



Final Examination in Botany  
Second Term: May . 2015

Educational Year: 1<sup>st</sup> Level

Program : Biotechnology

Subject: ( N 103 )

Courses: Basics of Plant Physiology

Time: 2 hrs

Date: 16 / 5 / 2015

Full mark: 60

Question mark: 15

Answer the following questions:

Part I

Q1 I.- Put right (  $\checkmark$  ) or wrong ( x ) for the following statements and correct the wrong : ( 10 Marks )

- 1-Flocculation is the removal of the electric double layer. ( )
- 2- Guttation occurs when water absorption exceeds the rate of transpiration . ( )
- 3-Plant cell becomes plasmolysed when put in isotonic solution. ( )
- 4- Active absorption of water depends on evaporation. ( )
- 5- High concentration of alcohol causes an irreversible increase in permeability. ( )
- 6-Suger converts to starch by phosphorylase enzymes at  $\text{pH} > 7$  . ( )
- 7- The state of Sol converts to Gel by decreasing temperature . ( )
- 8- Development of water diffusion pressure deficit in leaves due to Transpiration . ( )
- 9- Adsorption is a character of the colloid . ( )
- 10- Increasing in wind velocity causes decline in transpiration. ( )

II- Complete the missing in the following : ( 5 Marks )

- 1- Origin of the charge on colloidal particles was due to ..... OR .....
- 2- The ascent of sap depends on the following forces .....&.....
- 3- Methods for measuring Transpiration .....&.....
- 4- Two roles of osmosis in plant life .....&.....
- 5- Factors affecting the rate of respiration .....,.....,.....

Q2 Discuss each of the following (15 Marks)

- 1- Dynamics of water movement between plant cell .
- 2- The mechanism of opening and closing of stomata.
- 3- Roles of osmosis in plant life.
- 4- The permeability of electrolytes through plasma membrane .
- 5- Factors affecting water absorption.

P.T.O→

## Part II

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**Q3 ) Account on THREE only of the following : ( 15 Marks )**

- a- Nature of enzyme action .
- b- Activators and inhibitors of enzyme action .
- c- Hydrolases ( hydrolytic enzymes ) .
- d- Effect of the accumulation of the end products on the enzyme action .

**Q4 ) Throughout the different reactions in calvin –Benson cycle, give an account of fixation of CO<sub>2</sub> ( Light independent reactions ) during photosynthesis .**

**( 15 Marks )**

**Good Luck .**

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**Examiners:**

**Prof.Dr.OmarA. El-Shehaby   Prof.Dr. Wafaa M. Shukry**





Final Examination, Second Semester, May, 2015.

Education Year: First  
Time: 2 Hours  
Date: 19 \ 5 \ 2015  
Code: Z101

Program: Biotechnology  
Subject: Zoology  
Courses: Biological Diversity  
Total mark: 60

**Question No. One:**

**A. Choose the correct answer of the following: (5 Marks)**

- 1- Phylum chordate gains its name because the formation of ..... during the embryonic stage.  
a- Nerve cord                                      b- notochord                                      c- myotomes
- 2- Duration of germinal period of mammalian embryo is about .....  
a- 18-21 days                                      b- from 4th to 8th week                                      c- from 3rd month till birth
- 3- The indifferent embryonic gonads are differentiated into male gonads under .....  
a-SRY gene                                      b- XY chromosome                                      c- XX chromosome
- 4- Mammalian embryos have one more embryonic membrane than amniotic ones .....  
a- chorion                                      b- yolk sac                                      c- placenta
- 5- Female reproductive system of mammals has a modified organ for baby developing, it is ...  
a- oviduct                                      b- uterus                                      c- ovary

**B. Compare the heart and blood circulation in the larva and adult Frog. How does the heart differ in the crocodile? (5 Marks)**

**C. Answer the following questions: (5 Marks)**

- 1- What are the four distinctive characteristics of the chordata?
  - 2- Why are the Lampreys and Hagfishes regarded as the lowest vertebrate line?
- .....

**Question No. Two:**

**A. Compare between Bony Fishes, and Aves referring to their exo- and endo-skeleton, structure of heart, respiration tools and adaptation with the surrounding environments. (10 Marks)**

**B. Write a short note of the following: (5 Marks)**

- 1- Advanced characters of Reptilians over Amphibians.
  - 2- Some types of Amphibians.
- .....

**Question No. 3: Choose the correct answer: (15 Marks, each with 0.5 mark)**

1- He Classified animals according to the presence or absence of blood

- A. Carl Linnaeus    B. Aristotle    C. John Ray    D. MFA

2- He is the first to divide animals into 7 taxonomic ranks:

- A. Carl Linnaeus    B. Aristotle    C. John Ray    D. MFA

3- Sexual reproduction in Protozoa occurred by

- A. binary fission    B. budding.    C. conjugation.    D. syngamy.    E. (C & D)

4- *Amoeba proteus* moves by

- A) Flagellum    B) Cilia    C) Pseudopodia    D) No Locomotory organ

5- *Amoeba proteus* feeds on

- A) Soluble substances    B) Solid organic substances  
C) Blood    D) Inorganic substances

6- It is a multiplication of *Amoeba proteus* without encystment during unfavorable conditions. Spores are formed internally.

- A) Sporulation    B) Binary fission    C) Multiple fission    D) Conjugation

7- *Entamoeba histolytica* lives in

- A) Small intestine of Man    B) Large intestine of Man  
C) Blood    D) Free-living in fresh water

8- The infective stage of *Entamoeba histolytica* parasite is the

- A) Cyst with 8 nuclei    B) Cyst with 2 nuclei    C) Trophozoite    D) Cyst with 4 nuclei

9- *Euglena* uses Saprophytic or saprozoic nutrition in

- A) The absence of sunlight    B) Presence of sunlight  
C) Presence of water    D) Absence of water.

10- *Euglena* shows some characters of plants such as

- A) Chloroplasts    B) Pellicle    C) Myonemes    D) Binary fission

11- The final host of *Plasmodium* is

- A) Female Anopheles    B) Tse tse fly    C) Man    D) Male Anopheles

12- *Plasmodium* is an important protozoan parasite of man causing

- A) Malaria    B) Sleeping sickness    C) Dysentery    D) Liver disease

13- *Paramecium* moves by

- A) Cilia    B) Flagella    C) Pseudopodia    D) Sliding movement

14- Sensitivity of light is achieved by ..... in *Euglena*.

- A) Contractile vacuole    B) Flagellum    C) Chloroplast    D) Eye Spot



15- Female *Anopheles* pours saliva when biting Man for.....

- A) Increase blood flow                      B) Preventing blood coagulation  
C) Decrease blood flow                      D) A & B

16- *Euglena* is considered an animal because it has .....

- A) Myonemes,                      B) Eye-spot,                      C) Cytostome                      D) All of them

17- Male *Anopheles* can't transmit *Plasmodium* because ...

- A) It doesn't have sucking proboscis                      B) It doesn't have piercing proboscis  
C) A & B                      D) It doesn't have wings.

18- Released from ruptured RBCs in *Plasmodium* infection.....

- A) Sporozoites                      B) Zygote                      C) Haemozoin granules                      D) Ookinate

19- The result of the conjugation process in *Paramecium* is the formation of

- A) 2 *Paramecia*                      B) 4 *Paramecia*                      C) 8 *Paramecia*                      D) 3 *Paramecia*

20- Classification of Protists Phyla was done according to:

- A) Morphology                      B) Nutrition                      C) Locomotion                      D) Reproduction

21- Spicules in Class *Calcarea* are made up of .....

- A) Calcium carbonate                      B) Silica                      C) Spongin fibers

22- ..... type of sponges is the simplest type.

- A) Asconoid                      B) Syconoid                      C) Leuconoid

23- Asexual reproduction of sponges is through.

- A) Budding                      B) Conjugation                      C) Syngamy

24- Locomotory structure in *Mollusca* is represented by

- A) Muscular foot                      B) Cilia                      C) Flagella                      D) Appendages

25- Visceral hump in *Mollusca* is covered by a thin, fleshy fold called

- A) Mantle;                      B) Shell                      C) Foot                      D) Plate

26- *Fasciola gigantica* is .....

- A) Endoparasite                      B) Ectoparasite                      C) free - living

27- *Schistosoma* male has a unique ..... canal in which a female worm resides.

- A) Gynaephoric                      B) Digestive                      C) Defensive

28- *Taenia* lives in .....

- A) Large intestine                      B) Small intestine                      C) Blood                      D) fresh water

29- Locomotory organs in *Arthropoda* represented by segmentally arranged .....

- A) Cilia                      B) tentacles                      C) Muscular foot                      D) Appendages

30- Vector of *Plasmodium* is .....

- A) House fly                      B) Female *Anopheles*                      C) Tse Tse Fly                      D) Non

#### Question No. 4

##### A. Mark (✓) or (X) for the following statements: (10 Marks, each with 0.5 mark)

- 1) Protozoa are multicellular prokaryotic animals.
- 2) Encystment in Protozoa occurs under unfavorable conditions.
- 3) The infective stage of *Entamoeba gingivalis* is the trophozoite.
- 4) *Euglena* doesn't need a contractile vacuole as it lives in fresh water.
- 5) The micronucleus in *Paramecium* has a major role in conjugation process.
- 6) *Plasmodium* has two sexual cycles in the human body.
- 7) The infective stage of *Plasmodium* is called sporozoite.
- 8) The food vacuole in protozoan animals secretes the digestive enzymes.
- 9) The fever in *Plasmodium* infection is a result of complete cycle in RBCs.
- 10) Members of Phylum Porifera are sessile.
- 11) Cnidaria are triploblastic animals.
- 12) Digestion in Cnidaria is both intracellular and extracellular.
- 13) One class of Cnidaria, the Hydrozoa consists of only polypoid forms.
- 14) In Platyhelminthes, the body cavity is absent.
- 15) *Fasciola gigantica* is free living worm.
- 16) *Taenia* is hermaphrodite parasite.
- 17) Transmission of *Ascaris* occurs by biting of mosquito.
- 18) Annelida has a closed circulatory system.
- 19) Digestive system in *Annelida* is incomplete.
- 20) Respiratory organs in Diplopoda are lungs

##### B. Complete the Following sentences with the suitable words: (5 Marks, each 0.5 Mark)

- 1- The fast movement in *Euglena* is by .....
- 2- The result of binary fission in *Paramecium* is the formation of ..... individuals.
- 3- Osmoregulation in fresh-water Protozoans is achieved by .....
- 4- Cnidaria have hollow structures called tentacles used for ..... and ...
- 5- For locomotion, the *Hydra* utilizes three different methods, ....., ....., and ....
- 6- The habitat *Fasciola gigantica* are the ..... and the .....

إنتهت الأسئلة

With our best wishes

Assist. Prof. Dr. Manal Mohamed Ramadan &

Assist. Prof. Dr. Mohamed Fathy Abouel-Nour





Second Semester Examination in Culture Subject

May 2015

Educational Level: First level

Program: Biotechnology and Applications  
(New and Specific)

Subject: CS (104)

Course(s): Principles of culture of human rights

Time: 2 hrs

Date: 23 /5 /2015

Full mark: 80

أجب عن الأسئلة الآتية:

السؤال الأول "حقوق الانسان: مكفولة دوليا- تتمتع بحماية قانونية - تركز على كرامة

الكانن الانساني - لا يمكن التنازل عنها أو الحرمان منها"

اشرح كل خاصية من هذه الخصائص مع ذكر مثال واحد. (٢٥ درجة)

السؤال الثاني من الذى يقوم برصد حقوق الانسان على المستوى الوطنى و على المستوى

الدولى و ما هى عمليات الرصد؟ (٢٥ درجة)

السؤال الثالث ما معنى اجراء تعسفى من منظور حقوق الانسان - اشرح كل معنى من معانى

اجراء تعسفى. (١٥ درجة)

السؤال الرابع اذكر ما تعرفه عن: عقد الأمم المتحدة للتثقيف فى مجال حقوق الانسان

(١٩٩٥-٢٠٠٤) (تعليم حقوق الانسان).

تمنياتى بالتوفيق

أستاذ المادة

أ.د/ محمد نجيب عبد الغنى حسنين

د/ ميرفت حسنى حسين



Final Examination in Botany  
Second Term: Jun 2015

Educational Year: First Level

Program (Branch): Biotechnology

Subject: Bot (105)

Course(s): Introduction to Plant Ecology & Taxonomy

Time: 2 hrs Date: 6/6/2015

Full mark: 60

Question mark: 20

Answer the following three questions:

Q1: Answer the following: (20 marks)

a- Give one important difference between the following pairs:

- i. Solanaceae and Convolvulaceae.
- ii. Caesalpinoideae and Papilionoideae.
- iii. Corymb and Umbel inflorescences.

b- Describe the following taxonomic terms and relates each to its family:

- 1- Spike .
- 2- Monadelphous stamens.
- 3- Gynophore.
- 4- Monochlamydous flower.

Q2:

[A]

1- With the help of floral diagram and floral formula discuss the characters of *Hibiscus* flower. (5 marks)

2- Shortly describe the types of simple dry dehiscent fruits. (5 marks)

[B]

1- Mark the following sentences by true (✓) or false (×) (5 marks)

1. Obligatory halophytes requiring salinity throughout their life.
2. In the evolution of vegetation the aggregation of plants led to competition.
3. A vertical section of soil through all its horizon termed as soil profile.
4. Capillary water is the water combined with chemicals in soil.
5. Drought escaping plants are short lived plants called ephemerals.
6. Synecology is the science studies the relations between individual plant and its habitat.

2- Write short note on soil water. (5 marks)

Q3:

[A] Give an account on community dynamics. (10 marks)

[B] Illustrated with drawing only: (10 marks)

1. Hydrosere succession.
2. Xerosere succession.

Examiners:

Prof. Dr. Mohamed E. Abu Ziada

Dr. Yasser A. El-Amier