



Tanta University
Faculty of Science
Department of Zoology



EXAMINATION FOR JUNIORS (3rd YEAR) STUDENTS OF
SPECIAL ZOOLOGY

Course title: <i>ANIMAL TECHNIQUES</i>	Student No.:42(Forty Two)	Course code: Z03107
Date: 2, January, 2018	FIRST TERM	Total assessment marks: 150
Examiners: Prof.Ghada Tabl, Prof. Hewida Abu-Shafey, Dr. Soha Gomaa and Dr. Mona Elwan		Time allowed: 2 HOURS

الإمتحان فى ورقتان

Question 1 (37.5 marks)

A- Complete the missing parts (5 marks).

- 1-In agglutination, the antigen is and
- 2- Proteins can remain in the native protein electrophoresis
- 3- Precipitation reaction can be converted into agglutination reaction by coating soluble antigen onto.....
- 4-Lattice formation is formed by

B- Define the followings (20 marks)

- 1- Sensitization
 - 2- Antibody titer
 - 3- Viral hemagglutination
 - 4- Electrofocusing electrophoresis
 - 5- Casting tray
- C- Explain how electrophoresis is a way of DNA analyzing? (7.5 marks)**
- D- Compare between the negative and positive reaction in hemagglutination assay? (5 marks)**

Question 2 (37.5 marks)

A- Complete the missing parts with appropriate word(s)? (22.5 marks)

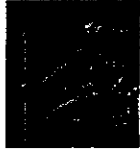
- 1) Chromatography is classified based on a,..... b,.....c,.....
- 2)are derived from a single cell clone and directed to single epitope of single antigen.
- 3) In hydridoma technology, addition ofleads to fusion of some B-lymphocytes with tumor cells to produce a hybrid cell (hybridoma).
- 4) ELISA technique is used for a,.....b,.....c,.....d,.....
- 5) is an equipment that enables a sophisticated separation of mixture between two phases.
- 6) The purposes of chromatography are 1,..... 2,.....
- 7) is a basic biotechnology technique that separates macromolecules according to their charge and size.
- 8) Protein separation by SDS-PAGE can be used to a,.....b,.....
- 9) SDS is an anionic detergent which andthus overwhelming positive charges in the protein.
- 10) is the transfer of proteins from the SDS-PAGE gel to a solid supporting membrane.
- 11) There are two types of blotting apparatus used to transfer proteins to solid supports a,.....b,.....
- 12) There are three different supports commonly in use for western blotting a,.....b,.....c,.....
- 13) In chromatography, separations are carried out based on differences in.....and.....
- 14) The amino acids and allow direct A280 measurement of protein concentration.
- 15) In, the individual acquires immunity through the transfer of antibodies formed by another host.

B: Decide whether the following statements are true or false and correct the wrong? (15 marks)

1. Passive immunization is known as administration of a vaccine so that the patient actively mounts a protective immune response.
2. Cell culture is a biochemical technique used mainly in immunology to detect the presence of an antibody or an antigen in a sample.
3. Mobile phase can be solid/ liquid and through which the mixture is carried by mobile phase.
4. Stacking gel is the gel in which proteins are resolved on the basis of their molecular weights
5. In sandwich ELISA, wells are coated with antigen, while they are coated with antibody in direct ELISA.
6. Spectrophotometer is a method to measure how much a chemical substance absorbs light by measuring the intensity of light.
7. Monoclonal antibodies are mixture of different antibody classes.
8. The most common purity check for DNA and RNA is the A260/A230 ratio.
9. Polyclonal antibodies were purified with where antigen can be bound to the support matrix.
10. Preparative purpose of chromatography is purification and collection of one or more components of a sample.

أنظر خلفه

2018



Tanta University
Faculty of Science
Department of Zoology



EXAMINATION FOR JUNIORS (3rd YEAR) STUDENTS OF
SPECIAL ZOOLOGY

Course title: ANIMAL TECHNIQUES

Student No.: 42 (Forty Two)

Course code: ZO3107

Date: 2, January, 2018

FIRST TERM

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Time allowed: 2 HOURS

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الامتحان في ورقتان

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أنظر خلفه



	Tanta University Faculty of Science Zoology Department			
	Term exam for sophomores (level 3) students of Special Zoology			
	Course Title:	Aquaculture	Course Code: ZO 3113	
Date:	4/1/2018	Term: First	Marks:100	Time Allowed : 2 Hours

Part one (65 marks)

الاسئلة في 3 صفحات

- 1) Write short notes on the following: (12 Marks)**
- A) – Aquaponics
 - B) - Risks of aquaculture (three risks only)
 - C) - Intensive system of aquaculture
- 2) - Fix the following problem in your pond (12 Marks)**
- A) – Unwanted fish came in your pond
 - B) – Water temperature increased to 32 °C
 - C) – Acidity rose to 3.4
 - D) –Oxygen concentration dropped to 1.5 mg/L
- 3) - Complete (10 Marks)**
- A) -1)..... 2)and 3) make a species suitable for aquaculture
 - B) – From the benefits of aquaculture.....and
 - C) – The commercial diets consist of a number of ingredients like ...1)... 2)and 3).
 - D) - By monitoring the feeding tray, we can get a good indication of and
- 4- Choose the appropriate word(s) (5 Marks)**
- A) - The best depth of water into the pond is.....
 - a) 1 meter
 - b) 50 cm
 - c) 50 meter
 - B) – Classification of haemocytes depends on
 - a) the presence of granules
 - b) the size of granules
 - c) a and b
 - C) – Artemia produce cysts at
 - a) favorable conditions
 - b) dry seasons
 - c) a and b
 - D) – Immune system of invertebrates is
 - a) Specific
 - b) Non-specific
 - c) a and b
 - E) - Megalopa larva develops to
 - a) Prawn
 - b) Artemia
 - c) crab

(انظر الخلف)



وحدة ضمان الجودة
كلية العلوم - جامعة طنطا
QUALITY ASSURANCE UNIT
FACULTY OF SCIENCE - TU

B- Global environmental threats to fisheries and aquaculture.

c- The advantages and disadvantages of using chemotherapeutic.

3) Put (√) or (X) then correct the wrong sentence: (5 Marks)

- Ancient Egyptian was the first to introduce fish farming. ()

- Probiotics are microorganisms of over 500 different types of fungi. ()

- We can use vaccination to treat aquatic invertebrates that depend on innate immunity. ()

- Mature water is a technique used in improving the performance of larvae. ()

<i>Examiners</i>	<i>Prof. Mona El-Gamal</i>	<i>Dr. Mahi Mohamed Mona</i>
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*Best wishes from
The Examiners*



TANTA UNIVERSITY
FACULTY OF SCIENCE
DEPARTMENT OF ZOOLOGY

EXAMINATION FOR JUNIORS (THIRD YEAR) STUDENTS OF ZOOLOGY

DATE: 17, JAN. 2018	SEMESTER: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS
COURSE TITLE:	FIELD TRIPS	COURSE CODE: ZO 3111	

Answer the following questions:

Q1. A. Match each of the following animals with its habitat in intertidal regions [10 marks]

A		B		C		D		E	
F		G		H		I		J	

1. Splash zone.	2. The high tide zone	3. The middle tide zone	4. The low tide zone

- B. By only labeled drawing explain van Dorn sampler. [5 marks]
- C. Mention the type of Ecosystem based on the following data, precipitation 20 ml, potential evaporation is 5 ml, and the surface storage of water is -2. [5 marks]
- D. Explain different types of ecological pyramids [5 marks]

Q2. A. Define the following: [5 marks]

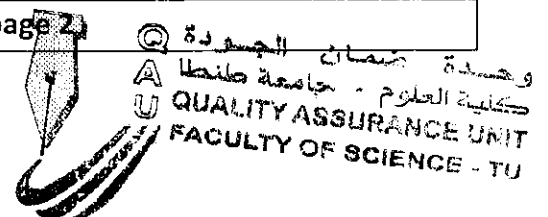
1. Strict Nature Reserves. 2. Resource Reserves

B. Complete the following table about five Protectorates in Egypt on the left with its Location and its type on the right. [10 marks]

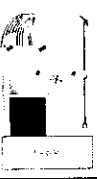
▼	Protectorates	Governorate	Type
1.	St. Katherine		
2.	Ashtum El Gamil		
3.	Siwa		
4.	El-Dababya		
5.	Nabq		

C. Write on the marine dangers you can watch during the field trip. [10 marks]

End of Page 1 >>>>> See page 2



6

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY			
	EXAMINATION FOR THIRD LEVEL STUDENTS OF CHEMISTRY - ZOOLOGY			
	COURSE TITLE:	EMBRYOLOGY AND EXPERIMENTAL EMBRYOLOGY		COURSE CODE: ZO 3141
DATE:	JANUARY, 2018	TERM: FIRST	TOTAL ASSESSMENT MARKS: 150	TIME ALLOWED: 2 HOURS

Answer the following questions; make clear and coloured drawings whenever possible.

The first Question: (75 marks)

- A) With perfect colour diagrams describe the passage of the chick fertilized ovum through the oviduct towards the cloaca; then show the structure of the hen's egg.
- B- With coloured drawings ONLY show the yolk sac and its relation to the gut(from 20 – 72h chick).
- C- Describe in detail the formation of the heart of the chick embryo (24 – 33 hours).

The second Question: (45 marks)

- A-With coloured drawing compare between the movement of cells during gastrulation of the Frog and Amphioxus.
- B-With perfect drawing demonstrate the differentiation of the brain of the Frog.
- C- Demonstrate the development of the eye of the Frog s embryo.
- D- How does the fertilization potential serves as a fast block to polyspermy.


The third Question: (30 marks)

- 1-How is the information for embryonic development within the fertilized egg interpreted to give rise an embryo.
- 2-How does the cortical granules entails changes at the egg surface that prevent polyspermy.
- 3- Give an account on the regression and progressive morphological changes during metamorphosis of the tadpole larvae.

With best wishes

EXAMINERS	PROF. FOUAD AFIFI ABOU-ZAID
	PROF. NABIL KMAL EL-FIKY

3

	SANA'A UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY		
	EXAM FOR JULY (3 RD YEAR) STUDENTS OF CHEMISTRY/ENTOMOLOGY		
COURSE TITLE:	INSECT PATHOLOGY	COURSE CODE: EN 3143	
DATE:	JANUARY, 2018	TERM: FIFTH	TIME ALLOWED: 2 HOURS
		TOTAL ASSESSMENT MARKS: 150	

PLEASE NOTE THE EXAM IS IN TWO (2) PAGES

ANSWER THE FOLLOWING QUESTIONS IN YOUR ANSWER BOOKLET

1. State whether the following statements are true or false with correction.....(30 Marks, 2 Each)

- 1.1. The microbial diseases are those in which no living microorganism is involved.
- 1.2. A concentration is the number of infective units taken per measure of body weight.
- 1.3. Baculoviruses are the most beneficial of the insect viruses to man.
- 1.4. *Bacillus thuringiensis* has been used most widely in insect control.
- 1.5. *Bacillus thuringiensis israelensis* has larvicidal activity toward mosquitoes, black flies and midges.
- 1.6. In most insects, starvation begins with the loss of carbohydrates.
- 1.7. Excessive quantities of carbohydrates induce visible white deposits in the American cockroach.
- 1.8. *Sphaerularia bombi* can infect the hibernating queens of *Bombus* and *Vespa*.
- 1.9. Neoplasms are proliferation in which the cells grow in a new and different way.
- 1.10. Nematodes can be kept for up to 3 years under refrigeration.
- 1.11. Cytoplasmic polyhedrosis viruses belong to DNA viruses.
- 1.12. Host preference is abiotic factor that may affect fungus epizootology.
- 1.13. Nematodes are associated with pathogenic bacteria, which located in the anterior part of the intestine (bacterial chamber).
- 1.14. *Drosophila melanogaster* can be used as a model for cancer research.
- 1.15. Killing of the mosquito larvae by *R. culicivora* is achieved when a preparasitic emerges from the insect body.

2. Choose the correct answer in the following sentences..... (30 Marks, 2 Each)

- 2.1. Entomopathogenic fungi can penetrate the cuticle of insects by means of (lipase – protease – chitinase - all of these).
- 2.2. Nutritional diseases refer to abnormalities caused by the (absence – insufficiency – excess - all of these) of one or more nutrients.
- 2.3. Mechanical agents cause two types of diseases (distension and trauma - Viral and bacterial - starvation and lack of vitality).
- 2.4. Gram stain depends on the thickness of the (peptidoglycan – lipopolysaccharides) in the bacterial cell wall.
- 2.5. Both malignant and benign tumors are (genotypically – phenotypically) induced.
- 2.6. The infective juvenile of aquatic *Steinernema* is (J3 - J2 - egg).
- 2.9. Heterorhabditidae develop inside hosts to (males & females – hermaphrodites).
- 2.10. (Entomophthorales – Deuteromycetes) can be grown on egg-yolk media or sun flower oil and yeast extract.
- 2.11. To have stabilized product of the (fungi – bacteria –viruses), certain additives are used as wetter, stickers and humectants.
- 2.12. (Poor – excessive) nutrition generally lowers the tumor incidence.
- 2.13. Soil treatment with high concentration of conidia provokes epizootic among cockchafer for (1 – 2 – 4) years later.
- 2.14. (Bacteria –fungi) kill target insects quickly, have a spectrum of activity that includes many economically important pests.
- 2.15. Koch discovered the (causativity of bacteria -- gram stains - first antibiotic).