

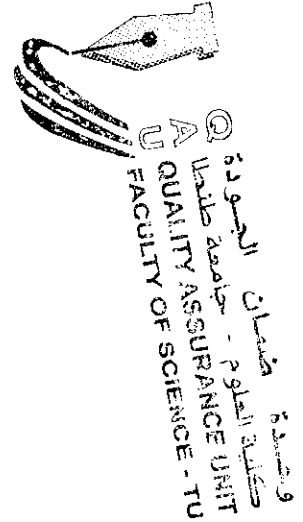
ع
علم حيوان

TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY		
PRACTICAL EXAMINATION FOR THIRD YEAR STUDENTS OF SPECIAL ZOOLOGY		
COURSE TITLE:	FISH BIOLOGY	COURSE CODE: ZO 3109
DATE: 28 DECEMBER, 2016	TOTAL ASSEMENT MARKS: 100	TIME ALLOWED: 2 HOURS

FIRST PART: (20 POINTS)

i. Complete the following sentences:

1. The obligatory food is
2. The value of maximum growth rate at temperature is And the growth rate is faster in Then Because
3. Surface feeders are
4. Herbivorous feeders are
5. Monophagic feeders are



Second part: (20 points)

ii. Mention the function of the following:

1. Diencephalon.
2. Cerebellum.
3. Mesencephallen.
4. The skin and its derivatives.

Third part: (20 points)



iii. Explain the following statements:

1. Classification of fishes according to the manner of capture and ingestion of food.
2. Melanophores.
3. Factors affecting the growth rate.
4. Condition factor.

Forth part: (40 points)

1. Discuss the steps of R.B.Cs formation.
2. Compare between the R.B.Cs and W.B.Cs in Teloste and Elasmobranchii fishes.

Examiners	PROF. DR. IBRAHEM ELSHOURBAGY	PROF. DR. SOMAIA Z. RASHED
	PROF. Dr. Afaf Alatrash	

	Tanta University Faculty of Science Department of Zoology		
	EXAMINATION FOR JUNIORS(3rd YEAR) STUDENTS OF SPECIAL ZOOLOGY		
Course title: ANIMAL TECHNIQUES		Student No.: 69(Sixty Nine)	Course code: ZO3107
Date: 16, January, 2017	FIRST TERM	Total assessment marks: 150	Time allowed: 2 HOURS
Examiners: Prof. Mohamed Labib, Prof. Ghada Tabl, Prof. Hewida Abu-Shafey, Dr. Ezar Hafez and Dr. Soha Gomaa			

الامتحان في وقتان

Question 1: Complete the missing parts with appropriate word(s)? (40 marks)

- 1) The process of agglutination involves two steps 1,..... 2,.....
- 2) Chromatography is classified based on a,..... b,..... c,.....
- 3) is the process by which red blood cells agglutinate.
- 4) Antibody titer is defined as of the greatest dilution in which agglutination is observed
- 5) and together are used to perform prior to blood transfusion or transplant to prevent harmful interactions between your blood and donor blood.
- 6) When individual acquires immunity through the transfer of antibodies formed by another host, it is called
- 7) are derived from a single cell clone and directed to single epitope of single antigen.
- 8) In hybridoma technology, addition of leads to fusion of some B-lymphocytes with tumor cells to produce a hybrid cell (hybridoma).
- 9) ELISA technique is used for a,..... b,..... c,..... d,.....
- 10) is an equipment that enables a sophisticated separation of mixture between two phases.
- 11) The purposes of chromatography are 1,..... 2,.....
- 12) is a basic biotechnology technique that separates macromolecules according to their charge and size.
- 13) Protein separation by SDS-PAGE can be used to a,..... b,.....
- 14) SDS is an anionic detergent which and thus overwhelming positive charges in the protein.
- 15) is the transfer of proteins from the SDS-PAGE gel to a solid supporting membrane.
- 16) There are two types of blotting apparatus used to transfer proteins to solid supports a,..... b,.....
- 17) The applications of flow cytometry includes a,..... b,..... c,..... d,....., while flow cytometry steps are a,..... b,..... c,..... d,..... e,.....
- 18) There are three different supports commonly in use for western blotting a,..... b,..... c,.....
- 19) In chromatography, separations are carried out based on differences in and
- 20) The advantages of cell culture over tissue and organ cultures are....., but the basic equipments of cell culture are a,....., b,....., c,....., d,.....

Question 2: Decide whether the following statements are true or false and correct the wrong?(20marks)

- 1) Passive immunization-individual acquires immunity through the transfer of antibodies formed by another host.
- 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) Cell viability is laser based technology employed in cell counting, cell sorting biomarker detection.
- 4) Flow cytometer is an instrument that measures the intensity of light absorbed after it passes through sample solution.
- 5) Stationary phase can be solid/ liquid and through which the mixture is carried by mobile phase.
- 6) Stacking gel is the gel in which proteins are resolved on the basis of their molecular weights
- 7) In sandwich ELISA, wells are coated with antigen, while they are coated with antibody in direct ELISA.
- 8) Spectrophotometer is a method to measure how much a chemical substance absorbs light by measuring the intensity of light.
- 9) Monoclonal antibodies are mixture of different antibody classes.
- 10) The most common purity check for DNA and RNA is the A260/A230 ratio.

Question 3(30 marks): A-Choose the correct word (s)?

- 1) Usually nucleic acids are detected at absorbance (a. 260 b. 280 c. 230 d. 320).
- 2) In gel electrophoresis, fragments are separated on basis of (a. Size b. charge c. both a & b d. none of above).
- 3) Agarose gels are commonly used to sort (a. DNA b. Protein c. RNA d. both a and c).

أنظر خلفه

Question 5: (30 marks)


A) Indicate whether the following statements are true or false:(15 marks):

- 1- The aim of fixation is to preserve the cell contents in as life manner.
- 2- Haematoxylin is a basic dye which stains basophilic components blue purple.
- 3- The magnifying power is the product of multiplying the ocular and the objective lenses power.
- 4- Formalin should be used in an extremely good ventilated room.
- 5- Glutaraldehyde is usually used as a buffered fixative for electron microscopy techniques.
- 6- Dehydration is the complete removal of water from the tissue.
- 7- Clearing is the replacement of the dehydrating fluid with embedding medium.
- 8- Tear or scratch across the section, or splitting of the ribbon; may be due to a jagged knife edge or dirt on the knife.
- 9- Cytoplasmic fixatives should not contain glacial acetic acid because mitochondria destroyed by it .
- 10- Dioxane is an excellent clearing agent .

B) Explain how you can prepare an organ for microscopic examination?(15marks)

Best wishes from The Examiners

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	DATE: 28 DECEMBER, 2016	TOTAL ASSEMENT MARKS: 100	TIME ALLOWED: 2 HOURS

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- ii. Mention the function of the following:
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	DATE: 28 DECEMBER, 2016	TOTAL ASSEMENT MARKS: 100	TIME ALLOWED: 2 HOURS

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	PROF. Dr. Afaf Alatrash	

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 2016/2017

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY		
	PRACTICAL EXAMINATION FOR THIRD YEAR STUDENTS OF SPECIAL ZOOLOGY		
	COURSE TITLE:	FISH BIOLOGY	COURSE CODE: ZO 3169
	DATE: 28 DECEMBER, 2016	TOTAL ASSEMENT MARKS: 100	TIME ALLOWED: 2 HOURS

FIRST PART: (20 POINTS)

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	PROF. Dr. Afaf Alatrash	

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY			
	EXAMINATION FOR 3RD YEAR STUDENTS			
	COURSE TITLE:	EMBRYOLOGY & EXPERIMENTAL EMBRYOLOGY OF VERTEBRATES	COURSE CODE: ZO 3101	
DATE:	JANUARY, 2017	TERM: FIRST	TOTAL ASSESSMENT MARKS: 180	TIME ALLOWED: 2 HOURS

Answer the following Questions:

First Question: *(Total 45 marks)*

- 1) With drawing compare the blastula in **Amphioxus, Frog, and Chick**,
- 2) How does the cortical granules entails changes at the egg surface that prevent polyspermy?
- 3) How is the information for embryonic development within the fertilized egg interpreted to give rise an embryo (Gene expression).

Second Question: *(Total 45 marks)*

- 1) How does the **fertilization potential** serves as a fast block to polyspermy?
- 2) With drawing, show the structure of hen's egg and its passage through the viduct.
- 3) With drawing show the structure of the brain of the frog' s embryo.
- 4) With drawings describe the **Human blastocyst** at 9-11 and 12 days.

Third Question: *(Total 45 marks)*


- 1) With perfect diagrams **ONLY**, show the development of the heart of the frog embryo.
- 2) Compare between different stages of Chick, **24, 48, and 72** hours.

Fourth Question: *(Total 45 marks)*

- 1) All organs of the Frog are originated from three germinal layers, Mention the origin of : (muscles – vertebrae- otic vesicle – dermis –ovaries- spermatid- heart ventricle- heart- brain ventricle- blood vessel – Liver – gut – intestine- mesenteries- eye lens).
- 2) Compare between the movement of cells during gastrulation of the Frog and Amphioxus
- 3) Complete and re-write the following:
 - A- The regressive morphological changes of the frog metamorphosis
 - 1-.....2-.....3-.....
 - B-The progressive morphological changes of the frog metamorphosis
 - 1-.....2-.....3-.....
 - C-The signals during developmental program can be transmitted from one –cell to another in three main ways
 - 1- 2 3-.....

With Best Wishes

EXAMINERS	PROF. FOUAD AFIFI ABOU-ZAID PROF. NABIL KAMAL EL-FIKY	
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	Tanta University- Faculty Of Science Department of Zoology			
	Examination Paper for juniors (Third Level) students of Special Zoology			
Course Title:	Invertebrates of Egypt لافقاريات مصر		Course Code: ZO 3103	
Date:	Jan., 2017	Term: First	Marks: 150	Time Allowed: 2 Hours

First Question (40 Marks)

A- Multiple choices (MCQ) : Choose the correct answer. (10 Marks, 2 marks for each one).

- 1- Life cycle of hydroids *Ectopleura crocea* (= *Tubularia crocea*) recorded at the Eastern Harbor of Alexandria includes larvae called:
() (A) Planula larva (B) Actinula larva (C) Ephyra larva (D) Both A & B
- 2- Upside- down Jellyfish with blue oral arms characterizes:
() (A) *Cassiopea andromeda* (B) *Cassiopea xamachana*
(C) *Aurelia aurita* (D) *Pelagia noctiluca*
- 3- In Red Sea of Egypt, branching fire coral *Millepora dichotoma* belongs to:
() (A) Soft corals (B) Horny corals (C) Hydrocorals (D) Black corals
- 4- The common Scyphozoan Jellyfish Orders recorded in Egyptian fauna belong to:
() (A) Semaestomeae (B) Rhizostomeae
(C) Stauromedusae (D) Both A & B
- 5- Number of tentacles & mesenteries in Anthozoan Octocorals polyps is typically:
() (A) 6 (B) 6 & its multiples (C) 8 (D) 8 & its multiples

B- Fill in the blank: (10 marks, 2 marks for each one).

- 1- Cnidarians show diversity of habitats and include two main forms _____ and _____.
- 2- In recent Taxonomy of Hydrozoa, Anthoathecata considers a combination of _____ and _____.
- 3- Types of food habits of mangrove jellyfish *Cassiopea* common in Red Sea of Egypt are: _____.
- 4- Medusa of Semaestomeae has marginal sense-organs arising from clefts between lappets called _____.
- 5- Anemone city showing symbiosis relationship between clownfish and their host sea anemone reported in Egypt in _____.

C- True or False: Which of the following statements is True or False?

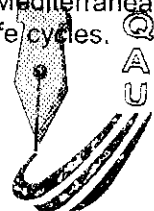
Correct False answers. (10 marks, 2 marks for each one).

- () 1- Leptothecata considers the recent combination of Calyptoblastea and Leptomedusae.
- () 2- Function of dactylozooids in colony of fire coral *Millepora dichotoma* is sexual reproduction.
- () 3- Newly-enlarged Suez Canal considers a major threat to Mediterranean environment through invasive jellyfish species.
- () 4- Medusa of Rhizostomeae has four unbranched oral arms.
- () 5- Scientific name of organ pipe coral is *Entacmaea quadricolor*.


D- Essay Questions: (10 Marks, 5 marks for each one).

- 1- Comment with labeled sketch on life cycle of snake-locks anemone *Anemonia viridis* (= *Anemonia sulcata*) inhabiting Mediterranean Sea of Egypt.
- 2- Discuss your conclusion for cnidarian life cycles.

أنظر بقية الأسئلة بالخلف



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

 1969	TANTA UNIVERSITY - FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY			
	FINAL EXAM FOR JUNIORS (THIRD LEVEL) STUDENTS OF ZOOLOGY			
COURSE TITLE:	FIELD TRIPS	COURSE CODE: ZO 3111		
DATE: 26. JAN. 2017	SEMESTER: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS	

Answer the following questions: (Questions in 2 pages)

Q1. A. Write short notes on the following [15 marks]

1. Types of an ecosystem.
2. Types of deserts.
3. Ecological pyramids
4. Abiotic sampling of streams.
5. Marine dangerous animals.

Q1. B. There are many general and environmental hazards that exist in nearly every location worldwide. Explain briefly how you can avoid the following hazards.

1. Dehydration
 2. Sunburn and heat exhaustion
 3. impure water
 4. Hypothermia
 5. High Altitude illness
- [15 marks]

Q2. A. Define each of the following: [10 marks]

1. National parks protectorates.
2. Nature conservation reserves protectorates.
3. Biosphere reserves protectorates.
4. Sea sickness
5. Water budget.

Q2. B. Only with fully labelled diagram explain different zones of Intertidal Habitats.

[10 marks]

Q3. Complete the following sentences: [10 marks]

1. are natural protectorates represent wetlands and natural restricted areas for birds.
2. Natural Protectorates in Red Sea Governorate consists of and Red Sea
3. and represent two important geological protected areas in Egypt.
4. is the second of four zones found on the rocky shore. This area is covered with water of the time.
5. The Convention on the Biological Diversity (CBD), 1992. Formulated the concept of "Ecosystem" in the following definition:

III- Mention the differences between two only of the following: (10 marks) i- Xiphosurida and Pycnogonida ii- Hoplocarida and Phyllocarida iii- Tanaidacea and Isopoda

VI- Answer the following: (10 marks)

- Write in details the body structure and classification of Amphipoda.

Fourth Question (35 Marks)

I. Complete the following statements with suitable words (18 marks, 3 each):

- A) Pelagic environment could be classified into.....region extended to depth...., and ...region which extend to depth....
- B) Holoplankton organisms means....., while meroplankton means....and classified into.....according to their sizes.
- C) Spray zone means....in which organisms live are facing problems as.....
- D) In sponges, Polysaccharides secreted by special cells in the body wall called....., while Sclerocytes is a type of cells responsible for.....
- E) *Calyx nicaensis* is a sponge type inhabiting....sea with...shape andskeleton.
- F) *Cacospongia scalaris* is a Red Sea sponge which has dark.... Color due to presence of.....

II. Put true(✓) or false(X) (10 marks, 2 each):


- A) *Dysida avara* and *Callyspongia implexa* is Mediterranean species which have medical importance ().
- B) Ras Muhammed National Park is the most important region in Red Sea due to biodiversity of sponge species ().
- C) The organisms inhabiting low tide zone are well adapted to desiccation ().
- D) The first attempts in sponges survey were done by Lendenfield ().
- E) *Spongia zimocca* has only sponging fibers so it has yellow color().

III. Make simple definition to the following: (7 marks)

- A) Lophocytes B) Nekton C) Eulittoral zone D) Avaral

Best Wishes & Good Luck

Examiners	1- Prof. Dr. Fayez A. Shoukr	2- Prof. Dr. Fadia Heba
	3- Prof. Dr. El-Sayed Taha Rizk	4- Ass. Prof. Wesam Salama

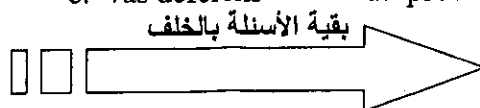
	Tanta UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY		
	Theoretical examination for 3 rd year students of Zoology		
	COURSE TITLE:	SP. HISTOLOGY	COURSE CODE:
JANUARY, 2016	TERM: FIRST	TOTAL ASSEMENT MARKS: 150	TIME ALLOWED: 2 HOURS

Q1- Write down the correct answer and number in your answering sheet:

1. Germ cells which have finished meiosis but have not yet differentiated into spermatozoa are:
 - a. Leydig cells. b. spermatids. c. Sertoli cells. d. tunica albuginea.
2. All of the following cells divide, either mitotically or meiotically, EXCEPT:
 - a. spermatogonia. b. primary spermatocytes
 - c. spermatids and spermatozoa. d. all of the above cells divide
3. All are skin derivatives (accessory organs) except
 - a. sebaceous glands b. nails c. sweat glands d. Melanocytes
4. The epithelium of the vas deferens is:
 - a. simple squamous epithelium. b. ciliated columnar epithelium with goblet cells.
 - c. pseudostratified epithelium with stereocilia. d. transitional epithelium.
5. What type of epithelium lines the uterus?
 - a. simple squamous. b. simple cuboidal. c. simple columnar. d. pseudostratified
6. The mucosal layer of the uterus is called the:
 - a. endometrium. b. myometrium. c. chorionic villi. d. placenta.
7. Larger blood vessels are found in the ovarian:
 - a. theca. b. medulla. c. cortex. d. tunica albuginea.
8. Sensory receptors in the dermis that respond to pressure is called the:
 - a. Pacinian's corpuscles. b. Meissner's corpuscles c. Mary's corpuscles d. sebaceous corpuscles
9. Larger blood vessels are found in the ovarian:
 - a. theca. b. medulla. c. cortex. d. tunica albuginea.
10. The "germinal epithelium" of the ovary is:
 - a. simple cuboidal mesothelium. b. organized into branching tubules.
 - c. the source for germ cells. d. all of the above
- 11: All are factors effects on skin color except:
 - a. Heredity b. Sex c. Ages d. Prolonged exposure to sunlight
12. Testicular cells which secrete testosterone are:
 - a. Leydig cells. b. Sertoli cells. c. spermatogonia. d. spermatocytes.
- 13: All are pigments for skin color except:
 - a. Carotene. b. Hemoglobin c. Melanin d. Safranin.
14. Which organ functions to produce sperm cells by mitosis and meiosis?
 - a. testis. b. epididymis c. vas deferens. d. seminal vesicle
15. Which organ surrounds the urethra?
 - a. testis b. epididymis c. vas deferens d. prostate



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صكرو

TANTA UNIVERSITY
FACULTY OF SCIENCE
ZOOLOGY DEPARTMENT

صنوا ٢

First term Exam- 3rd Level/ MICROBIOLOGY

COURSE TITLE:	PARASITOLOGY (الإختبار فى صفحتين)	COURSE CODE: 3153
DATE:	14 JANUARY 2017	TOTAL ASSESSMENT: 100 MARKS
		TIME ALLOWED: 2 hrs.

First Part (60 MARKS)

I- Define the following:(20 Marks; 4 Marks each)

- a- Temporary parasite b- Monoxenous and Heteroxenous life cycle c- Reservoir host
- d- Incubation period e- Prevalence of infection

II- Answer the following questions:(40 Marks)

- 1- Describe the pathogenicity **and** mode of infection of fascioliasis? (7 Marks)
- 2- Illustrate the life cycle **and** transmission of *Heterophyes heterophyes*? (7 Marks)
- 3- Enumerate why *Echinococcus granulosus* infection have severe pathogenicity for human? (7 Marks)
- 4- Differentiate between the following: (7 Marks)
 - a- Diagnosis of; *Hymenolepis* sp. **and** *Diphylidium caninum*
 - b- Mode of infection in ; *Ascaris* sp. **and** *Anclystoma* sp.
- 5- "Pinworm infection is household disease" Give reasons. (5 Marks)
- 6- Mention the mode of action of the following anti-helminthic drugs on parasites: (7 Marks)
 - a- Niclosamide b- Praziquantel c- Mebendazol

Second Part (40 MARKS)

I- Answer the following questions: (30 Marks; 7.5 Marks each)

- A) Mention the important factors for parasitic pathogenicity to the host? Discuss the pathogenic potential that caused from *Leishmania donovani*?
- B) What does it mean "opportunistic protozoa". Give an example, regarding to intestinal coccidian parasites, and mention the disease that caused, infective stage and the mode of infection.
- C) Mention the modes of infection and diagnostic stages of the following: *Trypanosoma*, *Giardia*, *Toxoplasma gondii* and *Balantidium coli*.
- D) Compare between the cyst stage in *Entamoeba coli*, *Entamoeba histolytica* and *Iodamoeba buetschlii*.

II- Choose the correct answer: (10 Marks; 1 Mark each)

- 1) How are both *Trypanosoma* and *Leishmania* spread?
 - A) By blood-sucking vectors
 - B) Mother-to-fetus
 - C) Sexually transmitted
 - D) Person-to-person
- 2) In malaria, where do the asexual sporozoites undergo schizogony to form merozoites?
 - A) In liver cells
 - B) In red blood cells
 - C) In lymph nodes
 - D) In the stomach of the female *Anopheles* mosquito

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- 3) All these parasites are pathogenic except
- Entamoeba histolytica*
 - Isospora*
 - Giardia lamblia*
 - Entamoeba gingivalis*
- 4) Stage with a protective membrane or thickened wall called:
- Cyst
 - Trophozoites
 - Egg
 - None of the above
- 5) Actively feed and multiply stage of *Toxoplasma* called:
- Tachyzoite
 - Trophozoites
 - Egg
 - None of the above
- 6) Each of the following statements concerning *Malaria* is correct except
- The Female *Anopheles* Mosquito is the Vector
 - Early infection, sporozoites enter hepatocytes
 - Release of merozoites from red blood cells cause Fever and Chills
 - The principal site of gametocyte formation is the human gastrointestinal tract.
- 7) Which mastigophoran species causes a sexually transmitted disease?
- Trypanosoma cruzi*
 - Leishmania donovani*
 - Giardia lamblia*
 - Trichomonas vaginalis*
- 8) What does the parasite *Giardia* use to attach to the intestinal wall of its host?
- Super glue
 - Capsule
 - Flagella
 - Adhesive disc
- 9) The reproduction in members of phylum Ciliophora includes:
- Autogamy and sporogony
 - Fission and conjugation
 - Binary fission and autogamy
 - Binary fission only
- 10) The trophozoite which contains red blood cells in its cytoplasm is
- Entamoeba coli*
 - Entamoeba histolytica*
 - Entamoeba gingivalis*
 - Iodamoeba*

BEST WISHES

Examiners:	Prof. Dr. Mostafa H. ElMehlawy	Dr. Sammar Harras
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