


علم حيوانر ختام

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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY		
	EXAMINATION FOR SECOND YEAR STUDENTS OF ZOOLOGY		
	COURSE TITLE:	EGYPTIAN FAUNA	COURSE CODE: ZO2109
DATE: 12. JAN. 2017	SEMESTER: FIRST	TOTAL ASSESSMENT MARKS: 100	TIME : 2 HOURS

Answer the following questions:

Q1. Choose the correct answer: (20 Marks)

- a. Snails and flatworms have sticky ventral surfaces in (lentic, lotic, desert) animals.
- b. Keen senses of sight smell and hearing is a characteristic feature of (desert, fresh water, aquatic) animals.
- c. Where the river and sea water meet, a specialized zone called (Estuarine, Swamps, Lakes).
- d. An area divided into two main regions, the archibenthic and the abyssal benthic, The (littoral zone - deep sea zone - pelagic zone).
- e. Bioluminescence is rather spread among (estuarine, deep sea, desert) forms.

Q2. Differentiate between lotic and lentic habitat and its fauna. (20 Marks)

Q3. Write short notes on: (20 Marks)

- a. Egyptian reptilian fauna, and give one example and its adaptation.
- b. Adaptation of desert animals.


Q4. Give an account on:

- a. The migratory forms
- b. Moisture conservation
- c. Biosphere
- d. Lakes
- e. Swamps

Q5. Fill in the blanks: (20 Marks)

- a. Estuarine animals can be divided into three categories , and
- b. Lotic habitat includes , and
- c. , , , are mean features of deep sea animals.
- d. The distinct types of ponds is , and

Best Wishes

	TANTA UNIVERSITY FACULTY OF SCIENCE ZOOLOGY DEPARTMENT		
	FINAL EXAM OF MAJOR ZOOLOGY, Chemistry / Zoology, Biophysics, BIOCHEMISTRY, CHEM/BIOCHEMISTRY Divisions		
	COURSE TITLE:	Cell Biology and Genetics	COURSE CODE: ZO 2101
	TERM: 1 st SEMESTER	DATE OF EXAM: 17 JAN, 2016	ASSESSMENT MARKS: 150
			TIME ALLOWED: 2 HOURS

First Question: (40 marks)

Q1-a: Identifid only four of the following: 10 marks

1. Infarction 2. Cell death 3. Contrast 4. Centrifugation 5. Karyorrhexis

Q1-b: What is different between of the following: 20 marks

- 1: Apoptosis and necrosis 2: Atrophy and hypertrophy.
 3: Histology and histopathology. 4: Hyperplasia and metaplasia.

Q1-c: Write of the following: 10 marks

1. Causes of cell injury 2. Importance's of apoptosis

Second Question: (30 marks)


Q2-a: Fill in the spaces: 20 marks

1. ----- is abnormal increase in interstitial fluid. The volume of IF carefully controlled by osmotic pressure, hydrostatic pressure and lymphatic drainage
2. ----- is abnormal blood clot formation in the circulatory system
3. ----- is extravasation of blood due to vessel rupture. May be due to trauma I.
4. ----- is an inflammatory disease of large and medium sized systemic arteries characterised by the formation of lipid-rich plaques in the vessel wall.
5. ----- is a *reversible* change in which one adult cell type is replaced by another.
6. ----- is part of a complex system of communication that governs basic cellular activities and coordinates cell actions.
7. ----- means the series of morphological changes occurring in a cell or group of cells following lethal injury.
8. ----- It is the study of microstructures of abnormal tissues and organs.
9. ----- is to separate the major organelles of the cells.
10. ----- Refers to the thickness of the specimen that will be in acceptable focus.

Q2-b: With full labeled drawing illustrate the following: 10 marks

- 1) The morphology of apoptosis and necrosis.
- 2) Cell fractionation to separate the major organelles of the cells.

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المراقب

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY			
	EXAMINATION FOR (SECOND YEAR) STUDENTS OF ZOOLOGY			
COURSE TITLE:	ENTOMOLOGY		COURSE CODE:ZO 2105	
DATE	JANUARY, 2017	TERM: FIRST	TOTAL ASSESSMENT MARKS:150	TIME ALLOWED: 2 HOURS

Answer the following questions in your answer booklet

1. State whether the following sentences are true or false with correction (16 marks, each 2):

- 1.1. The antennae of white ants are moniliform type.
- 1.2. The fore wings of grasshoppers are membranous type.
- 1.3. The insects are characterized with the presence of three legs.
- 1.4. Prolegs are outgrowths of abdominal segments of caterpillars.
- 1.5. The immature stages of holometabolous insects are called naiads.
- 1.6. The moulting fluid contains chitinase and protease capable of digesting the endocuticle.
- 1.7. Mantids have the hind legs modified to grasp the prey.
- 1.8. The lace-wing is a hard, vein less and shell-like wing.


2. Fill in the blanks below with the appropriate words (21 marks, each blank 1.5):

- 2.1 According to the geological time scale, insects appear 420 mya ago in the age.
- 2.2 If the terminal segment of antennae is suddenly enlarged, the type is termed
- 2.3 Predators and parasitoids are used in.....to reduce the numbers of insect pests.
- 2.4 In siphoning mouthparts, The food channel is formed between.....
- 2.5 The labrum of chewing type is bilobed plate moving.....
- 2.6 The cuticle is a noncellular layer secreted by....., It consists of three major layers,, exocuticle and endocuticle.
- 2.7 Campodeiform larvae are elongate and somewhat flattened with long cerci, antennae andthoracic legs.
- 2.8 In the.....pupa, the legs and wings are glued to the body which is covered by a cocoon.
- 2.9 Most insects move with a.....of fore and hind legs on one side and mid leg of the opposite side, while the opposite legs are fixed on the ground.
- 2.10 The integument of insects is an against many pathogens and insecticides.
- 2.11 The lateral area of the head below and posterior to the eyes is called.....
- 2.12 Insects belong to phylum..... and subphylum.....

3. Illustrate with fully-labeled drawings the mechanism of flight in insects. (8 marks).

4. Choose the right answers in the following (Total:15 marks, each 1.5):

- 4.1 The hind legs of grasshoppers are (collecting - swimming - jumping).
- 4.2 In the (frenulate - hamulate - jugate) coupling apparatus, tiny hooks of the hind wing fasten into a fold in the front wing.
- 4.3 The most common insects are (flies - butterflies and moths - beetles).
- 4.4 The (*Drosophila* - mosquito - butterfly) is a common model to study human diseases and Genetics.
- 4.5 Grasping-cutting mouthparts are present in the naiad of (dragonfly - mayfly).
- 4.6 The hind wing of Diptera is (halter - hairy - membranous).
- 4.7 The earwigs have powerful (cornicles - styli - forceps-like cerci).
- 4.8 The (genital - visceral - post-genital) region of insect abdomen includes the 8th and 9th segments in the females.
- 4.9 The (noncellular - internal - multicellular) integumentary processes are hollow outgrowths of the integument lined with epidermal cells.
- 4.10 Insects produce valuable products such as (honey and wax - stories and films - jewelry).

	TANTA UNIVERSITY FACULTY OF SCIENCE ZOOLOGY DEPARTMENT		
	FINAL EXAM OF MAJOR ZOOLOGY, Chemistry / Zoology, Biophysics, BIOCHEMISTRY, CHEM/BIOCHEMISTRY Divisions		
	COURSE TITLE:	Cell Biology and Genetics	COURSE CODE: ZO 2101
	TERM: 1 st SEMESTER	DATE OF EXAM: 17 JAN, 2016	ASSESSMENT MARKS: 150
			TIME ALLOWED: 2 HOURS

First Question: (40 marks)

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- 1: Apoptosis and necrosis 2: Atrophy and hypertrophy.
 3: Histology and histopathology. 4: Hyperplasia and metaplasia.

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1. Causes of cell injury 2. Importance's of apoptosis


Second Question: (30 marks)

Q2-a: Fill in the spaces: 20 marks

1. ----- is abnormal increase in interstitial fluid. The volume of IF carefully controlled by osmotic pressure, hydrostatic pressure and lymphatic drainage
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10. ----- Refers to the thickness of the specimen that will be in acceptable focus.

Q2-b: With full labeled drawing illustrate the following: 10 marks

- 1) The morphology of apoptosis and necrosis.
- 2) Cell fractionation to separate the major organelles of the cells.

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY		
	EXAMINATION FOR SECOND LEVEL STUDENTS OF ZOOLOGY		
COURSE TITLE:	Invertebrate systematic and Phylogeny	COURSE CODE:ZO2103	
DATE:	JANUARY,2017	FIRST TERM	TOTAL ASSESSMENT MARKS:150 TIME ALLOWED: 2 HOURS

Part 1 (Introduction in systematic, 20 Marks)

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- 1- Illustrate in a form of table, kingdoms of living organisms.(5 Marks)
- 2- Write on system of classification.(5 Marks)
- 3- Identify: systematic zoology, binomial system of nomenclature. (10 Marks)

Part 2 (Protozoa,40 Marks)

A) Answer The following questions: (20 Marks)

- 1- By means of fully labeled drawings illustrate the types of haemoflagellate forms? (4 marks)
- 2- Mention the pathogenicity of *L. donovani*? (4 marks)
- 3- Mention the differences between anterior station of development and posterior station of development? (4 marks)
- 4- Morphology and life cycle of *Giardia lamblia* ? (4 marks)
- 5-Mention the pathogenicity of *Entamoeba histolytica*? (4 marks)

B) Complete: (8 marks, 1Mark each)

- a- Infection by *Trichomonas vaginalis* is common in the system of human and occurs through, and
- b- Triphasic life cycle in Coccidia includes,,
- c- *Eimeria tenella* is a common parasite of and is the causative agent of

C) Choose the best correct answer and rewrite it in your answer sheet: (8 marks)

1- *Toxoplasma gondi* is a common parasite of:

- | | |
|---------|-----------|
| a- dogs | b Cat |
| c- fish | d- Cattle |

2- Pathogenicity of *Leishmania donovani* is characterized by -:

- | | |
|--|---------------------------|
| a- Ulceration of skin | b Change in shape of nose |
| c- enlargement of the spleen and liver | d- No obvious sign |

3- Members of the genus *Trypanosoma* parasitize all classes of vertebrates and are:

- | | |
|----------------------------|-------------------------|
| a- Intracellular parasites | b Intestinal parasites |
| c- extracellular parasites | d- Urinogenital parsite |

4-The infective stage of *Entamoeba hisolytica* is the cyst contains:

- | | |
|-----------------|----------------|
| a- One nucleous | b Two nuclei |
| c- Three nuclei | d- Four nuclei |

5- Asexual reproduction in *Paramecium* is carried out by:

- | | |
|--|--------------------------------|
| a-Transverse binary fission and multiple fission | b- Longitudinal binary fission |
| c- Autogamy | d- Syngamy |

تابع الصفحة التالية

G) **Problem solving question:(5 Marks)**

During your trip to Port-Saeid city one of your friends screamed during swimming in the sea and you went to him quickly and find that his arms are inflamed with red lines and he has powerful pain. What happen to him and how can you give him a hand?

Part 4: Platyhelminthes and Nematodes (40 Marks)

I- **Answer the following question: (30 marks; 10 marks each)**

- 1- Mention 5 differences between the 2 species of *Schistosoma*?
- 2- Describe the structure unites of the excretory system in both trematode and nematode.
- 3- Discuss the body wall structure in different 3 classes of platyhelminthes.

II- **Choose the correct answer:(5 marks; 0.5 mark each)**

1. Which of the intestinal nematodes are transmitted by ingestion of eggs?

- a. *Schistosoma mansoni* b. *Ancylostoma duodenale* c. *Ascaris lumbricoides*

2. The posterior end of male *Ascaris* remains

- a. Cylindrical b. Straight c. Curve

3. Sperm are stored in

- a. seminal receptacles b. testis c. uterus

4. We can differentiate between *Taenia solium* and *Taenia saginata* by

- a. eggs b. gravid segment c. Width of worm

5. is a cestode which its life cycle does not require an intermediate host and transmission to the final host can occur directly from ingestion of the egg stages from proglottids.

- a. *Taenia solium* b. *Hymenolepis nana* c. *Hymenolepis diminuta*

6. The mode of transmission in *Ancylostoma duodenale* occurred through

- a. Auto infection b. Penetration of the skin by filariform larvae (L3)
c. Penetration of the skin by rhabditiform larvae (L2)

7. The infective stage of *fasciola* sp.

- a. eggs b. larva c. encysted metacercaria

8. The infective stage of the *Taenia* sp. worms is

- a. cysticercus larva b. cercaria c. cyst

9. A term that refers to non-hermaphroditic helminths is

- a. Monoecious b. Heteroousenous c. Dioecious

10. Where are the adults of *S. haematobium*?

- a. Bile ducts b. Veins of rectum c. Veins of urinary bladder

III- **Define:(5 marks; 1 marks each)**

- 1- Opisthaptor
- 2- Oncosphere
- 3- Bothridia
- 4- Buccal cavity
- 5- Amphids

Best Wishes

EXAMINERS	PROF.DR. MOHAMAD MONA	PROF.DR.SAIED NOOR ELDIN
	PROF.DR. NAHLA OMRAN	PROF.DR. SAMAR HARRAS

حيوان در خامه



Tanta University Faculty of Science Department of Zoology			
Final Exam. for Sophomores (2 nd Year) students of Special Zoology			
1969	Course title:	Ecological Adaptations	Course Code: ZO 2107
Date:	3 / 1 / 2017	Semester: first	Total assessment Marks:150 Time allowed: 2 hours

Part 1 Answer the following questions

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First Question (51 marks)

A) Answer the following questions: (31 marks)

- 1- Write **three** structural adaptations of shark and frog. (4 marks)
- 2- Describe adaptations of four types of beaks and feet. (give examples) (8 marks)
- 3- What is the difference among hibernation, torpor, diapause and aestivation? (4 marks)
- 4- In worm environments birds and mammals employ some adaptations and strategies to maximize heat loss. (explain) (5 marks)
- 5- Write short notes on adaptation of chameleon. (5 marks)
- 6- How does its body covering adapt the animal to its environment? (5 marks)

B) Fill in the blanks with the appropriate words: (20 marks) 1mark for each blank

- 1- Thermoregulation is the ability of an organism to
- 2- Amphibians and reptiles cope with heat loss by and
- 3- is the blending of animals into their surroundings making the animal hard to see
- 4- There are two pathways which lead to the formation of a new species.....and.....
- 5- In automimicry, an animal mimics such as
- 6- Mammal can change insulation intensity by Birds can also lower their body temperature by
- 7- Physiological adaptation: A metabolic or.....
- 8- Structural adaptation: adaption that
- 9- When body temperature decreases below normal levels, is known as.....
- 10- An ostrich has long leg to..... and to provide more shade to eggs.


Second Question (24 Marks e) 2 marks each

Choose the correct answer

- 1- . Which one of these animals would be camouflaged in a pond?
a. frog b. deer c. monarch butterfly d. an elephant
- 2- Ectothermic minimizing heat loss by.....
a. Convection b. Conduction c. Radiation & insulation d. all of them.
- 3- Which one of these behaviors does a tiger learn from its mother?
a. migration during winter months b. how to hunt for food
c. how to change its stripe show to defend itself
- 4- is a behavior that is not learned.
a. Camouflage b. Mimicry c. Instinct
- 5- A tiger's stripes are an example of
a. camouflage b. mimicry c. migration d. metamorphosis
- 6- Convergence of several unpalatable species called
a. Batesian mimicry b. Mullerian mimicry c. Automimicry
- 7- Animals who hibernate usually live in a cold _____.
a. Climate b. adaptation c. Instinct d. shelter
- 8- Behaviors that animals are taught are called ____ behaviors.
a. learned b. adaptive c. instinct d. inherited
- 9- Dogs pant to loose heat
a. behavioral adaptation. b. structural adaptation c. physiological adaptation
- 10- The top side of the animal is a different color from the bottom side.

المكتبة
 كلية العلوم - جامعة طنطا
 2017
 DEPARTMENT OF ZOOLOGY - Tanta

توان

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY			
	EXAMINATION FOR (SECOND YEAR) STUDENTS OF ZOOLOGY			
COURSE TITLE:	ENTOMOLOGY		COURSE CODE:ZO 2105	
DATE	JANUARY, 2017	TERM: FIRST	TOTAL ASSESSMENT MARKS:150	TIME ALLOWED: 2 HOURS

Answer the following questions in your answer booklet

1. State whether the following sentences are true or false with correction (16 marks, each 2):

- 1.1. The antennae of white ants are moniliform type.
- 1.2. The fore wings of grasshoppers are membranous type.
- 1.3. The insects are characterized with the presence of three legs.
- 1.4. Prolegs are outgrowths of abdominal segments of caterpillars.
- 1.5. The immature stages of holometabolous insects are called naiads.
- 1.6. The moulting fluid contains chitinase and protease capable of digesting the endocuticle.
- 1.7. Mantids have the hind legs modified to grasp the prey.
- 1.8. The lace-wing is a hard, vein less and shell-like wing.

2. Fill in the blanks below with the appropriate words (21 marks, each blank 1.5):

- 2.1 According to the geological time scale, insects appear 420 mya ago in the age.
- 2.2 If the terminal segment of antennae is suddenly enlarged, the type is termed.....
- 2.3 Predators and parasitoids are used in.....to reduce the numbers of insect pests.
- 2.4 In siphoning mouthparts, The food channel is formed between.....
- 2.5 The labrum of chewing type is bilobed plate moving.....
- 2.6 The cuticle is a noncellular layer secreted by....., It consists of three major layers,, exocuticle and endocuticle.
- 2.7 Campodeiform larvae are elongate and somewhat flattened with long cerci, antennae andthoracic legs.
- 2.8 In the.....pupa, the legs and wings are glued to the body which is covered by a cocoon.
- 2.9 Most insects move with a.....of fore and hind legs on one side and mid leg of the opposite side, while the opposite legs are fixed on the ground.
- 2.10 The integument of insects is an against many pathogens and insecticides.
- 2.11 The lateral area of the head below and posterior to the eyes is called.....
- 2.12 Insects belong to phylum.....and subphylum.....


3. Illustrate with fully-labeled drawings the mechanism of flight in insects. (8 marks).

4. Choose the right answers in the following (Total:15 marks, each 1.5):

- 4.1 The hind legs of grasshoppers are (collecting - swimming - jumping).
- 4.2 In the (frenulate - hamulate - jugate) coupling apparatus, tiny hooks of the hind wing fasten into a fold in the front wing.
- 4.3 The most common insects are (flies - butterflies and moths - beetles).
- 4.4 The (Drosophila - mosquito - butterfly) is a common model to study human diseases and Genetics.
- 4.5 Grasping-cutting mouthparts are present in the naiad of (dragonfly - mayfly).
- 4.6 The hind wing of Diptera is (halter - hairy - membranous).
- 4.7 The earwigs have powerful (cornicles - styli - forceps-like cerci).
- 4.8 The (genital - visceral - post-genital) region of insect abdomen includes the 8th and 9th segments in the females.
- 4.9 The (noncellular - internal - multicellular) integumentary processes are hollow outgrowths of the integument lined with epidermal cells.
- 4.10 Insects produce valuable products such as (honey and wax - stories and films - jewelry).

علم حيوان عام

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	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY			
	EXAMINATION FOR SOPHOMORES (SECOND YEAR) STUDENTS OF ZOOLOGY			
1969	COURSE TITLE:	ZOOGEOGRAPHY		COURSE CODE: ZO 2113
DATE: 10	JAN, 2017	TERM: FRIST	TOTAL ASSESSMENT MARKS: 100	TIME ALLOWED: 2 HOURS

Answer the following questions:

I-A- Choose the correct answer:

(25 marks)

- 1- Causes of dispersal refer to:
 - a. excess of favorable homeostasis.
 - b. occurrence of food supplies.
 - c. opening up of new areas elsewhere.
 - d. all the above.
- 2- Over periods of a few hundred years, the species richness of an area is influenced by
 - a. the parsimonious hypothesis.
 - b. the disappearance of species already present.
 - c. oceanic and continental islands.
 - d. all of the above.
- 3- Which of the following is not true of islands?
 - a. species richness is not always less than that in an equivalent area on the nearest mainland.
 - b. species richness is positively correlated with island size.
 - c. species richness is positively correlated with distance from the mainland.
 - d. all of the above.
- 4- Which of the following is not true of Savanna Biome?
 - a. they have few species of baboons.
 - b. reptiles and amphibians are poorly represented.
 - c. jerboas are represented in a variety of species.
 - d. social life is well represented.

I-B- Species richness is related to rates of immigration and extinction. Explain!

II-Write an essay about the following:

(25 marks)

- Classes of barriers.
- The main groups of animals in Mountain biome and the adaptation to resist the climate.

III-(A) Complete the following statements:

(25 marks)

- 1-Earth biogeographic regions are.....
- 2-Altitudinal distribution includes.....

(B) Write short notes on:

- Aspects of the distribution of an organism.
- Broadcasting in zoogeography.

IV- Write short notes on Zoogeographical regions.

(25 marks)

Best wishes!

٢٥	PROF. DR. ABDEL-NAIEM I. ALASSIUTY	PROF. DR. MOHAMED A. KHALIL
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علم تنوير

Zoology Department
Faculty of Science
Tanta University



Exam of Animal Biotechnology
Date: January 5, 2017

Level: 2, Special Zoology, First Semester
Time allowed: 2 hours

Course Code: ZO211
Total mark: 100

Examiners: Prof. Mohamed Labib Salem and Dr. Mohamed Nassef

QUESTION 1: Complete the blanks with appropriate word(s) (20 marks)

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- 1- In.....gene therapy, genetic alterations will be passed down to future generations (heritable).
- 2- In DNA translation, proteins called..... are required to bring all the translation components together.
- 3- Most REases recognition sites are.....that means REases - sequence reads the same in a 5'--->3' direction on each strand.
- 4-are different REases that recognize the same DNA sequence and cleave at the same positions, while.....are different REases that have slightly different recognition DNA sequences but upon cleavage generate identical DNA termini, while.....are different REases that recognize the same nucleotide sequence but cleave at different positions in the DNA
- 5- In most multicellular organisms, mitochondrial DNA (mtDNA) is.....inherited.
- 6- technique used to distinguish between the individuals of same species by their DNA fragmentation
- 7- In DNA translation, when a ribosome reaches a stop codon on mRNA, A site of the ribosome accepts a protein called.....instead of tRNA.
- 8- The chances of two people having exactly the same DNA profiling is 30,000 million to 1, except for
- 9- During RNA processing, the process of introns removal and joining together of exons is called.....,while capping process means addition of.....to.....end of mRNA.
- 10- Creating new skin tissue for burn patients is an example of.....cloning.
- 11- In.....gene therapy, genetic alterations are restricted to that individual and will not be passed down to future generations (non-heritable).
- 12-is the delivery of therapeutic gene into a patient's cells to treat disease.
- 13- In DNA translation, when a ribosome reaches a stop codon on mRNA, A site of the ribosome accepts a protein called.....instead of tRNA.
- 14- Bacterial DNA is not damaged by viral DNA infection due toof certain bases atthat is performed by enzymes called.....

QUESTION 2: Choose the best answer(s) (20 marks)

- 1- belongs to REases type III
a. EcoPI and EcoP15I b. EcoKI and EcoAI c. EcoRI and Hind III
- 2- The human genome includes.....
a. all the genes b. all the nucleotides c. all the bases d. None of the previous
- 3- Dolly was created by transferring the nucleus of a mammary cell from an udder to.....
a. enucleated ovum b. enucleated fertilized egg c. none of the previous
- 4- A restriction enzyme cuts DNA at.....
a. specific sites b. sites with repeat nucleotides c. single nucleotides d. random sites
- 5- Junk DNA is DNA which.....
a. does not code for proteins b. is functionless c. codes for harmful genes
- 6- A restriction fragment is a piece of DNA which.....
a. contains repeated nucleotide sequences b. contains a gene
c. breaks up DNA at specific sites d. codes for a protein
- 7- The human genome includes
a. all the genes b. all the nucleotides c. all the bases
- 8- In human genome project, DNA sequencing aims to find
a. nucleotides sequence b. genes sequence c. events sequence in DNA replication
- 9- A cloned organism would be genetically most similar to its
a. somatic nuclear donor b. paternal gene donor c. haploid nuclear donor.
- 10- Methylase enzyme adds..... to adenine or cytosine bases within the recognition site of DNA
a. Methyl group b. Hydroxyl group c. carboxylic group d. None of the previous
- 11- The proportion of human DNA which codes for proteins is
a. 3-10% b. 10-20% c. 50-80% d. 80-90%
- 12- Gene "knock-out and Knock-in" technology is an example of..... Biotechnology
a. Animal b. Forensic c. Bioremediation d. Medical
- 13-.....enzyme degrades the RNA primer and replaces it with DNA
a. DNA polymerase I b. DNA polymerase III c. RNA primase d. None of the above

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