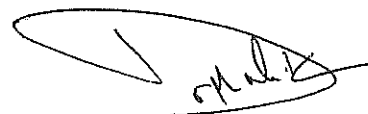
❖ **Second question: (20 marks).**

- A- Importance of Ampullae of Lorenzini ?  
B- Fish farms specifications:  
C- Scientists put some theories to explain migration, what is it?  
D- Biological factors that stimulate fish to emigrate?

❖ **Third question: Explained by only drawing with writing data (15 marks).**

- A- Different types of Fins?  
B- Different types of Scales?  
C- The heart of shark?

With my best wishes  
Prof. Dr. Malik M. Khalafalla





Answer The Following Questions: ديناميكا التلوث البحري المستوى الرابع

1- Explain the role of non spot contamination in marine.

(10 marks)

2- Declare the risk of following activities in marine contamination:

(10 marks)

- A) Shipping
- B) Mariculture
- C) Offshore oil and gas exploration and production

3- Write short notes on:

(15 Marks)

- A) Dead zones
- B) Chemical contamination in marine ecosystem
- C) Risk of oil in marine ecosystem

4- Define how following factors can affect the microbial ecology in marine water: (15 Marks)

- A) Adhesion and Sedimentation
- B) Predators
- C) Sunlight
- D) Turbulence
- E) Toxic substances

**GOOD LUCK**

Professor Doctor/ Wael El-Tras



الامتحان للامتحان  
المتخصص الرابع

**Answer The Following Questions:**

1- Explain the classification of zoonoses.

(10 marks)

2- Define the following terms:

(10 marks)

- A) Health
- B) Morbidity
- C) Environment
- D) Epidemiology
- E) Components

3- Declare the possible role of fish in transmitting the following zoonotic pathogens:

(15 Marks)

- A) Heterophyes Heterophyes
- B) Brucella spp.
- C) Leptospira spp.

4- Explain how to control the following zoonoses:

(15 Marks)

- A) Clonorchiasis
- B) Brucellosis in cat fish
- C) Leptospirosis

**GOOD LUCK**

Professor Doctor/ Wael El-Tras

*Wael El-Tras*



**Answer The Following Questions:**

التعليق الميكروبيولوجي للمياه ومياه الصرف  
المستوى الثاني

1- Enumerate the factors affecting presence of infection.

(6 marks)

2- Declare by diagram only the cycle of transmission of:

(20 marks)

- A) Diphyllbothrium Latum
- B) Heterophyes Heterophyes
- C) Schistosoma spp.
- D) Anisakis

3- Define how the following water microbes can be transmitted:

(12 Marks)

- A) Giardia Lamblia
- B) Brucella spp.
- C) Leptospira spp.

4- Explain how to control the following water microbes:

(12 Marks)

- A) Hepatitis A virus
- B) Leptospira spp.
- C) Giardia Lamblia

**GOOD LUCK**

Professor Doctor/ Wael El-Tras

*Wael El-Tras*





٣- د/ منال فهمي

٢- د/ أحمد مصطفى

١- أ.د/ عادل إبراهيم

أجب عن الأسئلة التالية :-

السؤال الأول:-

الدرجة ( ٢٠ )

أذكر فقط في نقاط محددة:

- ١- خصائص التعليم الإرشادي.
- ٢- التصنيفات المختلفة للأهداف الإرشادي.
- ٣- التغيرات التي يحدثها الإرشاد السمكي في سلوك المسترشدين.
- ٤- أسس ومبادئ عمل الإرشاد السمكي.

السؤال الثاني:-

الدرجة ( ٢٠ )

وضح بالرسم كامل البيانات:

- ١- نموذج بيسون لتخطيط البرامج الإرشادية السمكية.
- ٢- عناصر عملية الاتصال الإرشادي.
- ٣- دورة حياة أي فكرة أو منتج جديد.
- ٤- توزيع فئات التبنّي.
- ٥- تصنيف الطرق والمعينات الإرشادية.

السؤال الثالث:-

الدرجة ( ٢٠ )

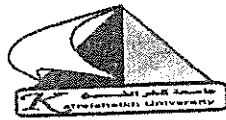
وضح ما يلي :

- ١- أنواع القادة في الإرشاد السمكي، مع ذكر الطرق المتبعة في اكتشاف القادة وأيها أفضل من وجهة نظرك.
- ٢- مبررات وجود الإرشاد الزراعي الإلكتروني.
- ٣- كيفية قياس الاحتياجات التدريبية.
- ٤- أسباب رفض أو عدم استمرار تبني المبتكرات الحديثة.

مع أطيب التمنيات بالتوفيق والنجاح ،،،،،،،،،،

توقيع لجنة الممتحنين

امتحان تطبيقي



Kafrelsheikh University  
Faculty of Aquatic and Fisheries Sciences  
Subject: Applied Statistics

Date: 24 - 5 - 2017  
Full Mark (50)

Time allowed: 2h  
Third Level  
Final Exam: 2 pages

**Answer the following questions:**

(1)(a) Suppose we have a population consisting of the ages of five children who are outpatients in a community mental health center. The ages are as follows: 3, 5, 7, 9, 11. Construct the sampling distribution of  $\bar{x}$  based on samples of size two selected with replacement then find the mean and the variance of the sampling distribution of means.

(b) We wish to estimate the average number of heart beats per minute for a certain population. Suppose we select a simple random sample of 49 subjects. If it is reasonable to assume that the population is normally distributed with  $\sigma = 10$ , Construct (i) 95 (ii) 99 percent confidence interval for  $\mu$  given that the average number of heart beats per minute ( $\bar{x}$ ) for the sample is 90. (iii) Explain the difference in the confidence intervals calculated in (i) and (ii).

Values of  $z_c$  corresponding to various confidence levels

Confidence level	99.73%	99%	95%	90%
$z_c$	3	2.58	1.96	1.645


(c) A simple random sample of 8 apparently healthy subjects yielded the following values of urine excreted arsenic (milligrams per day).

Subject	1	2	3	4	5	6	7	8
Value	7	3.5	8.6	15.8	14.7	7.8	0.5	4.2

Construct a 95 percent confidence interval for the population mean.

Probabilities Under the t-Distribution Curve

df \ c.l	1	2	3	4	5	6	7
95	12.706	4.303	3.182	2.776	2.571	2.447	2.365
99	63.657	9.925	5.841	4.604	4.032	3.707	3.499

Kafr elsheikh university		Subject : meteorology
Faculty of aquatic and Fisheries sciences		Date: 24/5/2017
50 marks	2016-2017	Level : 1

**Answer the following questions:**

- **First question: ( 25 Degree ) Write short paragraph in Following Points:**

1. Latitudes
2. insolation intensity
3. diffused solar radiation
4. Campbell-Stokes Sunshine Recorders
5. The Fahrenheit scale
6. Minimum thermometers
7. Torricelli barometer
8. Beaufort wind scale
9. pressure gradient
10. Air mass and Air Fronts

- **Second question: ( 25 Degree ) Complete the Following:**

- 1-Earth Rotation refers to .....and direction of rotation.....?
- 2- The amount of scattering is dependent on two factors: .....?
- 3- .....used to measure global solar radiation falling on a horizontal surface?
- 4- ten Celsius equal to ..... Fahrenheit , equal to ..... Kelvin?
- 5- Alcohol thermometers freezing point .....degrees Celsius ?
- 6- A maximum thermometer has .....in the capillary tube, Minimum thermometers has .....in the spirit column?
- 7- received solar insolation are driven by variations in ..... and .....?
- 8- standard sea-level pressure is said to be ..... cm or ..... inches or ..... millibars , Scientists often use ..... as their preferred unit for measuring pressure?
- 9- ..... is The most common type barometer used in homes, Inside this instrument is ..... called an ..... cell , the small changes in outside air pressure cause the .....?
- 10- ..... A device with three or four open cups attached to ..... spinal.
- 11- .....and.....and....., affecting the movement of wind?



**Physiology of Aquatics exam. For 2<sup>nd</sup> academic year students 22/5/2017.**

\*\*\*\*\*

Answer all questions

**I- In detail explain the mechanism of :- (9 marks)**

- 1- Gas exchange in gills of tilapia?
- 2- Sex reversal in guppy?
- 3- Molting in shrimps?

**II- What are the hormones regulating:- (6 marks)**

- 1- Osmoregulation in marine water fish?
- 2- Calcium level in catfish?

**III- What are the functions of :- (9marks).**

- 1- Kidneys in mullet?
- 2- Granulosa cells in mature ovarian follicles?
- 3- CCK in digestion of trout?

**IV- How can you differentiate between (in a table):- (6 marks)**

- 1- Mature male and female red cherry shrimp.
- 2- Male genital organs in catfish and shark

**V- Why (6 marks)**

- 1- Prawn losses large number of their eggs.
- 2- Sharks are exclusively marine fish.

**VI- Correct the wrong sentence provided the underlined words are correct. (14marks).**

- 1- Catfish has operculum to close its mouth.
- 2- Shrimp has exoskeleton to support its body.
- 3- Gills have excretory function in fish.
- 4- Kidney has hematopoietic function in rays.
- 5- Haemolymph is a fluid in crabs equivalent to blood in vertebrates.
- 6- Hemocytes are immune cells in fish.
- 7- Chitinase enzyme presents in herbivorous fish.
- 8- Thyroid gland's activity increases with elevating water temperature.
- 9- Barbles have chemoreceptors to detect taste of food.
- 10- Lateral line detects salinity of water.
- 11- Optic lobe of brain is well developed in fish depends on smell for hunting.
- 12- Delle functions to store sperms in oviparous fish.
- 13- Ovulation in fish depends on prolactin and testosterone.
- 14- AVT has reproductive and osmoregulatory functions in fish.

\*\*\*\*\*

Best Wishes, Prof. Dr/ Michel F. Saad



### Instructions

- 1- Please answer all questions
- 2- Diagrams must be drawn wherever necessary
- 3- Figures mentioned on the right indicate full marks

### Question (1)

( 20 degrees)

- a) Mention the most important properties of the eukaryotic cell membrane (biomembrane)
- b) Explain the three pathways by which materials are moved to lysosomes. (use diagram).

### Question (2)

(15 degrees)

- a) Describe the function of the microtubules.
- b) Discuss the role of chemical synapse in impulse transmission.

### Question (3)

(15 degrees)

- a) explain the bacterial transformation as a way of transmitting genetic material.
- b) Discuss the differences between Embryonic stem cells (ESCs) and Tissue-specific Stem cells.

Good Luck to all of you

Answer The Following Questions:

- 1- Enumerate the bacterial diseases affecting cultured aquatic invertebrates describing the diagnosis of one of them in details. (10 marks)
- 2- Write short notes on: (20 marks)
- A) Phenoloxidase enzyme as a humeral immune response of shrimp.  
B) Red disease.  
C) Clinical sings of Epicommensal Fouling disease.  
D) Mycobacteriosis.  
E) Cellular immune response of Shrimp.
- 3- Differentiate between: (10 Marks)
- A) White spots on IHHN virus and baculovirus.  
B) Stages of Taura syndrome.
- 4- In adult *P. monodon* form, there is cessation of feeding with aggregation of shrimp at the pond edge and hepatopancrease become discolored with mass mortality. (10 Marks)
- A) What is your diagnosis?  
B) How to confirm your diagnosis?  
C) What are the control measures for this disease?

GOOD LUCK

Professor Doctor/ Wael El-Tras



بيوتكنولوجيا القمار  
السؤال الرابع

**Course: Food Biotechnology**

**Level: 4 Sp. Fish Processing and Biotechnology**

**Allowed time: 2 hour**

**Date: 22 / 5 / 2017**



جامعة كفر الشيخ  
كلية علوم الثروة السمكية و المصايد

**Final Exam**

**Answer the following questions**

**First Question: (10 marks)**

A- What are the plasmids? Illustrate the particular necessary features for plasmid to act as a cloning vector

B- Mention briefly the steps of polymerase chain reaction (PCR) cycles.

**Second Question: (15 marks)**

Give short accounts to clarify the following questions:

1. How long has food biotechnology been in existence?
2. What are the different techniques associated with food biotechnology?
3. What food products have been or are being developed with biotechnology?
4. How does FDA review products developed through food biotechnology?
5. How does the EPA regulate food developed through biotechnology?

**Third Question: (10 marks)**

Discuss the applications of genetically modify food, why human could need them? and what are the potential problems that could resulted from them?

**Forth Question: (15 marks)**

- 1- Discuss briefly the concepts of Probiotic – Prebiotic – Nutraceutical.
- 2- What are the main advantages of natural food preservatives over synthetic and chemical agents? and what the general requirements for use of naturally occurring antimicrobial substances as food preservatives?
- 3- Indicate (in points only) the main applied natural food preservatives from Plant- Animal and Microbial origins.

Good luck and Happy Graduation

Prof. Ahmed A. Tayel

كوفه سو لستة



Kafrelsheikh University  
Faculty of Aquatic and Fisheries Science  
Department of Nutrition & Aquaculture  
Fish nutritional disorders exam

23 January, 2017 Time allowed: 2h full marks: 50 Number of pages: one

Please answer the following questions:

**I-Mention the nutritional risk factors for the following: (20 marks, 4 each):**

1. Mycotoxins occurrence in fish diets
2. Rancidity of fish feed
3. Fatty liver in fish
4. Lower feed intake
5. Skin abrasions

**II-How could you diagnose and manage the following nutritional problems? (15 marks, 5 each)**

1. Mycotoxins in fish farm
2. Poor FCR
3. Skeletal problems

**III- Describe the associated problems of the following (15 marks, 3 each)**

1. Vitamin A deficiency
2. Methionine deficiency
3. Trypsin inhibitors
4. Phytic acid
5. Gizzerosine

With best wishes

Prof. Dr. Abdelnasser Bakr



*Handwritten signature*

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences  
Department of Aquaculture

Subject: Feed Manufacturing Technology  
Time: 2 hours  
Date: 23/1/2017  
Level: Two



Final exam during academic year 2016/2017

Please answer the following questions: (50 marks).

❖ First question: Complete the following sentences(15 marks):

- 1- The major components of feedstuffs are .....
- 2- ..... and ..... are generally the major mineral components in feedstuffs of animal origin.
- 3- Vitamins are generally defined as .....
- 4- Energy can be defined as the .....
- 5- Fish meals are often overcooked, causing ..... or undercooked, causing .....
- 6- Methods of feed manufacture can be divided into: .....
- 7- Two of the problems in sun-drying are that .....
- 8- Different steps to manufacturing compound feed were .....
- 9- Several acids can be used to make fish silage.....
- 10- When making fish silage Ph should be between .....

❖ Second question: (15 marks).

- A- What is the most necessary information needed to diets formulation?
- B- Physical and chemical attributes of a good feed?
- C- What are the Major factors which effect on the quality and weight of feedstuffs during storage?

❖ Third question (10 marks)

- A- Make a diet containing 25% crude protein for Nile tilapia fish with the availability of the following components: fish meal & soybean meal & yellow corn & wheat bran & rice bran.
- B- What are the pros and cons of making silage?

❖ Forth question (10 marks): Explained by only drawing with writing data.

- A- Energy transformations and losses in fish.
- B- Simple system for the manufacture of fish silage.

With my best wishes

Prof. Dr. Malik M. Khalafalla

*Handwritten signature of Prof. Dr. Malik M. Khalafalla*



Please answer the following questions: (50 marks).

❖ First question: Complete the following sentences (15 marks):

- 1) Fish were the first ..... to appear.
- 2) All the cartilaginous fishes are .....to the marine life.
- 3) Fish use ..... instead of lungs.
- 4) Fishes such as .....are used to extract oil from their liver.
- 5) FAO: .....
- 6) Aquatic animal food products are a richer source of .....and .....
- 7) Total world Fisheries in 2014 was ..... ten and per capita food supply was ..... kg/y.
- 8) The Arab States combined have more than ..... km of shoreline and ..... km of continental shelf area
- 9) Most of the Arab States capture fish production is attributed to .....
- 10) Oceans occupy .....% of the Earth's surface.

❖ Second question - Writing about : (20 marks).

- A) Risks and benefits of fish consumption?
- B) Contribution of Fish to reduce child mortality?
- C) Reasons for increased global fish production during the recent five decades?
- D) Challenges to the post-harvest sector?
- E) Marine resources in the Arab region?

❖ Third question (15 marks): Explained by only drawing with writing data.

- A) Evolution of Fish.
- B) Impact of hunger and malnutrition on society.
- C) World capture fisheries and aquaculture production.

With my best wishes  
Prof. Dr. Malik M. Khalafalla



أجب عن الأسئلة الآتية:

السؤال الأول:

ما هي شروط الواجب توافرها في كل من:

- ١- البحث الجيد .
- ٢- العنوان الجيد .
- ٣- الاقتباس في البحث العلمي .
- ٤- الشكر في البحث العلمي .
- ٥- الباحث الجيد .

السؤال الثاني:

أ - ماهي أهم الخطوات المنهجية للبحوث العلمية ؟

ب- اذكر مع التوضيح الاعتبارات الأخلاقية للبحث العلمي .

ج- عرف البحث التجريبي وماهي أسباب استخدامه ؟

السؤال الثالث:

أ- إلى ماذا تهدف الدراسة الاستطلاعية عند إعداد بحث علمي ؟

ب- قارن بين تشكيل لجان الأخلاقيات التابعة لمؤسسات البحث العلمي ومهامها - وتشكيل اللجنة الدولية لأخلاقيات البيولوجيا التابعة لمنظمة اليونسكو ومهامها .

السؤال الرابع:

أ- ناقش العلاج باستخدام الخلايا الجزعية وموقف القوانين الدولية والدين الإسلامي والأديان السماوية منها .

ب- اذكر كيفية التخلص غير الآمن من النفايات المعملية وأثرها على البيئة .

خالص الأمنيات بالنجاح والتوفيق

د/ إبراهيم محمود المحسب

*Kafrelsheikh University  
Faculty of Science  
Chemistry Department*

علم النانو تكنولوجي  
*Subject: Nanotechnology  
Time: 2 hours  
Level: Three*



**Final Exam for Nanotechnology Academic year 2016/2017**

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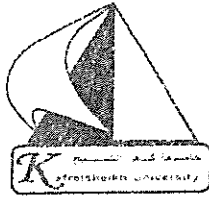
**Answer the following questions:**

- 1- Put true or false and correct:
  - a- Nanomaterials have unique optical and electrical properties due to .....effect, while the chemical reactivity is due to .....ratio.
  - b- Nanocoating technique has wide applications in .....and .....
  - c- The different colors of the gold nanoparticles could be due to.....
  - d- The charge localized at the particle surface gives rise to .....properties.
- 2- Discuss the optical properties of nanomaterials.
- 3- Write on Sol-Gel method as an appropriate technique to prepare nanomaterials in different forms.
- 4- The diffraction pattern of Silver metal was measured with x-ray radiation of wavelength of 1.315 Å. The first order Bragg diffraction peak was found at an angle  $2\theta$  of 50.5 degrees. Calculate the spacing between the diffracting planes.

*With my best wishes*

*Dr. Hamdy El-Sheshtawy*

Kafr El-Sheikh University  
Faculty of Fisheries  
First Year  
Subject: English  
Name: .....



Date: 18/01/2017  
Time Allowed: 2 Hr  
Total Mark: 60  
Final Exam, 1 Page  
Academic Number: .....

**I-Answer the following questions:**

- 1-What are the two types of whales?
- 2-How do sharks keep the ocean clean?
- 3-Why do we consider Dolphin as intelligent animals?
- 4-What is democracy?
- 5-What is Geology?

**II-Fill in the blanks with suitable words:**

- 1-An occasion when a teacher or expert and a group of students meet to study and discuss something is called a .....
- 2-A ..... refers to an autocratic form of government in which the government is ruled by an individual.
- 3-A scientist who studies plants is a .....; one who studies animals is a zoologist.
- 4-.....is concerned with what cells are made of.
- 5-.....is concerned with how the unborn things develop.
- 6-" Can't complain" is used to as a reply to .....
- 7- In telling the time, the classical way for 2.25 is.....
- 8-"I was stunned by" is used to express.....
- 9- Blue whales eat tiny creatures known as .....
- 10-Dolphins are social animals, living together in groups called.....

**III-Correct the verbs between brackets:**

- 1-After he (commit) the crime , the criminal (try) to escape.
- 2-She is the (important) person in the selecting committee.
- 3-If she had taken care of her son, he (not/become) a criminal.
- 4-Did you pay the bill? No, I not (pay) it yet.

**IV- Translate the following text from English into Arabic:**

Zoology is the study of animals. For a long time, animals were classified as any living organism that could not be included in the plant kingdom. Today they are considered to be those organisms which cannot be classified into any of three other kingdoms as well: the Monera, Protista, or Fungi. Anatomy is the study of the structure of a single animal species, such as humans; the study of the internal structures of groups of species is referred to as comparative anatomy.

**V- Write on ONE only of the following:**

- 1-Your name is Tom Smith. Write a resume for yourself applying for a job in your career.
- 2-Write a paragraph about an animal that lives in the ocean. What does this animal look like? Where does it live? What does it eat?

**Best of Luck**

**Dr Ayman Elhalafawy**



**Q. I. (20 mark)**

**Q-I-A- Answer the following with (✓) or (x): (10 marks, 2 for each point)**

- 1-Heteroclaris reduce cannibalism in cat fish ( ).
- 2- Sex separation is essential for successful breeding of common carp ( ).
- 3-Tilapia fry larger than 14 mm is not suitable for monosex process ( ).
- 4-Floating hapa is better than double-walled hap ( ).
- 5-Short photoperiod may delay the sexual maturation in fish ( ).

**Q-I-B- Compare between each of the following: (10 marks, 5 for each point)**

- 1-Male and female catfish
- 2-Homoplastic and Heteroplastic injection of pituitary extract

**Q. II. (30 mark)**

**Q-II-A- Complete the following sentences: (10 marks, 2 for each point)**

- 1-The optimum temperature for induced breeding of major carp is.....
- 2-The common carp fertilised egg is.....colour.
- 3- Sexually active tilapia is characterised by .....dorsal fin.
- 4-Fish vitellogenesis is inhibited under high level of.....
- 5-Breeding of injected fish with uninjected one called.....

**Q-II-B- Write short notes on the following (10 marks, 5 for each point)**

- 1- Rearing of Pangasius fry from 0:4 weeks.
- 2- Mode of action and pathway of Linpe method. (Diagram only)

**Q-II-C- Please, read the following and answers the questions: (10 marks)**

You are admitted to examine shipment of imported fish fry. The fries are of different size and species (catfish, major carp and minor carp).

- 1- What is the collection source of these fries (natural or artificial)? (2 M)
- 2-Are these fries the most suitable one for aquaculture? Why? (4 M)
- 3-How can you differentiate between these fries (catfish, major and minor carp)? (4 M)

*All the best*

أ. أحمد كفر الشيخ

Course: Food Safety

Level: 4 Sp. Fish Processing and Biotechnology

Allowed time: 2 hour

Date: 2/ 1 / 2017

Final Exam



جامعة كفر الشيخ  
كلية علوم الثروة السمكية و المصايد

Answer the following questions

First Question: (10 marks)

Mention briefly (in points) the different types and examples for the hazards that could be found in food.

Second Question: (15 marks)

- A. What are the major components for the establishment of good hygienic practice (GHP) system in the food industry?
- B- Illustrate in brief the main principles of the Hazard Analysis Critical Control Point (HACCP) system.

Third Question: (10 marks)

Exemplify (in a table) the types, causative agent and symptoms of marine biotoxins, which could be found in the seafood.

Forth Question: (15 marks)

How could you differentiate between Food borne infections and Food borne intoxications cases? Point out the main causes for Food borne infections and discuss in detail the main characteristics, clinical symptoms and transmission of two bacterial organisms from them.

Good luck and best wishes

Dr. Ahmed A. Tayel



**Question 1:**

**(6 marks, 2 each)**

Briefly, answer the following questions:

1. What are the factors that can disrupt the lake's successional cycle?
2. Describe the age of pond senescence?
3. About 50 kg of insects, crayfish and small fish are required to produce 5 kg of bluegill sunfish; and about 4 -5 kg of bluegill sunfish are required to produce 0.5 kg of largemouth bass. What is the reason?

**Question 2:**

**(10 marks, 2 each)**

Put (✓) on the right sentence and (X) on the wrong one.

1. The TEMPERATE regions lie between  $30^{\circ}$  N and  $60^{\circ}$  N in the Northern Hemisphere and between  $30^{\circ}$  S and  $60^{\circ}$  S in the Southern Hemisphere. ( ).
2. The SUBTROPICS lie between  $0^{\circ}$  equator and  $30^{\circ}$  N in the northern hemisphere, and between  $0^{\circ}$  and  $30^{\circ}$  S in the southern hemisphere. ( ).
3. Producers occupy different trophic levels in the food web. ( ).
4. Primary consumers are carnivorous. ( ).
5. Carrying capacity is the minimum stable population size that a particular environment can support over a relatively long period of time. ( ).

**Question 3:**

**(14 marks, 2 each)**

Define the followings:


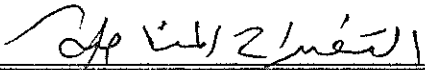
1. ORGANISMAL ECOLOGY.
2. COMMUNITY ECOLOGY.
3. LANDSCAPE ECOLOGY.
4. GLOBAL ECOLOGY.
5. PRIMARY PRODUCTION.
6. LIMITING FACTOR.
7. COMPETITIVE EXCLUSION PRINCIPLE.

**Question 4:**

**(10 marks)**

Calculate the expected number of births and deaths in a population of 2000 Tilapia fish if the per capita birth and death rates are 0.055 and 0.022 respectively and calculate its rate of growth?



Kafr elsheikh university		Subject : climate change
Faculty of aquatic and Fisheries sciences		Date: 15/1/2017
50 marks	2016-2017	Level : 3 

**Answer the following questions:**

- **First question: ( 16 Degree )**

explain global warming results on the marine ecosystem ,Fisheries and aquaculture?

**Second question: ( 18 Degree )**

Write in Following Points:

- 1- Earth Rotation and Revolution.
- 2- Solar Radiation and Earth Albedo.
- 3- Solar constant .
- 4- Pressure gradient.
- 5- Temperature and Heat
- 6- Green house gases (GHG).

- **Third question: ( 16 Degree )**

explain the forces that can act on moving wind?



## Environmental chemistry

Day: Sunday, 15/01/2017 (1-3 hrs.) Time: 120 minutes

Max. Markers: 50

Dr. Mohamed A. S. Abdel-Razek, Dr. Moustafa S. SaadAllah and Dr. Asmaa M. Ragab

Just, answer five questions from the following in short:

1. Originally, the concept of environmental chemistry focused on, what are the points that focused on?
2. Only, by chemical equations, Explain "  $\text{NO}^*$  is easily photolyzed  $\text{O}_3$  and therefore its daytime concentration is very low"
3. Several individual or combined processes contribute to the presence of different species that affect the composition and properties of natural waters.  
Mention including examples?
4. Explain the biologically mediated processes and its Effects?
5. What are the major polluters in industrialized countries?
6. Just, Define five from the following scientific expression:  
(Mineralized – Bioaccumulation – Transformations – Metabolic Processes – Xenobiotic - Brackish/Saline water - Dissolved oxygen - Toxicant – Toxin - Poison)
7. Define biodegradation of chemical pollutants? And explain in points, How does it happen?

Best Wishes



كسب، فنرا اليه

**Answer the following questions (each 10 marks)**

- (Q1) Define the following: (i) Boyle's law, (ii) Charles's law, (iii) Dalton's law, (iv) Graham's law, (v) Henry's law.
- (Q2) Define the following terms: (i) Sublimation, (ii) Deposition, (iii) Closed system, (iv) Open system, (iii) Molality.
- (Q3) A certain gas has a molar mass of 28.0 g/mol. How many grams of this gas would fit in a 3.00 L container at 182 kPa and 47.2 °C?
- (Q4) What is the density (in g/L) of a sample of SO<sub>2</sub> at 932 mmHg and 65 °C?
- (Q5) How many moles are in 3 Liter of 2 M solution of NaCl?

*(Good luck)*

تكنولوجيا مياحي طعام

**Course: Food Inspection Techniques**

**Level: 4** Sp. Fish Processing and Biotechnology

**Allowed time: 2 hour**

**Date: 16/ 1 / 2017**

**Final Exam**



جامعة كفر الشيخ  
كلية علوم الثروة السمكية و المصايد

**Answer the following questions**

**First Question: (15 marks)**

A. Implementation of a quality and safety management system by the food business is an active managerial system. Emphasize the various areas and procedures of relevance to the safety and quality of their food products and/or establish specific requirements.

B- Define the following with regard to their usage in food inspection :

Inspection – High risk foods – Critical limits – Enforcement – Premises – Investigative inspection

**Second Question: (15 marks)**

Complete the empty places with the missing words.

1 - From the examples of food-borne diseases risk factors are:

- 1) ..... 2) ..... 3) ..... 4) .....  
5) ..... 6) ..... 7) ..... 8) .....

2- The ideal organization of the inspection should include the following

- 1) ..... 2) ..... 3) .....  
4) ..... 5) ..... 6) .....

3- The regulatory action plan lists the regulations that the establishment must comply with such as:

- 1) ..... 2) ..... 3) .....

4- Inspection of the facility involves the application of several techniques, as:

- 1) ..... 2) ..... 3) .....  
4) ..... 5) ..... 6) .....

5- The employees and staff assessment should focus on the following:

- 1) ..... 2) ..... 3) .....  
4) ..... 5) .....

**Third Question: (10 marks)**

The prerequisite plan consists of various aspects that some national legislative bodies group under “Good Hygienic Practices” (GHPs) and “Good Manufacturing Practices” (GMPs). Discuss briefly the general components and considerations of the prerequisite plan.

**Forth Question: (10 marks)**

Describe a Walk-through inspection process (for primary production facilities), indicating the general checkpoints to be inspected and their elements.

Good luck and best wishes

Dr. Ahmed A. Tayel

Kafrelsheikh University	Small Agricultural projects
Faculty of Aquatic and Fisheries Sciences	Second Year students
	Time:- 2 hours

Exam. Committee

Prof. Dr/ Mohamed Mohsen; Prof. Dr/ Mostafa Abdelrahman; Prof. Dr/ Fawzy Magouz

Please write short notes on only six of the following points:

- 1- Considerations that must be taken into account when choosing meet animals for fattening.
- 2- Features that are introduced by the animal insurance fund to the animal breeder
- 3- The general processes for fish cage management during the culture season
- 4- Administrative procedures for the establishment of marine floating fish cages
- 5- Composition of bee's honey
- 6- Summarize the common diseases of Muscovy ducks with consider to the cause, symptoms and preventions and treatment program.
- 7- The required notes for the success the Muscovy ducks project
- 8- Features of bee's breeding as an economic project

تفذية اليرقات

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences  
Department of Aquaculture

Subject: Aquatic Larval Feeding  
Time: 2 hours  
Date: 11/1/2017  
Level: Three



Final exam during academic year 2016/2017

Please answer the following questions: (50 marks).

❖ First question (10 marks):

- What is the central role of micro-algae in mariculture?
- What are advantages and disadvantages of the various algal culture techniques?
- What are the generalized conditions for culturing micro-algae?

❖ Second question: (15 marks).

- Bioencapsulation of live feeds?
- Growth phases of micro-algae cultures?
- Waste products from the food industry?

❖ Third question (Choose only four): (13 marks).

- Types of malformation in fish larvae?
- Factors affecting on levels of digestive enzymes in fish larvae?
- Conditions to be met in larval feed?
- Optimum conditions for rotifers growth?
- Physical properties for microparticulate diets?

❖ Fourth question (Choose only three): Explained by only drawing with writing data (12 marks).

- Live cycle of Shrimp.
- Effect of dietary peptides on sea bass larval development growth and malformation rate.
- Effect of dietary phospholipid (PL) on sea bass larval Survival rate.
- Feeding system for fish larvae.

With our best wishes  
Prof. Dr. El-Sayed B. Belal  
Prof. Dr. Malik M. Khalafalla

میکروبولوجی

Kafr El-Sheikh University  
Faculty of Aquatic and Fisheries Sciences

Subject: Microbiology

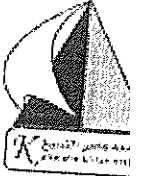
Time: 2 hours

Date: 11/1/2017

Level: One

First term exam during academic year 2016/2017

Full marks : 50 Pages : 1



**1-Complete the following:**

- 1) The bacterial growth phases are 1- ..... 2- ..... 3- ..... 4- ..... [ 10 Marks]
- 2) Viruses consist of a ..... core surrounded by a ..... coat
- 3) Types of Pili ( fimbriae ) according to their function are ..... and .....
- 4) Kinds of fungal hyphae are ..... and .....
- 5) ..... produce Motile Aeromans septicaemia.

**2-Choose the correct answer:**

- 1) Bacteria are ( Prokaryotes - Eukaryotes - Non cellular ) organisms . [ 10 Marks]
- 2) Bacterial cytoplasmic membrane is composed of ( Cellulose - Phospholipids and proteins )
- 3) Methanogens are ( Viruses - Archaea - Fungi ) .
- 4) Bacterial flagella are composed of protein called ( Albumin - Globulin - Flagellin ) .
- 5) Conjugation is a method of bacterial ( Gene transfer - Respiration - staining ) .
- 6) Bacterial capsule ( Decrease - Increase - Not affect ) the virulence.
- 7) Bacterial cell wall present in all bacteria except ( Yersinia sp. - Mycoplasma - Vibrio sp. )
- 8) Saprolegina parasitica is ( Gram positive - Gram negative - Fungal ) fish pathogen.
- 9) Fungi that produce sexual spores are ( Perfect - Imperfect - Dimorphic ) fungi.
- 10) Ascospores are type of fungal ( Endospors - sexual spores - Asexual spores ) .

**3-Write short notes on:**

- 1) Classification of bacteria according to Oxygen requirements. [4] [ 10 Marks]
- 2) Fungi general charcters. [3]
- 3) Bacterial chromosome . [3]

**4-Compare between the following:**

- 1) Pathogenicity and Virulence of bacteria . [5] [ 10 Marks]
- 2) Zygomycetes and Basidiomycetes . [5]

**5-Enumerate the following:**

- 1) Gram positive fish pathogen describing one of them in details. [5] [ 10 Marks]
- 2) Importance of fungi. [5]

With my best wishes

Dr. Essam El-Sherpieny

Kafrelsheikh University  
Faculty of Aquatic Sciences and Fisheries  
Course: Invertebrate Culture (0110110)  
Academic level: 4<sup>th</sup> year, 1<sup>st</sup> semester



Date: Jan 9, 2017  
Time: 2 hours  
Total marks: 50 mark  
Academic number:  
Student name:

Q. I. (20 mark)

Q-I-A- Answer the following with (✓) or (x): (10 marks, 2 for each point)

- 1- Crabs pre mating courtship occur between hard shelled male and soft shelled female ( ).
- 2- Spawning migration facilitates crustacean's seed production ( ).
- 3- Cannibalism may occur between shrimp nauplii in absence of food ( ).
- 4- Thelycum is present between pereopods IV & V in male prawn ( ).
- 5- Brood stock and larvae are reared in separate tanks in Japanese system of shrimp ( ).

Q-I-B- Compare between each of the following: (10 marks, 5 for each point)

- 1- Abdominal flap in male and female crabs.
- 2- Maturing and matured stage of shrimp testes.

Q. II. (30 mark)

Q-II-A- Complete the following sentences: (10 marks, 2 for each point)

- 1- The matured female shrimp has..... GSI.
- 2- The ready for spawning crabs ovary is..... colour.
- 3- The peak of natural breeding season of lobster occurs in.....
- 4- The optimum spawning temperature of bivalve is.....
- 5- The stimulus for courtship behaviour in *Penaeus species* is motivated by.....

Q-II-B- Write short notes on the following (10 marks, 5 for each point)

- 1- Swimming behaviour of shrimp mysis.
- 2- Ovarian maturation of crustaceans and its feedback mechanism (Diagram only).

Q-II-C- Please, read the following and answers the questions: (10 marks)

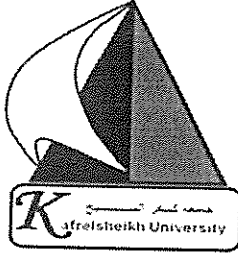
You are admitted to examine transported shrimp broodstock bags. Some shrimps showed good pigmentation while the others were laid on its side with lesions on exoskeleton.

- 1- What is the best stocking density in each bag? (2 M)
- 2- Are these shrimp suitable for direct release to hatchery (yes / no)? Why? (2 M)
- 3- How can you deal with shrimp with good pigmentation and that with lesions? (6 M)

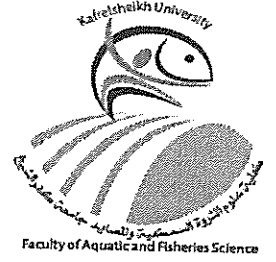
*All the best*



كوليد الامان



*Kafrelsheikh University*  
*Full marks:*  
*Faculty: Aquatic and Fisheries Sciences*  
*Date : Monday 09-01-2017*  
*Department: Fish Processing and Biotechnology*  
*Course Code : 0110211*  
*Subject: Basic Safety and Survival Training*  
*Code: 0110121*  
*Time Allowed: 2 hours*  
*Prof. Dr/ Ahmed Abdel-Dayem*



*No. of Exam Papers( 3 )*

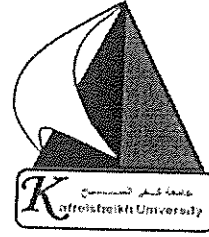
**ANSWER THE FOLLOWING QUESTIONS:**

**(A) Identify :**

- 1) Fire.
- 2) Hypothermia.
- 3) Combustible Material.
- 4) Garbage Record Book.
- 5) Ignition Point.
- 6) Initiating Safety.
- 7) Gillnetting.
- 8) Thermal Protective Aids.
- 9) Fire Detection System.

**(B) Give Short Notes:**

- 1) Safety Officer And His Responsibilities.
- 2) Reefer (Refrigerated) Ships.
- 3) Life Rafts Cover Requirements.
- 4) Intervention Convention.
- 5) Causes of Oil Pollution on the Ship.
- 6) Ship Board Emergencies.
- 7) Fire Tetrahedron (Pyramid)
- 8) How to Find Land
- 9) General Requirements for Life Boats.
- 10) Types of head protection Equipment.



Answer the following questions:

بيولوجيا التحياد المائي

**1. First question**

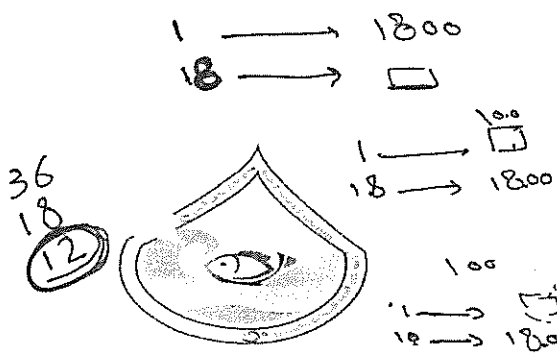
( 20 degrees)

- a- Deforestation is one of the most important threats to Africa's aquatic ecosystems. Explain.
- b- Mention the behavioral response of fish to low oxygen levels and explain the Winter Kill phenomena.

**2. Second question**

(30 degrees)

- a- What are the common traits of Aquatic Invasive Species (AIS)?
- b- Mention the principal pressures acting on aquatic biodiversity.
- c- Short notes on: - Overexploitation  
- Ghost fishing



Discuss  
 2.5 → 50cm  
 → 1800  
 5 → 200  
 → 1800



Faculty of Aquatic and Fisheries Sciences  
 Subject: Ornamental fish production (2016-2017)  
 Final-term Exam  
Answer the following questions:

Time allowed: 2 hours  
 36 / 2 = 18

1- A. Choose the correct answer;  
 If you have an aquarium of 60 x 30 cm offering 1800 cm<sup>2</sup> of surface area can hold (30 fishes of 2.5 cm, or 18 fish of 5 cm, or 10 fish of 7.5 cm size)  
 If you have an aquarium of 80 x 30 x 40 cm can use light intensities for about 10 hours (100 watt, or 180 watt, or 10 watt size)

B. Define the following terms:  
 Mop - Egg Scatters - Livebearers - Plecostomus

2- A. Write short notes on artificial foods of ornamental fishes? (10 degrees)

B. Explain briefly the basis of different ways of ornamental fish classification?

3- A. Discuss the factors causing natural Hatchery and Spawning? (14 degrees)

B. Find the odd word out and correct the following sentences:

- 1) Size of an aquarium is designed in such a way that depth will be twice as long as its length and height.
- 2) Goldfish-First ornamental fish to be kept, its bred in tropical waters.
- 3) Fighting fish is one of Egg buriers.
- 4) We must be placing each one male Koi Fish individual in the aquarium.
- 5) Angel fish need to high PH degree.
- 6) Molly and guppy are of Ovoviviparous.

4- A. Live foods do still have a number a specific uses in fish keeping. Discuss the statement? (14 degrees)

B. Complete the following sentences:

- 1- Filters are of three types: .....
- 2- The fry of Discus fish swimming near of the parents for .....
- 3- Sodium thio sulphate is used to .....
- 4- Arowana fish are .....
- 5- .....that is kept as pets in confined spaces of an aquarium or a garden pool with the purpose of enjoying their beauty for fun and fancy.

□ = عدد الـ 20  
 لـ 7.5  
 2.5 → 50cm  
 5 → 200  
 7.5 → 125

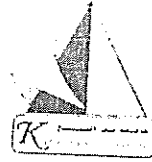
live food ← ...

1800  
 2.5cm → 1800cm<sup>2</sup>  
 □ → 1800

100cm  
 180  
 50cm  
 1 → 50cm  
 → 1800  
 □ → 1800 / 50

Good Luck

Substrate of ...



ر.د. وائل

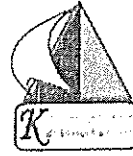
Answer The Following Questions:

- 1- Enumerate the principles of aquatic animals' quarantine. (10 Marks)
- 2- Mention the factors affecting aquatic animal's quarantine. (9 Marks)
- 3- Define the factors affecting the effectiveness of disinfectants. (6 Marks)
- 4- Give an example for assessing quarantine stringency "Preliminary Risk Analysis". (7 Marks)
- 5- Write short notes on: (18 Marks)
  - A) Period of Quarantine
  - B) Standards for Construction
  - C) Standards for Practices
  - D) Records

GOOD LUCK

Wael El-TRAS

Professor Doctor/ Wael El-TRAS



Kafrelsheikh Uni.  
Fac. Of Aquatic and Fisheries Science  
Level: 2  
Subject: Introduction to Food Science and Technology  
Name: Final exam during academic year 2016/2017

Date: 5/1/2017  
Time: 2 hours  
Total marks: 50  
Academic Number:

Board of examiners: Prof. Dr. Samir Metwally, Prof. Dr. Abd-Elbaset Salama, Prof. Dr. Amin K. Ammar.

Answer the following questions:

First question:

(20 marks)

A- Define:

Food – Food canning - Food drying - Stable foods.

B- Mention:

- 1- Function of food.
- 2- Causes of food spoilage.
- 3- Principles of food preservation.
- 4- Main steps of food canning.
- 5- General flow diagram in fish canning.
- 6- Examples of natural and chemical food preservatives.

Second question:

(10 marks)

A- Choose the correct answer:

- 1- Meats are rich in protein of (high or low) biological value.
- 2- Oilseeds are rich in energy and (water or fat) soluble vitamins.
- 3- Bacteria generally prefer (high or low) acid foods like (vegetable or fruits).
- 4- Reducing in moisture of dried foods will (increase or decrease) microbial activity of the product and increasing shelf life.
- 5- True yeasts fermented sugar producing alcohol and (oxygen or carbon dioxide) gas.

B- Mention the propose of:

- 1- Adding preservatives to food preservation.
- 2- Thermal processing in food canning.

Third question:

(20 marks)

A- Define:

British thermal unit (BTU) - latent heat of evaporation-  
Good manufacturing practice (GMP).

B- Complete the following sentences:

- 1- The intended use of the low temperature is to reduce the temperature of the material to food-grade heat which ..... and ..... of ....., ..... and ..... reactions.
- 2- There are three main ways of heat transfer are ....., ..... and .....
- 3- The steps to development a new foods are ....., ....., ..... and .....

C- Compare between:

- 1- Freezing and cooling.
- 2- Slow and quick (fast) thawing

*Dr. A. Salama*

,,, Good Luck ,,,

*Amin K. Ammar*



Please, answer the following questions:

Q1: Complete the followings: - (12 Marks, 3 each)

- 1-Fat composed of .....&.....&..... and.....
- 2-Scores of quality index method are .....&.....and.....
- 3-Biochemical tests for salmonella identification.....&.....&.....&.....and.....
- 4-Methods for detection of antibiotic residues .....and.....

Q2: Enumerate the followings: - (12 Marks, 3 each)

- 1-Factors affecting lipid oxidation and how to minimize this problem.
- 2-Types of proteins and sources of proteinases.
- 3-Postmortem changes in muscles.
- 4-Factors influencing biogenic amines formation.

Q3: write on the followings: - (16 Marks)

- 1-Cholestrol in fish and shell fish. (5 Marks)
- 2-Public health importance of *E.coli*. (5 Marks)
- 3-Effects of heavy metals consumption on human health. (6 Marks)

Q4: Point on the followings: - (10 Marks, 2.5 each)

- 1-Types of pathogenic bacteria found in fish.
- 2-Preparation of fish sample for bacteriological exam.
- 3-Sources of fish contamination with heavy metals.
- 4-Effects of using pesticides.

Good Luck  
Prof Dr. Nader Yehia Moustafa



مؤتمنة وكنترول ريبا اهلهم

Kafr El-Sheikh University

Faculty of Aquatic and Fisheries Sciences

Final Exam

Academic Year: 2016-2017

Board Exam

Subject: Fishing Gear Technology

Time allowed: 2 hours

Level : 3

Answer the following questions:

(50 marks)

1- A- Define the following terms:

(20 marks)

- |               |                   |                 |
|---------------|-------------------|-----------------|
| 1) Mesh lumen | 2) Fishing Tackle | 3) Fisheries    |
| 4) Denier     | 5) Soaking time   | 6) Oscillotaxis |

B- Non-biodegradable could be considered also as a disadvantage of synthetic fibers. Explain how and how to overcome.

2- A- Draw a sketch of a gill and trammel net construction (18 marks) and discuss how they catch fish.

B- Write a short note on Vigneron Dahl system.

3- Match between column "A" and its suitable sentence in column "B".

Column A

Column B

(12 marks)

- |                   |   |
|-------------------|---|
| 1) Troll lines    | protects hooks from being lost due to fish bite |
| 2) Floats         | vertical hanging coefficient                    |
| 3) Rotting        | hook measuring unit in Japan                    |
| 4) E <sub>1</sub> | natural fiber decay                             |
| 5) Sun            | more selective                                  |
| 6) Snood wire     | have positive buoyancy forces                   |
|                   | non selective                                   |
|                   | primary hanging ratio                           |

Good Luck

A. Prof. \ El-Azab Badr

**(C) Complete The Following Sentences:**

1- Safety Committee (Council) on the ship consists of .....,  
and .....

2- Safety regulations on the ship are:

- a- .....
- b- .....
- c- .....

3- Human negative effects on the environment are:

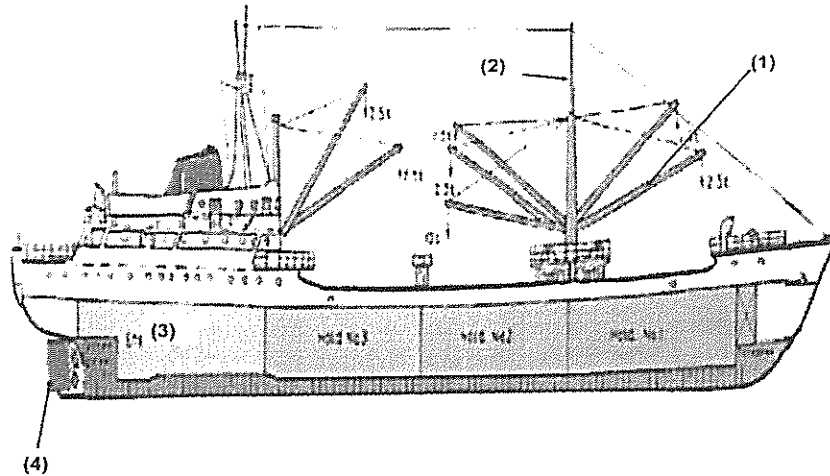
- a- .....
- b- .....

4- Types of Seining ....., and .....

5- The amount of Freshwater in Life Raft should be ..... liters for each person while in Life boat should be ..... Liters for each person

6- Pyrotechnic are ....., and .....

7- Carbon dioxide is used to extinguish ....., and ..... fires



8-

In this ship:

- (1) .....
- (2) .....
- (3) .....
- (4) .....



9- ....., .....and  
..... are Visual Signals used as Distress signals.

10- Water isn't effective in fire cases of class.....and .....

**(D) Put True (or) False Sign With Correction:**

- 1- Egypt is always selected in category (b) at IMO council ( )
- 2- The mass of Lifebuoys must not reach over 2 kg to be sufficient to operate the quick release arrangement for self-activating smoke signal and self-igniting light. ( )
- 3- The Rocket Parachute Flare shall, when fired vertically, reach an altitude of not less than 200 m ( )
- 4- Free-Fall Lifeboats should have water spray system ( )
- 5- Foams are effective in metals and food liquids ( )
- 7- Oxidation is an endothermic reaction between Matter and Oxygen causing temperature rise ( )
- 8- The Helmet consists of one piece without soldering ( )
- 9- Gasoline is Categorized in class (B) according to INTERNATIONAL ORGANIZATION FOR STANDARDIZATION ISO STANDARD 394 ( )
- 10- IMO still applied SOLAS 60 until now ( )

Best of Luck

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**Final Exam**

الامتحان النهائي

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**Exam committee : Prof.Dr. M.Mohye Eldien Saffam, Prof.Dr.Mohamed Abo Waly, and Dr.Farahat Moghanm**

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**Question one : (10 marks)**

**Explain what ids meant by :**

- Hydrologic cycle
- Biodegradation
- Water aesthetic parameters
- Water hardness
- pH of water
- Essential nutrient elements
- Soil fraction
- Soil texture
- Soil structure
- soil tillage

**Question two : (10 marks)**

**Explain the difference between each of the following :**

- Saturated zone & unsaturated zone
- Domestic wastewater & municipal wastewater
- Well & piezometer
- Hydraulic head & direction flow
- Point sources & nonpoint sources
- Quality control & Quality assurance
- Hydration & Hydrolysis
- Water-based diseases & Water-related insect vectors

**Question three : (10 marks)**

**Write short notes one the objects below :**

- Ground-water flow systems
- Management of water resources
- Soil factors affecting pesticide transport to ground water
- Biochemical oxygen Demand
- 2 : 1 clay minerals

**Question four : (10 marks)**

**Give evidence of :**

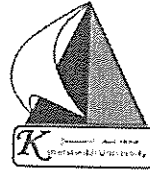
- Water polarity
- Maximum water density is at 4 C°
- Water's high specific heat
- High bulk density means low porosity
- Mercury is very toxic element

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**Good luck**

مركز بحوث  
البحر

Kafrelsheikh University  
Faculty of Aquatic and Fisheries Science  
Department of Fish processing and biotechnology  
Subject: Food microbiology.  
Time Allowed: 2hr.  
Code: .....



Full marks: 50  
Date 1/1/2017  
Pages (1)

Answer the following questions:

1- Spoiled food may be defined as food that has been damaged or injured so as to make it undesirable for human use due to disagreeable change in a food's normal state.

(10 degrees)

- A- Enumerate the types of food spoilage.
- B- Discuss specific spoilage organisms of fish.

2- Food preservation usually involves preventing the growth of bacteria, fungi or other microorganisms as well as retarding the oxidation of fats that cause rancidity, and also inhibit visual deterioration.

(10 degrees)

- A- Enumerate the main reasons of food preservation.
- B- Methods used for fish storage and preservation at home and discuss Fully TWO of them.

3- Write on the following:

(10 degrees , 5 of each )

- A. Factors which determine the value of an indicator microorganism.
- B. Enumerate Factors affecting shelf life of fish and discuss TWO of them.

4- In Table comper between:

- A - Putrifaction ; Fermentation and Rancidity of fish. (4 degrees)
- B- Phases of fish spoilage. (3 degrees)
- C- Humidity and Water activity affecting on microbial growth. (3 degrees)

5- Complete the following:

(10 degrees)

- A. Food borne intoxications have .....1..... periods and are characterized by .....2..... and classified into.....3.....4.....5.....6.....
- B. The main criteria for food of high hygienic value are.....1.....2.....3.....
- C. Characteristics of viral food borne infections.....1.....2.....3.....4.....
- D. Factors influence the effectiveness of antimicrobial treatment.....1.....2... ..3.....4.....
- E. The effectiveness of chemical sanitizers depends on.....1.....2.....3.....



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