

امتحانات الفرقة

الاولى

( الترم الاول )

سنوات سابقة

**Complete the followings:****15 marks**

- 1- Protozoa move by .....  
a- legs      b- moving organelles      c- hands
- 2- Digestion in Coelenterata is .....  
a- Extracellular and intracellular      b- internal      c- enzymatic
- 3- Platyhelminthes have ..... animals  
a- parasitic      b- free living      c- both a & b
- 4- Nematodes move by .....  
a- legs      b- body muscles      c- hands
- 5- Annelids are .....  
a- hermaphrodites      b- sexually separated      c- both a & b
- 6- Arthropods are characterized by .....  
a- chitineous endoskeleton      b- chitineous exoskeleton  
c- no skeleton
- 7- Sense organs in arthropods include .....  
a- Sensory cells      b- nerve cells      c- antennae
- 8- Molluscs are characterized by presence of .....  
a- Mantle      b- Cilia      c- viscera
- 9- Subphylum Vertebrata belongs to phylum .....  
a- Chordata      b- Metazoa      c- Vertebrata
- 10- Sponges are .....  
a- asymmetrical      b- bilaterally symmetrical      c- pentasymmetrical
- 11- Post anal tail of chordates function is .....  
a- movement and balance      b- locomotion      c- running
- 12- Chordates have four ..... limbs  
a- Modified      b- attached      c- loose
- 13- Chordates are characterized by sexual .....  
a- Tri-morphism      b- uni-morphism      c- di-morphism
- 14- Molluscs use ..... to move  
a- legs      b- foot      c- appendages
- 15- Phylum Porifera belongs to subkingdom .....

- a- Protozoa                      b- Parazoa                      c- Metazoan
- 16- Excretion of Platyhelminthes by.....
- a- Kidney                              b- Ostia                              c- Flame cell
- 17- Protozoa are.....organisms.
- a- Coelomate                              b- Unicellular                              c- Segmented
- 18- The skeleton of the sponges composed of.....
- a- Both b and c                              b- Spines                              c- Fibres
- 19- Tentacles of Coelenterate animals serve for.....
- a- Defence                              b- Food                              c- Both a and b
- 20- Respiration of Arthropoda by.....
- a- Body surface                              b- Trachea and gills                              c- Coxal gland
- 21- The body of Annelida are.....
- a- Segmented                              b- unjointed                              c- one unit
- 22- Mollusca possess.....symmetry
- a- Five- sided symmetry                              b- Bilateral symmetry                              c- Tetradial
- 23- Circulatory system of Aschelminthes is .....
- a- Open                              b- Closed                              c- Absent
- 24- The mantle of Mollusca secretes.....
- a- Shell                              b- Cuticle                              c- Hairs
- 25- Anterior part of central nervous system of chordata protected by .....
- a- Coelom                              b- Skull                              c- Hair
- 26- Kidneys of mollusca serve for .....
- a- Locomotion                              b- Feeding                              c- Excretion
- 27- Sponges are represented by.....type.
- a- One                              b- Three                              c- Six
- 28- .....are controlled by a water vascular system in Echinoderms.
- a- Contractile vacuole                              b- Tube feet                              c- Shell
- 29- Sponges have a characteristic cell .....
- 1- Digestive cell                              b- Gut                              c- Choanocyte
- 30- Coelenterata possess....., which used for paralyzing the prey

امعة المنوفية  
جامعة الطب البيطري - الفرقة الأولى  
الدراسي الأول (2020/2021) حان

Biology

Botany (1.5 h/ 30 Marks)

Date

Exam Time

## MORPHOLOGY & MEDICINAL PLANTS

I. Give the Scientific concept for each of the following sentences:

(10 Marks)

1. Buds that are covered with scale leaves.
2. Plants which live for more than two years.
3. When the flowers are unisexual and both sexes occur on the same plant.
4. Stems that grow horizontally in all directions along the soil surface.
5. Special organs used by certain plants to be united to their hosts for their nutrition.
6. Plants which give rise to a serious departure from normal health when eaten by animals.
7. When the axis grows indefinitely bearing the flowers either directly on itself or on its branches.
8. Plants live where the water supply is scarce and the conditions are dry
9. Metamorphosed stems which function in photosynthesis.
10. Plants which are soft and have no woody part above ground.

II. Put (√) or (X) on front of the following sentences and correct the wrong ones:

(5 Marks)

1. Seeds of *Datura stramonium* contain toxic substances called coumarins.
2. Climbing roots produced by plants that inhabit muddy swamps poor in oxygen.
3. Sweet clover had a toxic alkaloid called solanine.
4. Adventitious roots are those which derived from the radical.
5. Monopodial branching is one in which the growth of the main stem is definite and further growth of plant is carried by the axillary buds.

Best wishes  
Dr/ M. El-Lithy

## PLANT CYTOLOGY & PHYSIOLOGY

I- Explain with drawing oxidation of ~~pyruvate in presence of oxygen~~ and the amount of energy produced. (5 Marks)

II- Choose the correct answer:

(5 Marks)

1- Respiratory enzymes are located in \_\_\_\_\_

(a) Mitochondria

(b) Outer membrane

(c) Chloroplast

(d) None of the above

2- Highest concentration of auxin exists in \_\_\_\_\_

(a) At the base of various plant organs

(b) Growing tips of plants

(c) In leaves

(d) In xylem and phloem cells only

3- The non protein portion of enzyme called \_\_\_\_\_.

(a) Apoenzyme

(b) Prosthetic group

(c) Activator

(d) Substrate

4- Abscissic acid acts antagonistic to \_\_\_\_\_

(a) NAA

(b) IAA

(c) 2,4-D

(d) GA

5- In addition to auxin, a \_\_\_\_\_ must be supplied to culture media to obtain a good callus in plant tissue culture.

(a) Cytokinin

(b) Abscissic acid

(c) Vitamins

(d) Ethylene

III- Complete the following sentences:

(5 Marks)

1- Splitting of glucose in cytosol produce two ..... and the process called.....

2- The process of water uptake by substance that do not dissolve in water but substances swell is called .....

3- The ratio of the volume of  $\text{CO}_2$  evolved to the volume of  $\text{O}_2$  consumed in respiration called .....

4- ..... gives colour to flowers and fruits.

5- The organelle which surround and support plant cell is .....

With all my best wishes

Dr. Dina A. Gad



Answer All the following questions

I Complete the following sentences (15 points):

- 1- The Triploblastica is subdivided into three groups which are.....
- 2- Respiration occurs by ..... in protozoan animals.
- 3- The Swedish scient ..... put the base of modern taxonomy and nomenclature.
- 4- *Euglena* is an autotrophic (Holophytic), while *Ameoba* is a .....
- 5- Phylum Potozoa is sub-divided into four classes which are.....
- 6- The ..... is the infective stage of *Entamoaba histolytica*.
- 7- Tse-tse fly is the vector of *Trypanosoma bruci* while the .....is the vector of *Trypanosoma cruzi*.
- 8- Phylum Porifera belongs to Sub-Kingdom .....
- 9- The phenomenon of alternation of generation in Coelenterates means.....
- 10- Excretion takes place by renet cells as in ..... but in Platyhelminthes occurs by flame cells.
- 11- The circulatory system is ..... in arthropod animals while it is a closed system in Annelida.
- 12- Phylum Arthropoda is subdivide into four classes which are.....
- 13- The insect body is divided into three distinct regions which are.....
- 14- The term cephalothorax in Crustacean animals means .....
- 15- In Arachnida, the body is distinguished into two regions namely .....

II Comment briefly on each of the following (7.5 points):

- 1- The general characters of Phylum Protozoa and Mollusca (6 points):
- 2- Illustrate the classification of animal kingdom above the Phylum (1.5 points).

In a Table form write, the infective stage, mode of infection or transmission, intermediate or vector, disease and diagnosis of each of the following parasites (7.5 points):

- a- *Trypanosoma bruci gambiense*
- b- *Trypanosoma cruzi*
- c- *Entamoaba histolytica*
- d- *Fasciola hepatica*
- e- *Ascaris lumbercoides*

Examiner:

Prof. / Hanem H. Sakr

Sakr H H

Best wishes



Course Title	Biology	Exam Date	12 / 01 / 2020
Department	Botany (1.5 h/ 30 Marks)	Exam Time	3 h

## PLANT CYTOLOGY & PHYSIOLOGY

**I- Complete the following (ONLY write word/words in your answer booklet):**

- A. ....<sup>(1)</sup>..... is the membrane surrounding cytoplasm of plant cell, while ....<sup>(2)</sup>..... is the membrane that surrounding plant vacuole.
- B. According to shape, crystals may be ....<sup>(3)</sup>..... or ....<sup>(4)</sup>..... or ....<sup>(5)</sup>..... or ....<sup>(6)</sup>.....
- C. The semi fluid matrix inside the nucleus is called ....<sup>(7)</sup>.....
- D. Secondary cell wall had additional substances such as ....<sup>(8)</sup>..... or ....<sup>(9)</sup>..... or ....<sup>(10)</sup>.....
- E. Plastids may be ....<sup>(11)</sup>..... or ....<sup>(12)</sup>..... or ....<sup>(13)</sup>.....
- F. The ....<sup>(14)</sup>..... combines with coenzyme to form complete enzyme system called ....<sup>(15)</sup>.....
- G. Pampers industry depends on the ....<sup>(16)</sup>..... property of colloids, while the ....<sup>(17)</sup>..... character of charcoal can be used in filters and fridge's industries.
- H. ....<sup>(18)</sup>..... produces bolting of rosette-forming plants.
- I. Isozymes means ....<sup>(19)</sup>....., while zymogens means ....<sup>(20)</sup>.....

**II. Chose one of the following sings (X or √) and correct the wrong ones:-**

1. Anthocyanins affects fruit-ripening.
2. Flavonoids act to inhibit the growth of buds lower down the stems (apical dominance)
3. Susy is the enzyme catalyzing the conversion of starch to glucose.
4. Betalains are compounds that positively influence cell enlargement.
5. Carotenes are a group of chemicals that influence cell division.
6. Ethylene plays a role in leaf and seed dormancy by inhibiting growth.
7. Agases are enzymes that catalyze splitting of water.
8. Pigments are used by plants to absorb or detect light.
9. Sugars have been shown to act as antioxidants.
10. α-amylases break down 1,6 glucosidic linkage in starch degradation.

# MORPHOLOGY & MEDICINAL PLANTS

## I- Complete the following sentences:

- 1- The leaf consists of ..... and .....
- 2- The primary roots originate from.....
- 3- Prostrate stems may be..... or .....
- 4- The tap root is most common in ....., while the adventitious root is most common in .....
- 5- A flower, which bears all the flower whorls is called .....
- 6- If the sepals are free from one another, the calyx is said to be .....
- 7- The carpel consists of ..... and .....
- 8- Seeds of *Ricinus communis* contain toxic substance called.....

## II- Define the following:

- |          |                    |                      |
|----------|--------------------|----------------------|
| 1- Bract | 2- Endosperm       | 3- Self-pollination  |
| 4- Seed  | 5- Biennial plants | 6- Respiratory roots |

## III- Put (✓) or (X) on front of the following sentences and correct the wrong ones:

- 1- A corm consists of one or more internode.
- 2- Turnip is an example of the fusiform roots.
- 3- Stamens of the andorecium may be united in the form of a tube.
- 4- Onion contains nitrates which considered toxic in high doses.
- 5- Endosperm is a diploid tissue.
- 6- Tomato leaves and stems contain toxic substance called solanine.

Best wishes

a-Mucous cell

b- Nematocyst

- Food vacuole

Put (✓) or (x):

**15 marks**

- 1-Platyhelminthes are acoelomate animals.
- 2- Some Chordata use flagella for movement.
- 3- Excretory system of molluscs is the mantle.
- 4- Mouth of coelenterates used for feeding only.
- 5- Nematocysts are used only for food capture.
- 6- Excretion in Protozoa is by simple diffusion.
- 7- Platyhelminthes are mostly hermaphrodites.
- 8- The characterized cell of sponges is choanocytes.
- 9- Nematodes are pseudocoelomate animals.
- 10-Annelids have two layers of muscles.
- 11-Arthropods move by legs.
- 12-Skeleton in molluscs is composed of shell.
- 13-Protozoa respiration is by body surface.
- 14-Coelenterates are free swimming only.
- 15-Nematodes are characterized by absence of cilia.
- 16-Nematodes are characterized by absence of cilia.
- 17-The protoplasm of protozoa is differentiated into ectoplasm and endoderm.
- 18-The nervous system of porifera consist of one or more network.
- 19-Molluscan animals are filter feeders only.
- 20-The excretion of Aschelminthes is by Renettes.
- 21-The body of chordate animals covered by feathers or hair.
- 22-The gut of Platyhelminthes has mouth only.
- 23- The circulatory system of annelida is closed.
- 24-Body of Mammals covered by scales.
- 25-The genital opening and anus open in the mantle cavity of .
- 26-Vertebrate animals have complete digestive system with accessory glands.
- 27- The body of porifera is perforated by numerous ostia.
- 28- Annelids are segmented animals with jointed appendages.
- 29-Asexual reproduction of protozoa is by binary and multiple fission.
- 30-Chordata are triploblastic acoelomate animals.

With our best wishes.

Prof. Sherin sheir

Associ.Prof. Hoda El sheikh

Sherin sheir Hoda Elsheikh

ماد

بسم الله الرحمن الرحيم



Menoufia University

Faculty of Veterinary Medicine

Final Exam. (First year) 22/1/2020

Course: Biophysics

### Important Notes

Could you Please read the following:

- \* The exam consists of 4 questions in 4 papers.
- \* Answer all questions.
- \* Time allowed is 2 hours.
- \* Show work on all problems.
- \* Show a labeled diagram and all work including units.
- \* Please explain any nonstandard notation.
- \* The exam is graded out of 30 points.
- \* The exam contains 3 points bonus.
- \* Mark explicitly which questions are and are not to be graded if you attempt all in question number IV.
- \* No textbooks, cheat sheets or other examination aids are permitted

At last, I wish all of you a Good Luck.

A. Eladaw  
Prof. Dr. Amin El Adawy

I. [ 3 Points and 10 minutes ] Could you please answer true or false the following:

1. At the steady state of any liquid, its velocity is greater than the critical velocity.
2. The decay modulus of the radioactive matter is  $T^{-2}$ .
3. The decay constant of a radioactive element is directly with its half life time.
4. The decay constant of a radioactive element depends on the age of the nucleus.
5. The fundamental intervals divided into 100, 80, and 180 parts in Celsius, Fahrenheit, and Reaumur scale, respectively.
6. Skin temperature easily determined by clinical thermometer.

II. [ 2 Points and 10 minutes ] Write down the scientific word of the following:

1. It is dependent on the surface area of the liquid, the distance away from the static layer and the velocity with respect to the static layer.
2. It cannot give you the numerical value of constants of proportionality that may appear in an algebraic expression.
3. It is the ratio between the lateral contractions per original diameter and the longitudinal extension per original of any material.
4. In the elastic region the stress is directly proportional to the strain.

III. [ 10 points and 30 minutes ] Choose the correct answer and could you please give a reason of the following:

1. A particle moves in a circular path of radius  $r$  with speed  $v$ . If it increases its speed to  $2v$  while traveling along the same circular path. The centripetal acceleration of the particle has changed by a factor of

- (a) 0.25                                      (b) 0.5                                      (c) 2  
(d) 4    (e) impossible to determine.

2. Which of the following equations are dimensionally correct?

- a-  $V_f = V_i + ax$   
b-  $Y = (2m)\cos(kx)$ , where  $k = 2m^{-1}$   
c-  $Y = A \sin \omega t + B \tan \omega t + C \sin \omega t$

3. The volume of the flowing liquid in a tube per second is:

- a-  $V = \pi P x^4 / 8 \mu L$
- b-  $V = \pi P r^4 / 8 \mu L$
- c-  $V = \pi P (r^2 - x^2) / 8 \mu L$
- d-  $V = P (r^2 - x^2) / 4 \mu L$

4. In CGS-system of units, the unit of viscosity is:

- a-  $\text{Kg.m}^{-1}.\text{sec}^{-1}$
- b-  $\text{Gm.cm}^{-1}.\text{sec}^{-1}$
- c-  $\text{MLT}^{-1}$
- d-  $\text{ML}^{-1}\text{T}^{-1}$

5. The square's velocity of simple harmonic motion is equal to:

- a-  $\omega^2 A \cos \omega t$
- b-  $\omega A^2 \cos \omega t$
- c-  $\omega^2 A^2 (1 - \sin^2 \omega t)$
- d-  $\omega A \sqrt{A^2 - Y^2}$ .

6. Radiation is classifying to:

- a- Ionizing radiation
- b- Non ionizing radiation
- c- Ionizing and non ionizing radiation.

7. X-rays considered as:

- a- Particles
- b- Photons
- c- Phonons

8. X-rays for the naked eyes:

- a- Visible
- b- Invisible
- c- Dark.

9. If Power = work / time, the dimensions of power is:

a-  $\text{ML}^2\text{T}^{-3}$

b-  $\text{MLT}^{-1}$

c-  $\text{MLT}^{-3}$

10. Clinical thermometer reads from .....to.....:

- a-  $38^\circ\text{C} - 44^\circ\text{C}$
- b-  $35^\circ\text{C} - 42^\circ\text{C}$
- c-  $36^\circ\text{C} - 42^\circ\text{C}$ .

IV. [12 points and 70 minutes] Could you please answer (7) questions from the following questions:

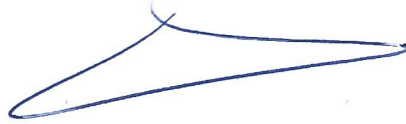
1. On the highway between Cairo and Alexandria, a car is traveling at a speed of 38 in./sec. Is this car exceeding the speed limit of 120 km/h. What if the driver is outside Egypt and is familiar with speeds measured in mil./h? What is the speed of the car in mil./h?
2. An auditorium measures 40.0 m x 20.0 m x 12.0 m. The density of air is  $1.20 \text{ kg/m}^3$ . What are (a) the volume of the room in cubic feet and (b) the weight of air in the room in pounds?
3. Deduce Poiseuille's equations for flow of liquids through tubes?
4. Define: Half life time, decay constant, and activity of a radioactive substance, then state the physical units of radioactive activity?
5. Write short notes on production of X-rays experimentally, then state the physical properties of X-rays?
6. A 0.500 kg block connected to a spring for which the force constant is 20 N/m oscillates on a horizontal.
  - Calculate the total energy of the system and the maximum speed of the block if the amplitude of the motion is 3 cm?
  - What is the velocity of the block when the position is 2 cm?
7. A cable used to support an actor as he swung onto the stage. Suppose that the tension in the cable is 940 N as the actor reaches the lowest point. What diameter should a 10 m long steel wire have if we do not want it to stretch more than 0.5 cm under these conditions? ( $E=2.5 \times 10^5 \text{ N/m}$ ).
8. Convert the following temperatures into Fahrenheit scale:  
345 °K, 375 °C, - 45 °C and 0 °K.
9. Deduce an equation to determine the temperature °C, on a scale employing any property X.

Best regards

*A. Eladawy*  
Prof. Dr. Amin El Adawy



بسم الله الرحمن الرحيم  
القرن العشرين



Menoufia University  
Faculty of veterinary medicine  
Course: Biophysics  
Final exam . Jan. 2021

### Important Notes

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- \* The exam is graded out of 30 points.
- \* The exam contains **Three** points bonus.
- \* Mark explicitly which questions are and are not to be graded if you attempt all in question number IV .
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At last, I wish all of you a Good Luck.

Prof. Dr. Amin El Adawy

A. El Adawy

**I. [5 min. and 3] Could you please answer true or false the following?**

1. The unit for the bulk modulus of elasticity is  $\text{N/m}^2$
2. The dimension of kinetic energy is  $\text{ML}^2\text{T}^{-2}$ .
3. If I increase the size of a solid body that falls into viscous liquid, the coefficient of viscosity will increase.
4. Unit of mass attenuation coefficient is  $\text{cm}^{-1}$
5. X- rays have low penetration power.
6. Ionizing radiation doesn't contain photons as it is uncharged.

**II. [15 min. and 6 points] Write down the scientific word of the following.**

1. It is depend on the surface area of the liquid, the distance away from the static layer and the velocity with respect to the static layer.
2. A traveling wave or pulse that causes the elements of the medium to move perpendicular to the direction of propagation.
3. The friction force which keeping the velocity gradient equal to unity through a surface area equal to unity.
4. It is the ratio between the lateral strain and the longitudinal strain of any material.
5. In the elastic region the stress is directly proportional to the strain.
6. The thickness which reduces the intensity of the incident beam by one – half

**III. [20 min. and 6 points] Choose the correct answer and could you please give a reason of the following.**

1. The property of an object which causes it to be no restored to its original shape after distortion is:
  - a. Stress
  - b. Strain
  - c. Elasticity
  - d. Inelasticity
2. Which of the following equations are dimensionally correct?
  - a.  $V_f = V_i + ax$
  - b.  $Y = (2m) \cos(kx)$ , where  $k = 2\text{m}^{-1}$
  - c.  $Y = A \sin wt + B \tan wt + C \sin wt$ .

3. The volume of the flowing liquid in a tube is:

- a.  $V = \pi P x^4 / 8 \mu L$
- b.  $V = \pi P r^4 / 8 \mu L$
- c.  $V = \pi P (r^2 - x^2) / 8 \mu L$
- d.  $V = P (r^2 - x^2) / 4 \mu L$

4. In CGS- system of units, the unit of viscosity is:

- a.  $\text{Kg.m}^{-1}.\text{sec}^{-1}$
- b.  $\text{gm.cm}^{-1}.\text{sec}^{-1}$
- c.  $\text{MLT}^{-1}$
- d.  $\text{ML}^{-1}\text{T}^{-1}$

5. According to Newton's equation of viscosity, if a solid body move into viscous liquid, then the stress of the liquid on the body increase, the velocity gradient will

- a. increase
- b. decrease
- c. keep const
- d. none of above

6. X- rays are electromagnetic waves with ..... wavelength between..... to ..... $\text{\AA}^0$

- a- very short, 0.01 – 10
- b. very long, 0.1 – 10
- c. very short, 0.1 – 100
- d. very long, 0.01 – 100

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**IV. [ 80 min. and 12 points] Could you please answer only 6 from the following questions.**

- 1. Define the decay constant  $\lambda$ , then mention its properties.
- 2. Write short notes on the physical quantities and the properties of X-ray?
- 3. Write the mathematical formula for each of the following:

Half life time  $T_{1/2}$  ,

activity of radioisotope,

effective half - life

4. Write about the construction of a temperature scale, then prove that

$$t = \frac{(X_t - X_0)}{(X_{100} - X_0)} ^\circ\text{C}$$

5. Deduce Poiseuille's equations for flow of liquids through tubes.

6. Derive the dimensions of the following quantities:

- Viscosity modulus
- Plank's constant
- Gravitational constant
- Power
- Decay's modulus.

7. Write in details about the absorption of X- rays.

8. Find the corresponding values of the temperature  $48^\circ\text{C}$  in Fahrenheit and Reaumur scales.



Menoufia University  
Faculty of Veterinary Medicine  
Anatomy and Embryology First Year

Date: 21.2.2021

Please answer the all following

First part the objective questions (60 questions/15 points)

Choose the correct answer

1- The fossa means.....			
A. Articular depression	B. Articular projection	C. Non-articular depression	D. Non-articular projection
2- Fovea means.....			
A. Articular depression	B. Articular projection	C. Non-articular depression	D. Non-articular projection
3- The detection of the position of heart in living animal is type of.....anatomy			
A. Applied	B. Gross	C. Developmental	D. Comparative
4- The articulation type between scapula and humerus bones of horse is.....joint			
A. Gliding	B. Ellipsoidal	C. Pivot	D. Hinge
5- In head, the .....plane divided the head into rostral and caudal parts			
A. Frontal	B. Transverse	C. Medial	D. Sagittal
6- The metaphysis is absent in .....bone			
A. Humerus	B. Scapula	C. Radius	D. Metacarpal
7- The spongy bones fill completely all bones except the .....			
A. Humerus	B. Scapula	C. Carpal	D. Sessamoid
8- The .....plane divides the body into dorsal and ventral parts			
A. Median	B. Sagittal	C. Frontal	D. Transverse
9- The articulation between radius and ulna of dog is.....			
A. Suture	B. Symphyses	C. Syndesmosis	D. Synovial
10- The first step of the oogenesis is observed during.....			
A. Ovulation	B. Fertilization	C. Puberty	D. Fetal life
11- The first group of cells involutes through the primitive streak form.....			
A. Ectoderm	B. Endoderm	C. Mesoderm	D. Hypoblast



Menoufia Uni  
Faculty of Veter  
Anatomy and Embryology



Date: 21.2.2021

allowed: 2 Hours

A. Ligament	B. Menisci	C. Articular surface	D. Marginal cartilage
13- The .....membrane in the chick embryo is the respiratory organ			
A. Chorioallantoic	B. Yolk sac	C. Chorion	D. Allantois
14- The holoblastic unequal cleavage is present in.....			
A. Frog	B. Mammals	C. Birds	D. Reptiles
15- The ox has..... metacarpal bones			
A. 2	B. 3	C. 4	D. 5
16- The muscle bundles is surrounded by.....			
A. Endomysium	B. Perimysium	C. Epimysium	D. Myofiber
17- The retinaculum is clear around.....joint			
A. Shoulder	B. Elbow	C. Carpal	D. Fetlock
18- The axial skeleton includes			
A. Skull	B. Ribs	C. Vertebrae	D. All of them
19- The structure of the somites is.....			
A. Mesoderm	B. Endoderm	C. Ectoderm	D. Trophoblast
20- The delamination of the inner cell mass forming.....			
A. Endoderm	B. Mesoderm	C. Hypoblast	D. Trophoblast
21- The number of carpal bone in ox is.....			
A. 4	B. 5	C. 6	D. 7
22- Eccentric implantation can be observed in.....			
A. Human	B. Rodent	C. Cow	D. Birds
23- The structure of allantois is.....			
A. Mesoderm	B. Endoderm	C. Somatopleure	D. Spalncchinopleure
24- The muscles of the intestinal wall are originated from			
A. Splanchnic mesoderm	B. Somatic mesoderm	C. Endoderm	D. Ectoderm
25- The deciduate placenta is present in.....			
A. Cow	B. Mare	C. Pig	D. Dog
26- The suture is type of .....joint			
A. Fib	B. Cartilaginous	C. Synovial	D. None of them



Assiut University  
Faculty of Veterinary Medicine  
Anatomy and Embryology First Year Exam, 2020/2021



Date: 21.2.2021

time allowed: 2 Hours

27- The finally matured ovum is observed at .....			
A. Fertilization	B. Ovulation	C. Implantation	D. Fetal period
28- During ovulation the ..... is released from the mature follicle of ovary			
A. Oogonium	B. Primary oocyte	C. Secondary oocyte	D. Mature ovum
29- The blood vessels of long bones includes			
A. Nutrient artery	B. Periosteal artery	C. Metaphyseal artery	D. All of them
30- The structure responsible for formation of synovia is			
A. Articular surface	B. Articular cartilage	C. Ligaments	D. Joint capsule
31- The right and left pelvic bone are attached by ..... joint			
A. Fibrous	B. Cartilaginous	C. Synovial	D. True
32- ..... is a solid mass of approximately 8 -16 blastomeres			
A. Blastula	B. Blastocyst	C. Gastrula	D. Morula
33- Inner cell mass is observed during the cleavage of.....			
A. Fish	B. Frog	C. Birds	D. Mammals
34- During cleavage of mammals the embryo is still surrounded by .....			
A. Granulosa cells	B. Inner cell mass	C. Blastocoel	D. Zona pellucida
35- The implantation of embryo into uterine tube is prevented by the.....			
A. Granulosa cells	B. Inner cell mass	C. Blastocoel	D. Zona pellucida
36- ..... is the formation of the three germ layers from the bilaminar embryo.			
A. Spermiogenesis	B. Cleavage	C. Gastrulation	D. Decidua
37- Specialized structure of mammals which separates the blood of mother from that of fetus.			
A. Trophoblast	B. Chorion	C. Decidua	D. Placenta
38- The sperm becomes mature and free itself from the Sertoli cells after.....			
A. Spermatogenesis	B. spermatocytogenesis	C. Spermiation	D. Spermiogenesis
39- Zona pelucida reaction is produced under the effect of the content of cortical granules off.....			
A. Ovum	B. Corona radiate	C. Sperm	D. None of them
40- Cleavage of polylecithal macrotelolecithal ovum is.....			
A. Holoblastic equal	B. Holoblastic unequal	C. Discoidal	D. Superficial

Choose the true (A) or false (B) sentences



**Menoufia University**  
**Faculty of Veterinary Medicine**  
**Anatomy and Embryology, First Year Exam, 2019/**

**Date: 21.2.2021**



**Hours**

41- Shoulder girdle region is consisted of, scapula, clavicle and radius	
42- Only dog has 5 digits while in other domestic animals the number of di	
43- Head is the articular surface of humerus and articulate with radius and	nt
44- The intertuberal groove is divided by the intermediate ridge in the humerus of horse and ox	
45- The primordial germ cells is derived from the endoderm of the yolk sac	
46- Each fore limb of the ox has 4 proximal sesamoid and 2 distal sesamoid bones	
47- Periosteum is fibrous membranes cover the surface of all types of bones	
48- Suture is fibrous joint can only be seen between scapula and humerus of small animals	
49- Synovial joints are the only joints that have a space between the adjoining bones	
50- The joint capsule present in some of synovial joints and absent the majority of it	
51- In incongruent joint the articular surfaces adapted to each other by the presence of ligaments	
52- In hinge joint one articular surface is ring moved around axis of other like elbow joint	
53- Striated voluntary muscle present in the wall of intestine	
54- Reduced long bone is a type of long bone but have very small central cavity as ulna	
55- The zona pellucida around zygote is removed immediately after fertilization	
56- Internal fasciae are thin soft tissue sheets lined abdominal cavity	
57- In contra deciduate placenta large amount of bleeding present after birth	
58- Compact bone is thick at the shaft and thin at extremities of scapula	
59- Mare and she camel have diffuse type of placenta	
60- Trophoblast is responsible for formation of all fetal membranes	

**Second part subjective questions (10 points) الاجابة فى كراسة الاجابة**

**Briefly describe with illustrations each of followings**

- 1- The fibrous joints
- 2- The gross anatomy and structures of long bone
- 3- Arrangement of skeletal muscle fibers
- 4- The steps of gastrulation of birds
- 5- Classification of placenta based on the distribution of chorionic villi and fate of the decidua



**Menoufia University**  
**Faculty of Veterinary Medicine**  
**Anatomy and Embryology First Year Exam, 2019/2020**



**Date: 1.1.2020**

**time allowed: 2 Hours**

**Please answer the all of following questions**

**First part the objective questions (40 questions/10 points) الاجابة في نموذج الاجابة الالكتروني**

Choose the correct answer			
1- The trochlea means.....			
A. Articular depression	B. Articular projection	C. Non-articular depression	D. Non-articular projection
2- Fovea means.....			
A. Articular depression	B. Articular projection	C. Non-articular depression	D. Non-articular projection
3- Application of anatomical knowledge on living animal is known as.....anatomy			
A. Applied	B. Gross	C. Developmental	D. Comparative
4- The articulation type between carpal bones of horse is.....joint			
A. Gliding	B. Ellipsoidal	C. Pivot	D. Hinge
5- In limbs, the .....plane divided the limb into proximal and distal part parts			
A. Frontal	B. Transverse	C. Medial	D. Sagittal
6- The metaphys is clear in .....bone			
A. Humerus	B. Scapula	C. Carpal	D. Sessamoid
7- The spongy bones fill completely all bones except the .....			
A. Humerus	B. Scapula	C. Carpal	D. Sessamoid
8- The .....plane divides the body into cranial and caudal parts			
A. Median	B. Sagittal	C. Frontal	D. Transverse
9- The articulation between second and third metacarpus of horse is.....			
A. Suture	B. Symphyses	C. Syndesmosis	D. synovial
10- The last step of the oogenesis is observed during.....			
A. Ovulation	B. Fertilization	C. Puberty	D. Fetal life
11- The main group of cells involutes through the primitive streak form.....			
A. Ectoderm	B. Endoderm	C. Mesoderm	D. Hypoblast
12- The mesoderm of chorionic villi is made from.....			
A. Hypoblast	B. Endoderm	C. Inner cell mass	D. Trophoblast
13- The .....membrane in the chick embryo is the respiratory organ			
A. Chorioallantoic	B. Yolk sac	C. Chorion	D. Allantois
14- The holoblastic unequal cleavage is present in.....			
A. Frog	B. Mammals	C. Birds	D. Reptiles
15- The ox has..... metacarpal bones			
A. 2	B. 3	C. 4	D. 5
16- The muscle bundles is surrounded by.....			
A. Endomysium	B. Perimysium	C. Epimysium	D. Myofiber
17- The retinaculum is clear around.....joint			
A. Shoulder	B. Elbow	C. Carpal	D. Fetlock



**Menoufia University**  
**Faculty of Veterinary Medicine**  
**Anatomy and Embryology First Year E**



**Date: 1.1.2020**

**time allowed: 2 Hours**

18- Eccentric implantation can be observed in.....			
A. Human	B. Rodent	C. Cow	D. Birds
19- The structure of the somites is.....			
A. Mesoderm	B. Endoderm	C. Ectoderm	D. Trophoblast
20- The delamination of the inner cell mass forming.....			
A. Endoderm	B. Mesoderm	C. Hypoblast	D. Trophoblast
<b>Choose the true (A) or false (B) sentences</b>			
21- Shoulder girdle region is consisted of, scapula, clavicle and humerus			
22- Only dog has 4 digits while in other domestic animals the number of digits is varied			
23- Head is the articular surface of humerus and articulate with radius and ulna forming elbow joint			
24- The intertuberal groove is divided by the intermediate ridge in the humerus of horse and ox			
25- The primordial germ cells is derived from the endoderm of the yolk sac			
26- Each fore limb of the ox has 4 proximal sessamoid and 2 distal sessamoid bones			
27- Endosteum is fibrous membrane present only in long bone			
28- Suture is fibrous joint can only be seen in the skull of old aged animals			
29- Synovial joints are the only joints that have a space between the adjoining bones			
30- The joint capsule present in some of synovial joints and absent the majority of it			
31- In incongruent joint the articular surfaces adapted to each other by the presence of ligaments			
32- In hinge joint one articular surface is ring moved around axis of other like elbow joint			
33- Striated voluntary muscle present in the wall of heart			
34- Reduced long bone is a type of long bone but have very small central cavity as ulna			
35- The zona pellucida around zygote is removed immediately after fertilization			
36- Internal fasciae are thin soft tissue sheets lined body cavities			
37- Xiphoid region is a part of cranial abdominal regions			
38- Compact bone is thick at the shaft and thin at extremities of flat bones			
39- Mare and she camel have diffuse type of placenta			
40- Trophoblast is responsible for formation of all fetal membranes			

**Second part subjective questions (15 points) الاجابة في كراسة الاجابة**

**Briefly describe with illustrations each of followings**

- 1- Structures of synovial joint
- 2- The gross anatomy and structures of long bone
- 3- Arrangement of skeletal muscle fibers
- 4- The steps of fertilization
- 5- Fetal membranes in birds
- 6- Classification of placenta based on the maternal side share

جامعة المنوفية

Menoufia University

منارة المعرفة في قلب الدلتا



Faculty of Veterinary Medicine

Menoufia University

Subject: Fundamentals of Organic Chemistry Final Term Exam

Date: 19/01/2020

Time Allowed: (3 Hours)

Name:

Part I: Answer All The Following Multiple Choice Questions (MCQs):

(1) Which of the following reactions can be used to prepare alkanes ?

- (a) Wurtz reaction (b) Wolf-Kishner reaction  
(c) Kolbe's electrolysis (d) All of these

(2) Which of the following classes of compounds is unreactive toward sulphuric acid? (a) Alkanes (b) Alcohols (c) Alkenes (d) Alkynes

(3) Ethylene is obtained from ethyl bromide by :

- (a) Simple heating (b) Hydrolysis (c) Dehydrohalogenation (d) Nucleophilic substitution

(4) In the reaction of propene with HCl,  $H^+$  ion acts as the : (a) electrophile (b) carbonium ion (c) nucleophile (d) carbanion

(5) In the addition of HX to a double bond, the hydrogen goes to the carbon that already has more hydrogens is a statement of (a) Hund's rule

- (b) Markovnikov's rule (c) Huckel rule (d) Saytzeff rule

(6) Markovnikov's addition of HBr is not applicable to

- (a) Propene (b) 1-butene (c) 1-pentene (d) 2-butene

(7) In the reaction of  $CH_3CH_2CH=CH_2$  with HCl, the H of the HCl will become attached to which carbon ? (a) C-1 (b) C-2 (c) C-3 (d) C-4

(8) Ethylene reacts with HI to give (a) Iodoethane (b) 2,2-Dibromide

- (c) 1,1 -Diiodoethane (d) None of these

(9) How many  $\sigma$  (sigma) bonds are there in  $CH_2=CH-CH=CH_2$  ?

- (a) 3 (b) 6 (c) 9 (d) 12

(c) a ketone (d) an ether

10. Ethanol on heating with conc.  $H_2SO_4$  at  $170^\circ C$  gives:

- a) ethylene b) ethylhydrogensulfate c) diethyl ether d) diethylsulfate

11. Which of the following has the highest boiling point?

- a)  $CH_3CH_2OH$  b)  $CH_3OH$  c)  $CH_3CH_2CH_2CH_2OH$  d)  $CH_3CH_2CH_2OH$

12. Which of the bonds in ethanol will undergo heterolytic bond fission most:

- a) O-H b) C-H c) C-O d) C-C

13. When acetylene is passed through hot iron tube at  $400^\circ C$ , it gives?

- a) benzene b) toluene c) o-xylene d) mesitylene

14. Which of the following compounds on hydrolysis gives acetylene:

- a)  $CaC_2$  b)  $Mg_2C_3$  c)  $Al_4C_3$  d)  $Cu_2Cl_2$

15. 1-Butyne reacts with:

- a)  $NaNH_2$  b) HBr c) dil.  $H_2SO_4$  and  $HgSO_4$  d. All of these

16. Addition of 2 moles of HCl to propyne gives:

a) 2,2-dichloropropane b) 1,3-dichloropropane c) 1,2-dichloropropane d) none

17. Hydration of 2-methyl-1-propene with  $\text{H}_2\text{O}/\text{H}_2\text{SO}_4$  gives:

a)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$  b)  $(\text{CH}_3)_3\text{COH}$  c)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$  d)  $(\text{CH}_3)_2\text{CHOH}$

18. Catalytic hydrogenation of 3-methyl-1-butene gives:

a) *iso* butane b) 2,2-dimethylbutane c) 2-methylbutane d) 2,3-dimethylbutane

19. Combustion of an alkene with sufficient oxygen will produce:

a)  $\text{CO}_2$  &  $\text{H}_2\text{O}$  b)  $\text{CO}$  &  $\text{H}_2\text{O}$  c) only  $\text{CO}_2$  d) only  $\text{CO}$

20. The higher reactivity of an alkene or alkyne, as compared to an alkane, is due to:

a) sigma bond b) pi bond c) hydrogen bond d) none of these

21. Addition of 2 moles of  $\text{HCl}$  to propyne gives:

a) 2,2-dichloropropane b) 1,3-dichloropropane c) 1,2-dichloropropane d) none of these

**Part II: Answer in Brief The Following Questions:**

1. How are organic compounds classified?

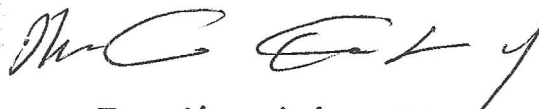
2. Write all possible structural isomers of the alkane  $\text{C}_5\text{H}_{12}$ . Name each isomer by IUPAC system.

3. Write the structural formulas for all isomeric alkenes containing five carbon atoms. Name each according to the IUPAC system.

4. How are aldehydes and ketones prepared? give only one reaction/method for each class.

5. Describe only one important reaction of ketone and aldehyde.

With Best Wishes for All,



Professor Dr. Ibrahim Tantawy

Dr. Mohamed Hawata