نماذج اسئلة سابقة فرع العلوم الاساسية :

Ministry of Higher Education	**Class: 1st class**
& Scientific Research	**Subject: Computer**
Tikrit University	**Mid-Examination**
College of Dentistry	**2 h. Time**
Dept. Basic Sciences	**Form (B)**

Q1: What are the differences between the following? (give only one difference) (30 degrees)

1- Supercomputer **&** PC
2- File **&** Folder
3- HZ **&** MHZ
4- Monitor **&** Mouse
5- Windows **&** Microsoft Word
6- Paste **&** Cut (shortcut in keyboard)

Q2: Choose the Correct Answer. (30 degrees)

1. Part of a computer that allows a user to output Data from the computer:
A. Output Device, B. Software, C. Operating System, D. Input Device

2. This optical disk store up to 8.4 GB of data?
A. Compact Disk, B. Hard Drive, C. Blu-ray disc, D. Digital Video Disk

3. Which is the biggest unit of data storage in the following list?
A. KB, B. GB, C. MB, D. TB

4. 1.234, is example for data type?
A) Integer, B) Floating-point , C) Character, D) String

5. The two kinds of Secondary Memory are:
A) HDD and ROM, B) ODD and HDD, C) ROM and RAM, D) All of above

6. Transistors as devices are for which generation computers

A) First Generation, B) Second Generation,
C) Third Generation, D) Fourth Generation

7. A small, single-user computer based on a microprocessor.

A) Supercomputer, B) Workstation computer
C)Mainframe computer D) Personal computer

***8.* _____ Cheaper and less powerful than laptops or desktops.**

A) Mainframe Computer, B) Tablet Computers, C) Notebook computer, D) Supercomputers

***9.* One computer that is considered a portable**

A) Tablet Computers, B)Laptop computer, C)Notebook computer D) All of above

10. Which of the following is input device only?

A) Printers, B) webcams, C) Touch Screen, D) Monitors

11. What are the requirements for using Google Drive?

A. College account only, B. Download Google Drive,
C. Gmail accounts only, D. None of above

12. Which of the following applications lets the teacher to do the exam free online?

A) Google Drive, B) Google Classroom, C) Google Form, D) All above

13……. groups of students study independently at different times and locations from each other.

A) Asynchronous Online Learning, B) Fixed E-Learning
C) Adaptive E-Learning, D) Synchronous Online Learning

14. What is the way to access Google Forms?

A) Google Drive, B) Using Link, C) Gmail 9 dots, D) All of the above

15. The following number (10F) in ……system.

A)Binary, B) Hexadecimal, C) Decimal, D)Octal

Q3: Convert the Following Number from Decimal to Binary, Octal, and Hexadecimal Systems. 306 $_{(D)}$ Write the steps. (25 degrees)

Q4: Draw the diagram of the Information Processing Cycle. (15 degrees)

Good Luck

Examiners
Dr. Tamara Afif Anai

Head of the Dep.
Prof. Dr. Hadeel MzherYounus

Ministry of Higher Education
& Scientific Research
Tikrit University
College of Dentistry
Dept. Basic Sciences

Class: 1st class
Subject: Computer
Final Examination
3 h. Time
Form (A)

Q1: Choose the Correct Answer: (20 degrees)

1- Which of the following is not an input device?
A) scanner, B) webcams, C) plotter, D) digital camera

2- The brain of the computer. This part does the calculation, moving, and processing of information:

A) CPU, B) Motherboard, C) RAM, D) Hard Drive,

3- ……. Online learning enables groups of students to participate in a learning activity together at the same time, from any place in the world.
A) Asynchronous Online Learning, C) Adaptive E-Learning,
B) Fixed E-Learning D) Synchronous Online Learning

4- MS-DOS is an acronym for
A) Disk Operating System C) Microsoft Disk Operating System
B) Microsoft Operating System Disk D) No one of them

5-Press …… to find text or other content in the document.
Ctrl + F B) Alt + F4 C) Ctrl + W D) Close

6-The Bullets button is available on the Ribbon Home Tab in the group……...
A) Special characters B) Paragraph C) Format D) Options

7-Press…….to close the MS Word.
A) Shift B) Alt + F4 C) Ctrl + W D) Close

8-Add ghost text behind the content on the page, press…….
A) Watermark B) Page color C) Page borders D) Page Background

9-By default, which page is the header, or the footer printed?

On the first page C) On every page

B) On the alternate page D) On the final page

10-A table …….

A) Can be formatted with character formats like bold and paragraph formats like borders and shading

B) Can be created and modified with a button on the standard toolbar

C) Is a method of organizing data in your document.

D) Is a grid organized in columns and rows.

11-To create a formula in MS Excel put …….in the beginning?

A) =, B)? , C) - , D) //

12-A bookmark is an item or location in a document where you identify a name for future Reference. Which of the following tasks is accomplished by using bookmarks?

A) To make the ending of a page of the document.

B) To quickly jump to a specific location in the document.

C) To add hyperlinks to a web page.

D) To mark the beginning of a page of the document.

13-To change the color of the Background of the slide we select:

A) Design tab C) File tab

B) Home tab D) View tab

14-A …….. style will automatically apply several effects to your text at once :

A) Hyperlinks C) Chart

B) WordArt D) No one of them

15-In MS Access 2007 the extension has been changed to ……. extension.

A) accdb B) mdb

C) ppt and pptx D) Xlsx

16-To delete Slide, first select it then press

A) The Delete and Backspace key on the keyboard

B) The Delete or Backspace key on the keyboard

C) The Delete key on the keyboard

D) The Backspace key on the keyboard

17-Make the transition from one slide to another by moving only the placeholder in the slide and select ---------- from the transitions tab.

A) None B) Dynamic content

C) Subtle D) Split

18-Use ---------- from the keyboard to stop a slide show.

A) Enter Key B) CTRL Key

C) F1 Key D) ESC Key

19-We can adjust the volume level on the computer by _____ and dragging the lever to the left or right

A) Right-click on the speaker icon located in the taskbar
B) Left-click on the speaker icon located on the desktop
C) Right-click on the speaker icon located on the desktop
D) Left-click on the speaker icon located in the taskbar

20-You can add comments from

A) View tab
B) Review tab
C) Slide Show tab
D) No one of them

Q2: Convert the following numbers from Binary System to Octal System and Hexadecimal System: (15 degrees)

$1111011_{(B)}$ →……(O) , $1111011_{(B)}$ →……(H)

Write the steps.

Q3: Put (True) for the right answer and (False) for the wrong answer: (choose 20 only) (20 degrees)

Firewall: Prevents unauthorized access from external connections and helps protect your network from threats that could harm your computer.

In the keyboard Copy the selected text = Ctrl + X.

A classroom is a way to get all students in one place and allows the teacher to easily assign work and for students to turn it in.

There is no save button in Google Drive.

If you see pound signs (#######) in a cell in MS- Excel, it means the column is not wide enough to display the cell content.

In Microsoft Word cannot insert page numbers on the pages of your document.

In the Home tab, can be inserted references style in the Citations & Bibliography group.

You can put the line under the text as (dental) using the **B** (icon) in the Hom tab.

Ctrl + F is an acronym for copying text using the keyboard.

(Dent.pdf) is an example of a file created in MS PowerPoint.

You may not place your computer to Sleep as opposed to completely shutting it down.

Use the Review tab to add a screenshot.

This icon  refers to the File Explorer.

Taskbar Programs, provides quick access to open or pinned programs.

In MS-PowerPoint can add pictures only from the computer.

You can save your presentation as a video.

To add a move to the slide, select the design tab.

Cannot add sound to the presentation.

You can change the themes of the presentation from the draw tab.

KB= 1000 B.

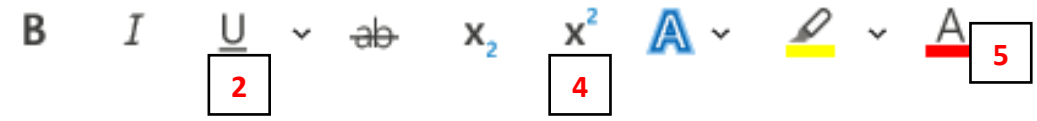
Reports are one of the major objects in MS Access.

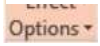
Format tab used to add a video.

Q4: (10 degrees)

A) What is the purpose of each number in the following Figure?

B) What is



1- 

2- 

3- 

4- 

5- 

Q5: What is the difference between the following? (give only one difference) (choose 7 only) (35 degrees).

Supercomputer **&** PC
GHZ **&** MHZ
Monitor **&** Touch Screen
Blu-ray Disc **&** CD
DOS **&** Word
Ctrl + P **&** Ctrl + S (Shortcut in keyboard)
Dent.ppt **&** Dent.doc
Image (1) **&** Image (2)

```
mov al, 5
mov bl, 10
add bl, al
```

Image (1)

```
10110000 01100001
```

Image (2)

Good Luck

Examiners	Head of the Dep.
Dr. Tamara Afif Anai	**Prof. Dr. Hadeel MizherYounus**
Asst. Lec. Shms Aldeen Saad Mohsen	

Ministry of Higher Education

& Scientific Research

Tikrit University

College of Dentistry

Dept Basic Science.

Class :First.Stage

Subject: English

Time: 1 hours

Form (A)

Q1: Choose the correct answer for the following : 2M

1- I will see you ---------- Monday .
(On, at , in).

2- He threw the ball --------- the roof .
(over , on , above) .

3- I dream -------- finishing college in four years .
(of , for , at).

4- The house is --------- Elm street and maple street .
(between , among , opposite) .

5- She took a quick glance --------- her reflection .
(of , for , at) .

Q2 : Do as required : (Choose 5) 2 M

1 – I usually (went) away at weekend . (correct the verb) .

2- He has broken his leg , (negate) .

3- They are (study) pedodontics now .

4- Make a question in the Present perfect continuous tense .

5- He has been living in the house (for / since) twenty years .

6- She isn't (sew) the dress today . (Give the correct form of the verb) .

Q3 : Match to give a meaningful words . (choose 5) 2 M

1- Anti	A- agree
2- Less	b – freeze
3- Dis	c- friendly .
4- Ness	d- fear
5- Un	e- cast
6- Fore	f- kind

Q4: Define Small talk , mention who makes small talk. And what do they make small talk about ? 1.5 M

Good Luck

Examiner **Head of the Dep.. Prof. Dr. Hadeel MizherYounus**

Assistant .lecturer : Rusul Jassim

Assistant . lecturer : Reem Awad

Ministry of Higher Education
& Scientific Research
Tikrit University
College of Dentistry
Dept Basic Science.

Class :First.Stage
Subject: English
Time: 2 Hours
Form (A)

Q1: Choose the correct answer : (10 only) 5 Marks

1- There is a wasp …… the room .

(inside , in , at) .

2- I watch TV …… the evening .

(from…to , during , for)

3- She lives ……. The school .

(near , by , opposite) .

4- I'm thinking ……. this problem .

(of , about , for)

5- Did someone call ……. a taxi ?

(at , of , for)

6- The comb is ……. The brush .

(beside , besides , near)

7- Wasn't that film wonderful ! Yes , it was ……..

(brilliant , beautiful , messy)

8- She was boring in the class .

(She was bored , She feels bored , She is boring)

9- It is a lovely day today ! yes it is really ……..

(beautiful , gorgeous , brilliant)

10- He has been living in this house (for / since) twenty years .

11- The dishes was …… yesterday .

(washed , being washed . been washed)

Q2 / Do as required : (5 only) 5 marks

1- He has done the college . (Change to passive) .

2- She isn't (sew) the dress today . (Correct the verb) .

3- He has broken his leg . (Make a question) .

4- He has playing video games (since , for) I was a kid .

5- The hunter killed two lions . (Change to passive) .

6- He said , " I went to the cinema yesterday . (Indirect speech) .

Q3 / Match to give a meaningful words : (5 only) 2.5 Marks

1- Dis	a- circle
2- Fore	b- sea
3- Un	c- agree
4- Semi	d- cast
5- Inter	e- friendly
6- Under	f- act

Q4/ Define Small Talk, and mention what do people make small talk about ?

Good Luck

Examiner : Rusul Jassim **Head of Dep . Prof. Dr. Hadeel MizherYounus**

Reem Awad

Ministry of Higher Education

& Scientific Research

Tikrit University

Dentistry.College of

Dept .Basic science

First.Class

Subject Biology

3 Hours.Time

Form (3)

Q1- Answer the following with true (T) or false (F) and correct the incorrect sentences . (4 marks)

1- Invasion is The ability of an infectious agent to cause disease .
2- Chemosynthetic are Bacteria These bacteria obtain their nutritional requirements from dead organic matter.
3- Anaerobic breakdown of organic matter is called fermentation.
4- Transformation is sensitive to nucleases in the environment.
5- Many rickettsia strains also grow in the culture media, the generation time is 8-10 hours at 34 C, the divided like bacteria, and have cell walls like the cell wall of bacteria.
6- Viruses are unicellular, they are affected by antibiotics, and sensitive to interferon.
7- The enveloped virus attached to host cell by capsid.
8- The ability to act as a recipient is a consequence of the lack of the plasmid.

Q2- Complete the followings: (5marks)

1- *S. mansoni, S. japonicum*, and *S. intercalatum*, are the causative agents of ----------,while *Schistosoma haematobium* is the causative agents of---------- .
2- The blood flukes differ from other flukes in that infection is acquired by penetration of ---------- through the skin.
3- In the case of *T. saginata*, the intermediate hosts are ----------,while the definitive hosts are----------.
4- Symptoms of infection with *T. saginata* include1----------2----------3---------
5- Koch's postulates are four criteria designed to establish a causal relationship between ---------- and ----------.
6- Sometimes bacteria that are clearly pathogens are present, but infection remains latent subclinical and the host is ----------of the bacteria.
7- Bacterial virulence factors include1----------2---------3---------4--------.

Q3- Explain the followings: (11 marks)

1- Life cycle of *Entamoeba histolytica* . (3marks)
2- The General Characteristics of Schistosoma(3marks)
3- Koch's postulates, and is it true for all microorganisms? Why?(3marks)
4- The infective stage for human of *E. histolytica, T. saginata, A. lumbricoides, and Schistosoma haematobium*. (2 marks)

Q4- Define the following? (5MARKS)

1- Cell Biology- 2- Ribosomes- 3- Golgi apparatus- 4- Genetic linkage- 5-Law of Independent Assortment.

Q5-Write the structure of amino acid properties. (5MARKS)

Q6- Answer the following with True or False and correct the False sentences.? (10MARKS)

1-Meiosis is the form of the cell division that governs sexual reproduction in prokaryotes.

2-The Golgi complex membrane-bound sacs for storage, digestive, and waste removal, contains water solution.

3-Cell division takes place in one of five processes.

4-Contractile proteins are fibrous and stringy and provide support. Examples include Keratin, Collagen and Elastin.

5-An acid is a substance that dissociates to yield hydrogen ions and cation.

6-Diploid organisms with two different alleles of a given gene are called heterozygous.

7- The coding mRNA sequence can be described as a unit of three nucleotides called a gene.

8- The boiling point of unsaturated fats is lower than saturated.

9- A major example of electrical work is in the operation of the muscle.

10- Lipids have mainly hydrocarbons in their composition and highly reduced form of carbon.

Good Luck

Examiner: Prof. Dr. sheelan A. Anwar

Examiner : Asst. Prof. Muna A. Abdulla

Head of the Dep. . Prof. Dr. Hadeel MizherYounus.

Ministry of Higher Education
& Scientific Research
Tikrit University
Dentistry.College of
Dept .Basic science

First.Class
Subject Biology
3 Hours.Time
Form (3)

Q1- Answer the following with true (T) or false (F) and correct the incorrect sentences . (4 marks)

9- Invasion is The ability of an infectious agent to cause disease .

10- Chemosynthetic are Bacteria These bacteria obtain their nutritional requirements from dead organic matter.

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12- Transformation is sensitive to nucleases in the environment.

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15- The enveloped virus attached to host cell by capsid.

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8- The infective stage for human of *E. histolytica, T. saginata, A. lumbricoides, and Schistosoma haematobium*. (2 marks)

Q4- Define the following? (5MARKS)

2- Cell Biology- 2- Ribosomes- 3- Golgi apparatus- 4- Genetic linkage- 5-Law of Independent Assortment.

Q5-Write the structure of amino acid properties. (5MARKS)

Q6- Answer the following with True or False and correct the False sentences.? (10MARKS)

1-Meiosis is the form of the cell division that governs sexual reproduction in prokaryotes.

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Good Luck

Examiner: Prof. Dr. sheelan A. Anwar

Examiner : Asst. Prof. Muna A. Abdulla

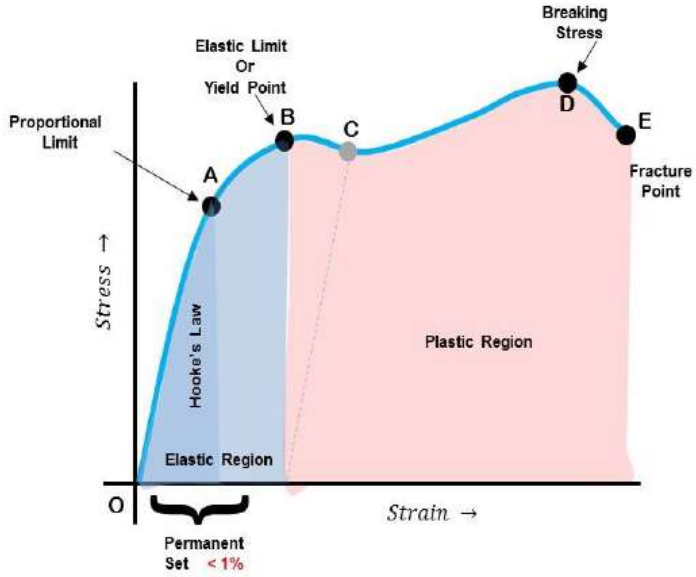
Head of the Dep. . Prof. Dr. Hadeel MizherYounus

Ministry of Higher Education
& Scientific Research
Tikrit University
College of Dentistry 2023 - 2024
Dept. Basic Science

Class: 1st
Subject: Medical physics (Theoretical)
Time: 2 Hours
Form (A)

Note: Answer all questions.

Q1) a) What is the difference between X-rays and gamma rays? (20 mark)
b) What are the types of bones?
c) What is a lead apron used for?
Q2) a) From the diagram you can see the different mark points on the curve, and then it passes various stages before fracture, define these stages. (20 mark)



b) Explain the Converting Temperatures applications.
Q3) a) Explain the functions of bone in briefly. (20 mark)
b) What is the power radiated per square centimeter from the skin at a temperature of 306K^o (33C^o)?
Q4) a) Explain the uses of Cryosurgery operations in medicine. (20 mark)
b) Select the correct answer Five only.
1. Which of the following types of radiation has the highest linear energy transfer (LET)?
a. X-rays
b. Gamma rays
c. Alpha particles
d. Neutrons
2. Which of the following units is used to measure the amount of energy deposited by radiation per unit mass of tissue?
a. Gray
b. Rad

c. Rem
d. Roentgen

3. Which of the following is an example of a deterministic effect of radiation exposure?
a. Cancer
b. Genetic mutations
c. Cataracts
d. Acute radiation syndrome

4. Which of the following radiation therapy techniques involves the use of radioactive sources placed inside the body ?
a. External beam radiation therapy
b. Intensity-modulated radiation therapy
c. Stereotactic radiosurgery
d. Brachytherapy

5. Which of the following is an example of a secondary barrier for radiation shielding ?
a. Lead apron
b. Lead glass window
c. Concrete wall
d. Radiation badge

6. What is the formula for calculating the energy of a photon?
a) $E = mc^2$
b) $E = h\nu$
c) $E = h\lambda$
d) $E = hc$

Q5) Answer True or False of the following sentences, select five only.(20 mark)
1. The energy of an X-ray photon is directly proportional to its frequency.
2. The Roentgen is a unit of measurement for radiation exposure that takes into account the biological effects of different types of radiation.
3. The linear energy transfer (LET) of a radiation particle is a measure of the amount of energy it deposits per unit length of tissue.
4. The half-value layer (HVL) of a material is the thickness of the material required to reduce the intensity of a beam of radiation to half its initial value.
5. The oil in the X-ray tube is used to absorb scattered radiation.
6. The purpose of using a grid in radiography is to increase the exposure time.
7. Tomography is a technique used to avoid shadows in X-ray images.
8. The frequency of radiation is inversely proportional to its wavelength.

Examiner
Asst. Lect. Thamer M. Mohammed

Head of the Department
Prof.Dr. Hadeel M. Younes

Answers:

What is the difference between X-rays and gamma rays?

Answer: X-rays and gamma rays are both forms of electromagnetic radiation, but gamma rays have higher energy and shorter wavelengths than X-rays.

Types of Bones ***Types of Bones***

 Long bones are characterized by a shaft, the diaphysis that is much longer than its width; and by an epiphysis, a rounded head at each end of the shaft. ***They are made up mostly of compact bone, with lesser amounts of marrow, located within the medullary cavity, and spongy, cancellous bone***. Most bones of the limbs, including those of the ***fingers*** and ***toes***, are long bones ***femur***, and ***tibia***.

 Short bones *are roughly cube-shaped and have only a thin layer of compact bone surrounding a spongy interior*. The bones of the ***wrist and ankle*** are short.

 Flat bones are *thin and generally curved, with two parallel layers of compact bones sandwiching a layer of spongy bone*. Most of the bones of the skull are flat bones, as is the sternum.

c) What is a lead apron used for?

Answer: A lead apron is used to protect healthcare workers from exposure to X-rays during medical imaging procedures.

Q2) a) **From the diagram you can see the different mark points on the curve,** and **then it passes various stages before fracture, define these stages.**

1- PROPORTIONAL LIMIT

The proportional limit ***is a point on the curve up to which the value of stress and strain remains proportional***. From the diagram, point **A** is called the ***proportional limit point*** or it can also be known as the limit of proportionality. The stress Up to this point can be also known as ***proportional limit stress.*** Hook's law of proportionality from the diagram can be defined between point **OA**. It is so because **OA** is a straight line which shows that Hook's law of stress-strain is followed up to point **A**.

2- ELASTIC LIMIT

Elastic limit ***is the limiting value of stress up to which the material is perfectly elastic***. From the curve, point **B** is the elastic limit point. The material will return to its original position if it is unloaded before the crossing of point **B**. This is so because the material is perfectly elastic up to point **B**.

3- YIELD STRESS POINT

Yield stress is defined as ***the stress after which material extension takes place more quickly with no or little increase in load***. Point **B** is the yield point on the graph and stress associated with this point is known as yield stress.

4- ULTIMATE STRESS POINT

The ultimate stress point is ***the maximum strength that the material has to bear stress before breaking.*** It can also be defined as the ultimate stress corresponding to the peak point on the stress-strain graph. On the graph point **D** is the ultimate stress point. After point **D** material has very minute or zero strength to face further stress.

5- BREAKING STRESS (POINT OF RUPTURE)

The breaking point or breaking stress ***is the point where the strength of the material breaks.*** The stress associated with this point is known as breaking strength or rupture strength. On the stress-strain curve, point **E** is the breaking stress point.

Consider a bar of cross-sectional area (A) being subjected to equal and opposite forces (F) pulling at the ends so the bar is under tension.

b) Explain the Converting Temperatures applications.

Applications

-In the oral environment temperature is not constant because

Of hot and cold food and drink.

-Dental pulp is sensitive, and may be damaged if its temperature

increases >5C^0). So, the dental drilling rises in temperature of

pulp during drilling should be less than 5C^0.

Q3) Explain the functions of bone in briefly.

Bones have many functions, including the following:

Shape

Bone structure gives shape to the body. This shape changes as you grow, and your skeletal system determines your height, width, and other factors, such as the size of your hands and feet. Body shape or type is genetically inherited. There are three main body shapes: ectomorphs (tall and thin), mesomorphs (shorter and muscular), and endomorphs (apple or pear-shaped).

The skeleton provides support to the body and keeps your internal organs in their proper place. The vertebral column allows you to stand erect, while cavities

hollow spaces in the skeleton are designed to hold your organs. For example, the skull holds the brain; the chest cavity holds your lungs and heart and the abdominal cavity holds your gastrointestinal organs. Additionally, the pelvis and leg bones are strong and thick to support the weight of the entire skeleton.

Movement

The skeletal bones are held together by ligaments. Tendons attach your muscles to the bones of your skeleton. The muscular and skeletal systems work together to carry out bodily movement, and together they are called the musculoskeletal system. When muscles contract, the skeleton moves. The shape of the skeletal system also impacts movement. The small bones of the foot allow for adaptation to all sorts of terrain, while the small bones in the hands allow for precise and detailed movement.

Protection

His skeleton protects vital organs from damage, encasing them within hard bones. The cranium bone --skull -- houses the brain, while the vertebral, or spinal, column protects the delicate spinal cord, which controls all bodily functions through communication with your brain. The bony thorax, comprised of the ribs and sternum, protects your heart and lungs.

Blood Cell Production and Storage

The spongy tissue inside long bones, such as the femur, or thigh bone, has two types of marrow responsible for blood cell production. On average, 2.6 million red blood cells are produced each second by the bone marrow. Red bone marrow gives rise to blood cells while yellow bone marrow stores fat, which turns into red bone marrow in case of severe red blood cell depletion or anemia. Skeletal bones also function as a storage bank for minerals, such as calcium and phosphorus. These minerals are necessary for vital body functions, such as nerve transmission and metabolism. The vertebral column (Spine)

a. What is the power radiated per square centimeter from the skin at a temperature of $306K^0$ ($\sim 33C^0$)?

$W = \sigma T^4 = (5.7 \times 10^{-12}) (306)^4 \approx 0.05\ W/cm^2$

b. What is the power radiated from a nude body 1.75 m^2 ($1.75 \times 10^4\ cm^2$) in area?

$W = (0.05) (1.75 \times 10^4\ cm^2) = 875\ W$

The radiative power received from the surrounding walls at $293K^0$ ($\sim 20C^0$) would be about 735 W, for a net loss of 140 W. Since normally most of the body is clothed, the loss is considerably smaller than 140 W, but it is still significant.

Q4)a)

Cryosurgery: Cryogenic methods are also used to destroy cells; this application is called cryosurgery. Cryosurgery has several advantages:

(1) There is little bleeding in the destroyed area
(2) The volume of tissue destroyed can be controlled by the temperature of the cryosurgical probe
(3) There is little pain sensation because low temperatures tend to desensitize the nerves.

b)1. Which of the following types of radiation has the highest linear energy transfer (LET)?
a. X-rays
b. Gamma rays
c. Alpha particles
d. Neutrons
Answer: c. Alpha particles
2. Which of the following units is used to measure the amount of energy deposited by radiation per unit mass of tissue?
a. Gray
b. Rad
c. Rem
d. Roentgen
Answer: a. Gray
3. Which of the following is an example of a deterministic effect of radiation exposure?
a. Cancer
b. Genetic mutations
c. Cataracts
d. Acute radiation syndrome
Which of the following radiation therapy techniques involves the use of radioactive sources placed inside the body?
a. External beam radiation therapy
b. Intensity-modulated radiation therapy
c. Stereotactic radiosurgery
d. Brachytherapy
Answer: d. Brachytherapy
Which of the following is an example of a secondary barrier for radiation shielding?
a. Lead apron
b. Lead glass window
c. Concrete wall
d. Radiation badge
Answer: c. Concrete wall
6. What is the formula for calculating the energy of a photon?
a) $E = mc^2$
b) $E = h\nu$

c) $E = h\lambda$
d) $E = hc$
Answer: b) $E = h\nu$
Answer: d. Acute radiation syndrome
7. Which of the following types of radiation has the highest linear energy transfer (LET)?
a. X-rays
b. Gamma rays
c. Alpha particles
d. Neutrons
Answer: c. Alpha particles
8. Which of the following units is used to measure the amount of energy deposited by radiation per unit mass of tissue?
a. Gray
b. Rad
c. Rem
d. Roentgen
Answer: a. Gray

Q5) Answer True or False of the following sentences, select five only.(25 mark)

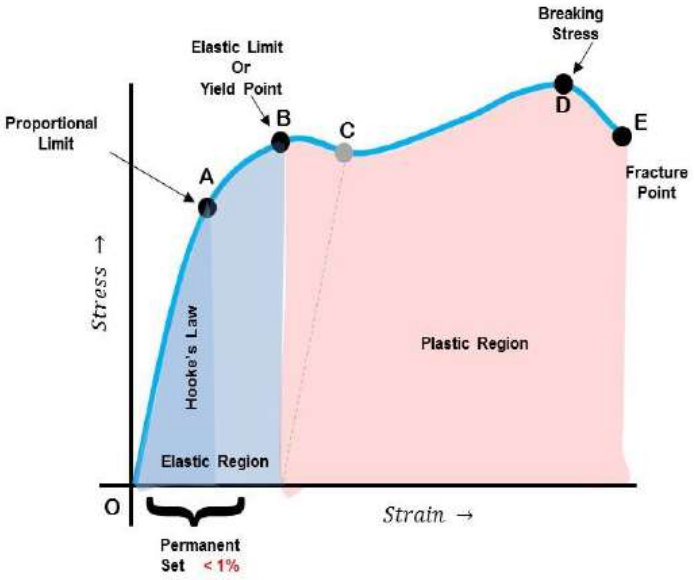
1. The energy of an X-ray photon is directly proportional to its frequency.
Answer: True
2. The Roentgen is a unit of measurement for radiation exposure that takes into account the biological effects of different types of radiation.
Answer: False
3. The linear energy transfer (LET) of a radiation particle is a measure of the amount of energy it deposits per unit length of tissue.
Answer: True
4. The half-value layer (HVL) of a material is the thickness of the material required to reduce the intensity of a beam of radiation to half its initial value.
Answer: True
5: The oil in the X-ray tube is used to absorb scattered radiation.
Answer: False
6. The purpose of using a grid in radiography is to increase the exposure time.
Answer: False
7. Tomography is a technique used to avoid shadows in X-ray images.
Answer: True
8. The frequency of radiation is inversely proportional to its wavelength.
Answer: True

Ministry of Higher Education
& Scientific Research
Tikrit University
College of Dentistry 2023 - 2024
Dept. Basic Science

Class: 1st
Subject: Medical physics (Theoretical)
Time: 2 Hours
Form (A)

Note: Answer all questions.

Q1)a)What is the difference between X-rays and gamma rays? (20 mark)
b)What are the types of bones?
c) What is a lead apron used for?
Q2) a) From the diagram you can see the different mark points on the curve, and **then it passes various stages before fracture, define these stages. (20 mark)**



b) Explain the Converting Temperatures applications.

Q3)a)Explain the functions of bone in briefly.(20 mark)

b)What is the power radiated per square centimeter from the skin at a temperature of 306K^{o} (33C^{o})?

Q4)a) Explain the uses of Cryosurgery operations in medicine. (20 mark)

b)Select the correct answer Five only.

1. Which of the following types of radiation has the highest linear energy transfer (LET)?

a. X-rays
b. Gamma rays
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2. Which of the following units is used to measure the amount of energy deposited by radiation per unit mass of tissue?

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3. Which of the following is an example of a deterministic effect of radiation exposure?

a. Cancer
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d. Acute radiation syndrome

4. Which of the following radiation therapy techniques involves the use of radioactive sources placed inside the body ?

a. External beam radiation therapy
b. Intensity-modulated radiation therapy
c. Stereotactic radiosurgery
d. Brachytherapy

5. Which of the following is an example of a secondary barrier for radiation shielding ?

a. Lead apron
b. Lead glass window
c. Concrete wall
d. Radiation badge

6. What is the formula for calculating the energy of a photon?

a) E = mc^2
b) E = hν
c) E = hλ
d) E = hc

Q5) Answer True or False of the following sentences, select five only.(20 mark)

1. The energy of an X-ray photon is directly proportional to its frequency.
2. The Roentgen is a unit of measurement for radiation exposure that takes into account the biological effects of different types of radiation.
3. The linear energy transfer (LET) of a radiation particle is a measure of the amount of energy it deposits per unit length of tissue.
4. The half-value layer (HVL) of a material is the thickness of the material required to reduce the intensity of a beam of radiation to half its initial value.
5. The oil in the X-ray tube is used to absorb scattered radiation.
6. The purpose of using a grid in radiography is to increase the exposure time.
7. Tomography is a technique used to avoid shadows in X-ray images.
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Examiner
Asst. Lect. Thamer M. Mohammed

Head of the Department
Prof.Dr. Hadeel M. Younes

Answers:

What is the difference between X-rays and gamma rays?

Answer: X-rays and gamma rays are both forms of electromagnetic radiation, but gamma rays have higher energy and shorter wavelengths than X-rays.

Types of Bones ***Types of Bones***

 Long bones are characterized by a shaft, the diaphysis that is much longer than its width; and by an epiphysis, a rounded head at each end of the shaft. ***They are made up mostly of compact bone, with lesser amounts of marrow, located within the medullary cavity, and spongy, cancellous bone***. Most bones of the limbs, including those of the ***fingers*** and ***toes***, are long bones ***femur***, ***tibia***.

 Short bones *are roughly cube-shaped, and have only a thin layer of compact bone surrounding a spongy interior*. The bones of the ***wrist and ankle*** are short bones.

 Flat bones are *thin and generally curved, with two parallel layers of compact bones sandwiching a layer of spongy bone*. Most of the bones of the skull are flat bones, as is the sternum.

c) What is a lead apron used for?

Answer: A lead apron is used to protect healthcare workers from exposure to X-rays during medical imaging procedures.

Q2) a) **From the diagram you can see the different mark points on the curve,** and **then it passes various stages before fracture, define these stages.**

1- PROPORTIONAL LIMIT

The proportional limit ***is the point on the curve up to which the value of stress and strain remains proportional***. From the diagram, point **A** is called the ***proportional limit point*** or it can also be known as the limit of proportionality. The stress Up to this point can be also known as ***proportional limit stress.*** Hook's law of proportionality from the diagram can be defined between point **OA**. It is so because **OA** is a straight line which shows that Hook's law of stress-strain is followed up to point **A**.

2- ELASTIC LIMIT

Elastic limit ***is the limiting value of stress up to which the material is perfectly elastic***. From the curve, point **B** is the elastic limit point. The material will return to its original position if it is unloaded before the crossing of point **B**. This is so because the material is perfectly elastic up to point **B**.

3- YIELD STRESS POINT

Yield stress is defined as ***the stress after which material extension takes place more quickly with no or little increase in load***. Point **B** is the yield point on the graph and stress associated with this point is known as yield stress.

4- ULTIMATE STRESS POINT

Ultimate stress point is ***the maximum strength that material has to bear stress before breaking.*** It can also be defined as the ultimate stress corresponding to the peak point on the stress strain graph. On the graph point **D** is the ultimate stress point. After point **D** material have very minute or zero strength to face further stress.

5- BREAKING STRESS (POINT OF RUPTURE)

Breaking point or breaking stress ***is point where strength of material breaks.*** The stress associates with this point known as breaking strength or rupture strength. On the stress strain curve, point **E** is the breaking stress point.

Consider a bar of cross sectional area (A) being subjected to equal and opposite forces (F) pulling at the ends so the bar is under tension.

b) Explain the Converting Temperatures applications.

Applications

-In the oral environment temperature is not constant because hot and cold food and drink.

-Dental pulp is sensitive, may be damaged if its temperature increases $>5C^0$). So the dental drilling rises in temperature of pulp during drilling should be less than $5C^0$.

Q3) Explain the functions of bone in briefly.

Bones have many functions, including the following:

Shape

Bone structure gives shape to the body. This shape changes as you grow, and your skeletal system determines your height, width and other factors, such as the size of your hands and feet. Body shape or type is genetically inherited. There are three main body shapes : ectomorphs (tall and thin), mesomorphs (shorter and muscular) and endomorphs (apple or pear-shaped).

Support

The skeleton provides support to the body and keeps your internal organs in their proper place. The vertebral column allows you to stand erect, while cavities

hollow spaces in the skeleton are designed to hold your organs. For example, the skull holds the brain; the chest cavity holds your lungs and heart while the abdominal cavity holds your gastrointestinal organs. Additionally, the pelvis and leg bones are strong and thick to support the weight of the entire skeleton.

Movement

The skeletal bones are held together by ligaments. Tendons attach your muscles to the bones of your skeleton. The muscular and skeletal systems work together to carry out bodily movement, and together they are called the musculoskeletal system. When muscles contract, the skeleton moves. The shape of the skeletal system also impacts movement. The small bones of the foot allow for adaptation to all sorts of terrain, while the small bones in the hands allow for precise and detailed movement.

Protection

His skeleton protects vital organs from damage, encasing them within hard bones. The cranium bone --skull -- houses the brain, while the vertebral, or spinal, column protects the delicate spinal cord, which controls all bodily functions through communication with your brain. The bony thorax, comprised of the ribs and sternum, protects your heart and lungs.

Blood Cell Production and Storage

The spongy tissue inside long bones, such as the femur, or thigh bone, has two types of marrow responsible for blood cell production. On average, 2.6 million red blood cells are produced each second by the bone marrow. Red bone marrow gives rise to blood cells while yellow bone marrow stores fat, which turns into red bone marrow in case of severe red blood cell depletion or anemia. Skeletal bones also function as a storage bank for minerals, such as calcium and phosphorus. These minerals are necessary for vital body functions, such as nerve transmission and metabolism. Vertebral column (Spine)

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$W = \sigma T^4 = (5.7 \times 10^{-12})(306)^4 \approx 0.05\ W/cm^2$

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Q5) Answer True or False of the following sentences, select five only.(25 mark)

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Answer: True

(2022- 2023) أسئلة امتحان نهاية السنة للعام الدراسي

اللغة العربية:

المرحلة الاولى

س1: عرف التاء المربوطة مع ذكر مواضع كتابة التاء المربوطة مع ذكر الأمثلة ؟ (15 درجة).

س2: عرف النقطتان الرأسيتان، وتكلم عن مواضع النقطتان في الحالات التالية، مع ذكر الأمثلة ؟ (15 درجة).

س3: أ: عرف الضاد والظاء ؟ (15 درجة).

ب: علامة الأقواس: وهي ثلاثة أنواع تكلم عنها بالتفصيل ؟

س4: عرف التاء المبسوطة مع ذكر مواضع كتابة التاء المبسوطة مع ذكر الأمثلة ؟ (15 درجة).

س5: إملأ الفراغات التالية (1 درجة).

1- قال تعالى: {وُجُوهٌ يَوْمَئِذٍ ..... ، إِلَى رَبِّهَا ..... }.

2- تكتب كلمة (امرأة) ..... ، لكنها كتبت في القرآن الكريم ، ..... إذا أضيفت إلى زوجها.

3_ قال تعالى: {وَإِذَا مَسَّ الْإِنْسَانَ ..... دَعَانَا لِجَنْبِهِ أَوْ قَاعِدًا أَوْ قَائِمًا فَلَمَّا كَشَفْنَا عَنْهُ ..... }.

-4علامات الترقيم هي رموز مخصصة أثناء الكتابة ، لغرض تعيين مواضع .....، ..... .

5- قال تعالى: { وَدَخَلَ جَنَّتَهُ وَهُوَ ..... لِنَفْسِهِ قَالَ مَا ..... أَنْ تَبِيدَ هَذِهِ أَبَدًا}.

أسئلةامتحان نصف السنة للعام الدراسي (2022– 2023)

لكل سؤال (5 درجات(

س1: عرف همزة القطع ، مع ذكر مواضع همزة القطع، مع ذكر الأمثلة ؟

س2: عرف الهمزة المتطرفة ؟ مع ذكر مواضع الهمزة المتطرفة ، مع ذكر الأمثلة ؟

س3: عرف الهمزة المتوسطة ؟ مع ذكر رسم الهمزة المتوسطة على الألف، مع ذكر الأمثلة ؟

أسئلة امتحان نهاية السنة للعام الدراسي (2022- 2023)

س1: عرف الفاصلة أو الفارزة ؟ وتستعمل في المواضع التالية تكلم عنها بنقاط مع ذكر الأمثلة ؟ (15 درجة).

س2: عرف التاء المبسوطة مع ذكر مواضع كتابة التاء المبسوطة مع ذكر الأمثلة ؟ (15 درجة).

س3: أ: تكلم بنقاط عن علامة التأثر والتعجب ؟ (15 درجة).

ب: عرف الضاد والظاء ؟

س4: عرف التاء المربوطة مع ذكر مواضع كتابة التاء المربوطة مع ذكر الأمثلة ؟ (15 درجة).

س5: إملأ الفراغات التالية (1 درجة).

1- { ..... ، إِلَى رَبِّهَا ..... وُجُوهٌ يَوْمَئِذٍ } قال تعالى:.

2- ..... ، لكنها كتبت في القرآن الكريم ، ..... إذا أضيفت إلى زوجها تكتب كلمة (امرأة).

3_ { ..... دَعَانَا لِجَنْبِهِ أَوْ قَاعِدًا أَوْ قَائِمًا فَلَمَّا كَشَفْنَا عَنْهُ ..... وَإِذَا مَسَّ الْإِنْسَانَ } قال تعالى:.

4- ..... ، ..... علامات الترقيم هي رموز مخصصة أثناء الكتابة ، لغرض تعيين مواضع .....

5- { وَدَخَلَ جَنَّتَهُ وَهُوَ ..... لِنَفْسِهِ قَالَ مَا ..... أَنْ تَبِيدَ هَذِهِ أَبَدًا} قال تعالى:.

Ministry of Higher Education

& Scientific Research

Tikrit University

Dentistry College of

Dept Basic Science.

Stage.First : Class

Subject: human rights

hours 3: Time

Form (A)

س 1 : عرف الدستور .. وأشرح القواعد الدستورية. (25 درجة)

س 2 : عدد حقوق الطفل في الاسلام .. مع شرح أثنين منها؟ (25 درجة)

س3 :تكلم عن شريعة حمورابي . (25 درجة)

س4 : أشرح بأختصار حقوق الطفل في الديانة المسيحية . (25 درجة)

مع تمنياتنا لكم بالنجاح .

مدرس المادة	مدرس المادة	رئيس الفرع
م. م. اسامة محمد عبد	م.م. زيد علي احمد	أ.د. هديل مزهر يونس

جامعة تكريت **المرحلة الاولى**

كلية طب الاسنان **مادة حقوق الانسان والديموقراطية**

امتحان الفصل الاول

س 1 : ما هي النتائج التي وردت في مواد الاعلان العالمي لحقوق الانسان ؟

(3) درجات

س2 : ما هي حقوق الانسان في الاسلام ؟ عدد خمسة منها مع الشرح .

(2.5) درجة

س 3 : ما هي الضمانات الدستورية على الصعيد الداخلي؟ .. تكلم عنها بالتفصيل .

(2) درجة

مع تمنياتنا لكم بالنجاح

م.م. زيد علي احمد **م.م. عطية عبد فاضل** **م.م. اسامة محمد عبد**

رئيس الفرع:

أ.د. هديل مزهر يونس

Dental Anatomy 1:yaer:

Q1: Choose the correct answer from the following questions: (30 degree)

[The numbers of teeth used in the questions are (FDA)]

1. Part of tooth embedded in the alveolar process and covered by cementum.
   (a) crown (b) root (c) pulp (d) enamel

2. The visible part of the crown seen in the mouth.
   (a) anatomical crown (b) crown (c) clinical crown (d) non of above.

3. Hardest material in the human body.
   (a) dentin (b) enamel (c) pulp (d) non of the above.

4. Three teeth in each quadrant of the same shape.
   (a) premolars (b) molars (c) incisors (d) canines.

5. The space between the proximal surfaces incisally & cervically:
   (a) sulcus (b) pit (c) embrassure (d) fissure.

6. The surface of the posterior teeth which contact the teeth in the opposite Jaw.
   (a) occlusal surface (b) lingual surface (c) buccal surface (d) mesial surface
7. Pronounced elevations on the occlusal surfaces of a tooth terminating in a conical or rounded surface.
   (a) Cingulum (b) mamelon (c) Cusps (d) fossa

8. The oblique ridge in 16 &26 is formed from the union between triangular ridges of :
   (a) MLC & DBC (b) MLC & MBC (c) MBC & DLC (d) DBC & DLC
9. From the distal aspect of tooth 26 we can see:
   (a) Some of the occlusal landmarks (b) distal MR (c) central pit (d) a & b

10. The crowns are tilted lingually over their roots are in teeth:
    (a) 32 & 42 (b) 34 & 44 (c) 36 & 46 (d) all the above

Q2: Write (True) for the correct statement and (False) for the false statement? (30 degree)

[The numbers of teeth used in the questions are (FDA)]

( )1. Mesial contact area in maxillary central incisor is at the junction between the middle 1/3 & the cervical 1/3 .

( )2. The cervical line of the maxillary lateral incisor distally is more convex incisally than the mesial one.

( )3. In maxillary canine distal crest of curvature in the center of the middle 1/3.

( ) 4. Lingual surface of mandibular central incisor is curve and smooth .

( ) 5. The mandibular central are similar in shape from the labial aspect to the mand. Lateral incisor except that the lateral is smaller mesiodistally than the central .

( ) 6. The incisal edges of both the mandibular central is straight when viewed from the labial aspect.

( ) 7. The occlusal surface of the mandibular central incisor is larger labially than lingually .

( ) 8. In tooth number 16 mesiobuccal cusp is bigger than distobuccal &bigger than mesiolingual cusp

( )9. From the mesial aspect of tooth 26 we can see 3 roots.

( )10. Labial surface of maxillary canine is concave and smooth.

Q3: Match between tooth and its landmark:- **(10 degree)**

1. Maxillary first molar **a**. fifth cusp

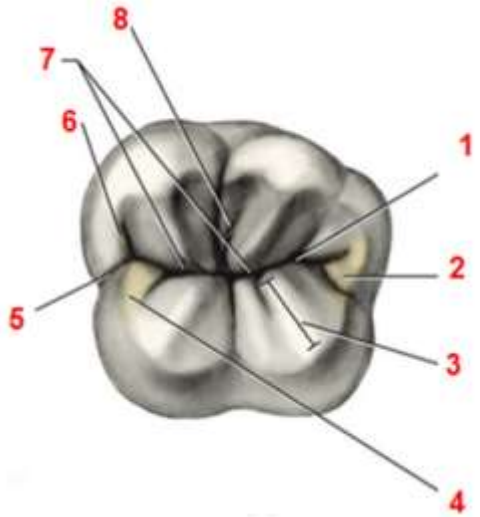
2. Maxillary first premolar — **b**. palato-radicular groove

3. Mandibular second premolar — **c.** lingual developmental groove

4. Lateral incisor — **d**. mesio-lingual developmental groove

5. Mandibular first premolar — **e**. mesial developmental groove

Q4: Name the tooth and the labeling:-



Good Luck

Examiner

Assis.Lec. Noor Ghazi

Q1: Choose the correct answer from the following: **(40 degree)**

1. The anatomical landmark that include the elevation of all the layers of the crown is
   a. Tubercle
   b. Cusp
   c. Ridge

d. Pit

2. The more rounded distal outline can be seen in
   a. maxillary central incisor
   b. maxillary lateral incisor
   c. mandibular central incisor
   d. mandibular lateral incisor

3. The letter (A) in universal system of notation of primary teeth refers to ……., while in palmer system refers to ……..
   a. Maxillary right first molar, central incisor.
   b. Maxillary right second molar, central incisor
   c. Maxillary left first molar, lateral incisor
   d. Maxillary left second molar, lateral incisor

4. The pulp chamber is outlined by
   a. Dentin and enamel
   b. Dentin and cementum
   c. Enamel only
   d. Pulp

5. The Fossa that found in the anterior teeth is
   a. Triangular fossa
   b. Central fossa
   c. Palatal fossa
   d. Lingual fossa

6. The largest cingulum of in anterior teeth seen in
   a. Maxillary central
   b. Maxillary lateral
   c. Maxillary canine
   d. Mandibular canine

7. In maxillary canine line bisecting the cusp is labial to a line bisecting the root from
   a. Labial aspect
   b. Lingual aspect
   c. Mesial aspect
   d. Distal aspect

8. The maxillary central incisor has ……Line angles.
   a. 2
   b. 4
   c. 6
   d. 8

9. The most common tooth that has anatomical variations is
   a. Maxillary central incisor
   b. Maxillary lateral incisor
   c. Third molar
   d. Canine

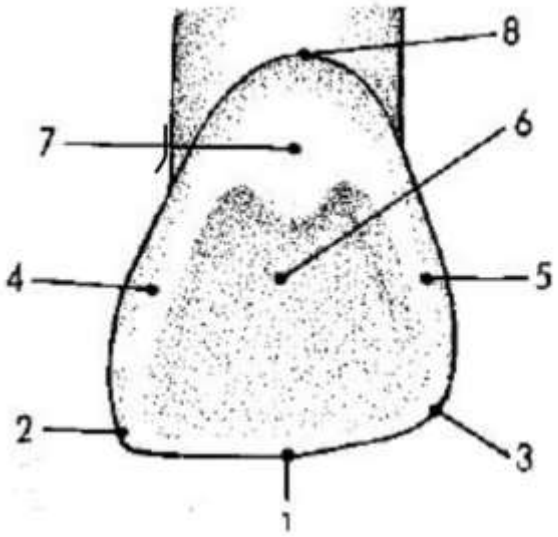
10. The oblique ridge in 16 &26 is formed from the union between triangular ridges of :

a. MLC & DBC
b. MLC & MBC
c. MBC & DLC
d. DBC & DLC

Q2: Answer with <u>True</u> or <u>False</u> for the following statement:- **(40 degree)**

1. Mamelon it's anyone of the three rounded elevation include the enamel and dentin of the incisal portion of the tooth.
2. Clinical crown may be smaller, equal or larger than anatomical crown.
3. Cervical line is the line that found in the neck of the tooth.
4. Cingulum is a lingual lobe can be seen in anterior and posterior teeth.
5. A tubercle is a smaller elevation on some portion of the crown produced by extra formation of all teeth layers.
6. Incisal 1/3 of Labial surface of the mandibular central and lateral incisor is convex , while the middle & cervical thirds are flat.
7. In maxillary canine there is a well-developed lingual ridge separated from the cusp tip which divides the lingual fossa into mesial & distal lingual fossae.
8. The maxillary central incisor is larger mesio-distally than the lateral but smaller than the canine.
9. Mesial &distal developmental depression on the surface of the root gives the canine more anchorage in the bone.
10. The cusp tip of maxillary canine is at the center of the mesial and distal slops.

Q3: Name the tooth and the labeling:- **(20 degree)**



Good Luck

Examiner

Assis.Lec. Noor Ghazi

نموذج (1)

Q1/ answer by [True] or [false] for the following

A /Which nerve(s) related to occipital bone only

1 vagus 2 trigeminal 3 hypoglossal 4 ophthalmic

B/ Which nerve(s) related to sphenoid bone

1 maxillary 2 mandibular 3 oculomotor 4 optic

C/Which nerve(s) related to temporal bone only

1 vagus 2 vistibulochoclear 3 facial 4 trigeminal

D/Which nerve related to both occipital and temporal bones

1 vagus 2 hypoglossal 3 trigeminal 4 glossopharangeal

Q2/complete the following:

1-trachea is a mobile tube about ……..long.

2-posteriorly mediastinum bounded by……

3- ……..is specialized organ responsible for voice production.

4-muscles of mastication are
:a……b…….c……..……d…….

5-lymphatic vessel are absent in the following:
a……..b…….c……..d……..e……

6/hypoglossal nerve pass through ……..foramen.

7/the heart placed in the ……mediastinum.

8/duct of parotid gland located opposed to …….

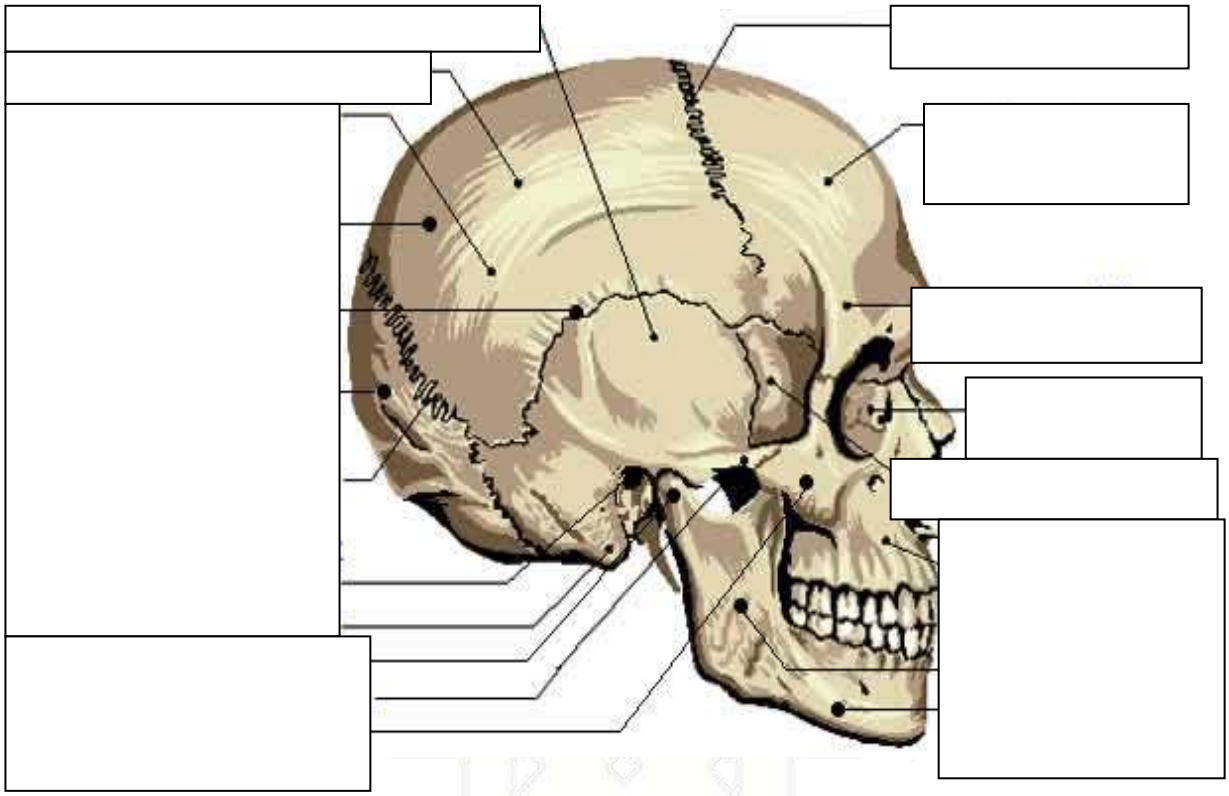
Q3/ enumerate the following:

five bones articulate with temporal bone, heart valves, brain component.

Q5/ define the following:

esophagus , trachea, heart , primary cartilaginous joint

Q4 mention name of the following structures:



نموذج (2)

First stage/Human anatomy

Q1/ choose the most correcet answer :

1. The suture that separates the parietal bones from the occipital bone is the

a. Coronal suture b. Lambdoid suture

c. Sagittal suture d. Squamous suture

2. What small ridges extend laterally from the external occipital protuberance and serve as points of attachment for several neck muscles?

a. Temporal lines b. Linea aspera c. Nuchal lines

d. Mastoid process e. Styloid process

3. Which of these bones does NOT articulate with the sphenoid bone?

a. Ethmoid bone b. Frontal bone c. Parietal bone

d. Occipital bone e. Nasal bone

4. The zygomatic arch consists of processes from the

a. Maxilla and mandible b. Parietal and temporal bones

c. Temporal and zygomatic bones d. Parietal and occipital bones

e. Zygomatic and frontal bones

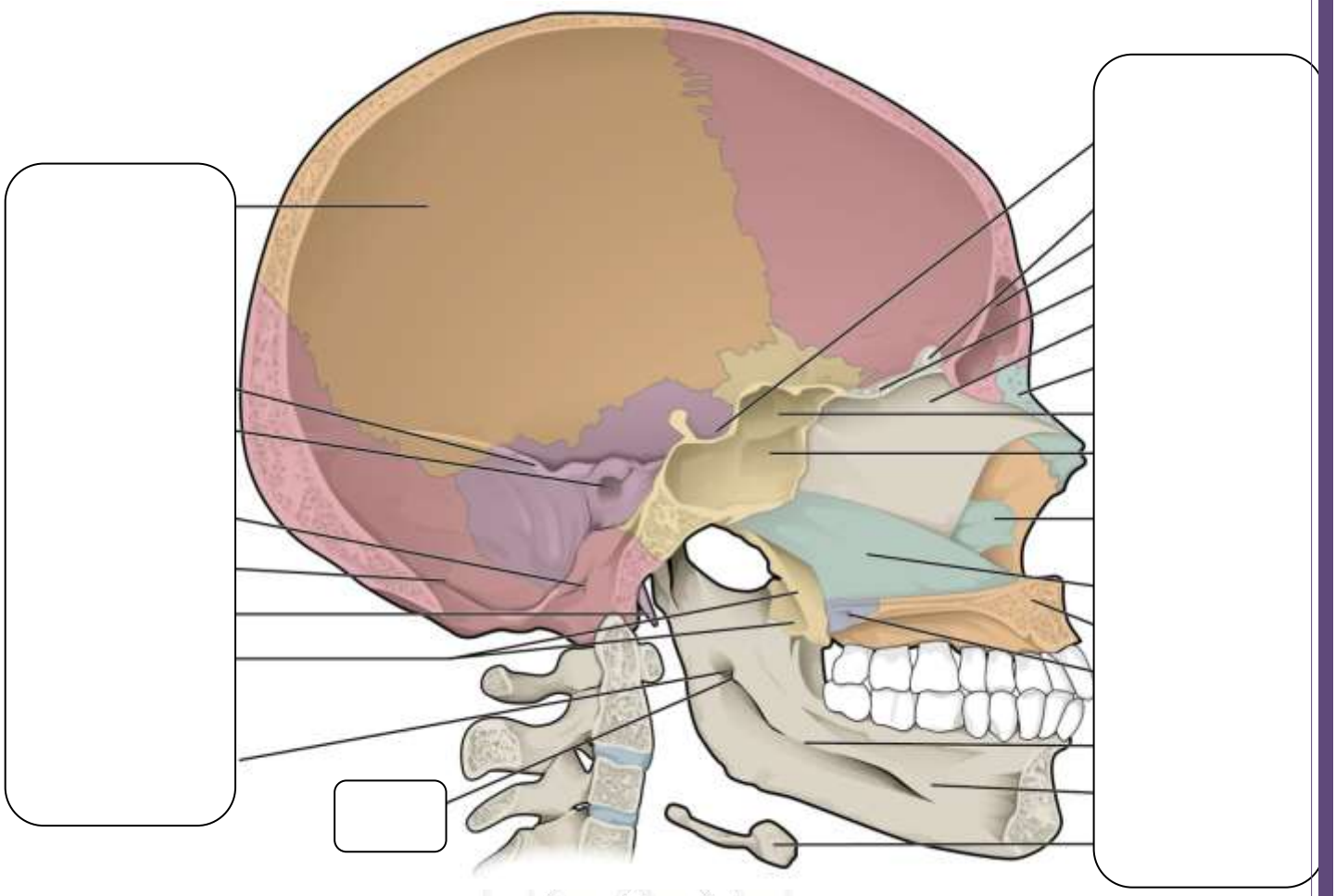
5. Which of these bones does NOT form part of the orbit?

a. Frontal b. Ethmoid c. Maxilla d. Sphenoid e. Temporal

6. The foramen magnum is present in the _____ bone.

a. Frontal b. Occipital c. Parietal d. Sphenoid e. Temporal

Q1/<u>mention the name of the following structures:</u>



Q2/ mention the functions of :

a- the atlanto–occipital joint. B- Synovial fluid

Q3/ complete the following:

1-Lymphatic organs are: ……., ……., ……., ……., and ……

2- masticatory muscles : all receive innervation from the motor root of the …… via its ……..; includes ……..muscle, ……. muscle, lateral pterygoid muscle, and medial pterygoid muscle.

3- The skin is made up of the following layers: ……, …….. and …….. layer.

4- The cavity of the mouth consists of two parts: an outer, smaller portion, the ……, and an inner, larger part, the ……

Q4/ Define the following:

Raphe , Primary cartilaginous joints, Larynx.

Q5/ explain the following:

Pharynx, Plexuses, Pericardium.

Q6/ Identify the [fissure, canal and foramen] in the following bones:

Frontal bone, Occipital bone, temporal bone

Medical chemistry and organic chemistry

First stage:

Q1:Chose the suitable answer for the following.
1-Water's ……structure interacts strongly with charged ions.
A- molecular.
B-hydrogen bonds.
C- polar molecular.
D-solvent
2- Acids can be stored in containers made of..... metal.

A-Al
B-Mg
C-Zn
D-Fe

3-Chemical compound that can dissolve lipids and proteins
A-CH3COOH.
B-HCl
C-NH4Cl
D-NaOH

4- Basic salt is…….. .
A-NH4Cl
B-CH3COONa.
C-PbSO4
D-NaCl

5- ……is consider bidentate ligand.
A-water
B- Glycine
C-ammonium
D-EDTA

6- The neutron is particle has ……. Charge.
A- (+1)
B-(+2)
C-(-1)
D-(0)

7-(212…… Po → 208 82 Pb + 42 α) atomic number for Po is
A-80
B-84
C-70
D-78

8- …….. is the time needed for one-half of the original nuclei of an isotope to decay to other substances
A- Fission reaction
B- Critical Mass
C- fusion reaction
D-half life

9-1-Acetic acid con. is dissolved in distilled water to form solution with pOH=12 will be
A-0.1M
B-0.2M
C-0.3M
D-0.4M
E-0.5M

10--A chemical compound that converts blue colour litmus paper into red colour is
A-sodium carbonate solution.
B-amonium solution.
C-EDTA.
D-chemical compound with small Kb .
E- chemical compound with large Kb .

Q2:Answer the following questions.
1-,If radium is taken into the body ,what will happen? .
2-When a sparingly soluble salt is placed in water with shaking,what will happen?
3-If more solvent is added to the solution ,what will happen for solute?
4-when (OH-) is increased in the blood ,what will happen for phosphate buffer?
5-what is happening for teeth in people who suffer from strong acid reflux or who vomit regularly ?
6-What would happen for Film badges when is receiving radiation?

Practice

Complete the followings.

1-Silver is a white mutable and ductile metal, it is …… in (H2SO4 and dil.HCl) but …… in nitric acid HNO3 (2:1) and in boiling conc.H2SO4

2- The white precipitate of AgCl is soluble in dilute ……to formation the complex soluble salt Ag(NH3)2Cl.

3- The yellow precipitate of PbCrO4 is insoluble in…but is soluble in ……

4- The pH meter should be standardized each time it is used with a buffer of ……..

5- Make sure the solution you are measuring its pH is at room temperature since ……

.

Q1:Chose the suitable answer for the following.

1-Water's ……structure interacts strongly with charged ions.

A- molecular.
B-hydrogen bonds.
C- polar molecular.
D-solvent

2- Acids can be stored in containers made of..... metal.

A-Al
B-Mg
C-Zn
D-Fe

3-Chemical compound that can dissolve lipids and proteins

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D-NaOH

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D-EDTA

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2- The white precipitate of AgCl is soluble in dilute ……to formation the complex soluble salt Ag(NH3)2Cl.
3- The yellow precipitate of PbCrO4 is insoluble in…but is soluble in ……
4- The pH meter should be standardized each time it is used with a buffer of ……..
5- Make sure the solution you are measuring its pH is at room temperature since ……

Q1:write full chemical reaction for the following states
1-Oxidation for cyclopentene .
2-Ethylproponoate with ammonia
3-Propene reacts with HI
4-Nitration of benzoic acid.
5-Benzene reacts with Cl2 under light
6-Reductation for 2-pentanone.

Q2:1-what is ethylene oxide?write three properties for it and then write its reaction with HI.
2-What is Imidazole ? Show derivative of imidazole and then what its function.
3- Explain briefly Polymers Formed By Living Systems

Q3: A-From acetylene using any chemical compound need prepare benzoic acid.
B-Convert Methylproponoate into 1-propene.

نماذج اسئلة لمقررات مواد المرحلة الثانية:
Biochemistry 2nd stage

Ministry of Higher Education
& Scientific Research
Tikrit University
Dentistry College of
Dept Basic Science

Second Stage: Class
Final Exam. 2022-2023
Subject :Biochemistry
hours 3.:Time

Q1- MCQs (Give one correct answer) (40 Marks)

1. Enzymes are classified into ------ classes
   a. six
   b. five
   c. seven
   d. eight

2. The multiple forms of an enzyme catalyzing the same reaction are:
   a. apoenzyme
   b. isozyme
   c. cofactor
   d. coenzyme

3. Carbohydrates can absorbed as
   a. oligosaccharides
   b. disaccharides
   c. monosaccharides
   d. all of the above

4. Insulin can't be taken as an oral medication due to
   a. it denature by gastric acid
   b. it destroyed by enzymes
   c. it is not absorbed
   d. not of the above

5. The active form of vitamin B1 is
   a. pyridoxal phosphate
   b. thiamin pyrophosphate
   c. cobolamin
   d. niacin

6. Vitamin E:
   a-is a mixture of several related compounds known as tocopherols

b-the major function of vitamin E is to act as a natural antioxidant

c-the major symptom of its deficiency in humans is an increase in red blood cell fragility

d-all of the above

7. Amino acid acting as a neurotransmitter:

a. tyrosine
b. alanine
c. glutamate
d. valine

8. Amino acid has an indol ring in its structure:

a- tyrosine
b- tryptophan
c- phenylalanine
d- histidine

9. Calcium in the adult body about:

a- 2-3 Kg
b- 3-4 Kg
c- 1-1.5 Kg
d- 2-2.5 Kg

10. The most important hormones regulating hepatic gluconeogenesis:

a- insulin and glucagon.

b- ADH and serotonin.

c- cortisol and epinephrine.

d-not of the above.

11. It is sometimes called "good" cholesterol:

a-LDL-c.

b-HDL-c.

c- VLDL-c.

d- FFA.

12. Hormones derived from tryptophan are :

a- epinephrine & cortisol.

b- T3 and T4.

c- serotonin and melatonin.

d- not of the above.

13. The energy yield from a gram of fatty acids is approximately:

a- 4 kcal

b- 6 kcal

c- 7 kcal

d- 9 kcal.

14. The major hormone secreted from pineal gland is:

a- melatonin.

b- serotonin.

c- endorphin.

d- cortisol.

15. Nucleic acid which present as double helix is:

a-mRNA.

b-rRNA.

c- tRNA.

d- DNA.

16. The first committed step of fatty acid synthesis is the synthesis of:

e- malonyl-CoA

f- acetyl-CoA

g- ACP

h- not of the above.

17. RNA does not contain:

a- uracil.

b- adenine.

c- thymine.

d-cytocine.

18. Cholesterol is the precursor for synthesis of

a. Vitamin D
b. Thyroid hormones
c. Melanins
d. Neurotransmitters

19. Two systems control all physiologic processes :

a- nervous & digestive systems.

b- endocrine & repiratory systems.

c- endocrine & nervous systems.

d- not of the above.

20. In DNA structure, the amount of thymine (T) equals the amount of :

a- adenine (A).

b- guanine (G).

c- cytosine (C).

d- uracil (U).

Q2- Fill the blanks with suitable words (20 Marks)

1- If the cofactor of enzyme is an organic loosely attached compound it is called a …….. .

2- There are two types of glycolysis …… and ……..

3- …… is the most common metabolic bone disease, characterized by a reduction of bone mass.

4- The earliest symptom of vitamin A deficiency are …… .

5- Oxidation of fats involves the reduction of …… and ……..., while synthesis of fats involves the oxidation of …… .

6- Serotonin and melatonin are synthesized from the amino acid ……. .

7- The bases adenine and gaunine are categorized as …… .

Q3- Talk briefly about (<u>Five</u>) of the followings: (40 Marks)

1- Regulation of calcium in the body.

2- Differences between purines and pyrimidines.

3- Translation of protein synthesis.

4- Sources of fatty acids in animals.

5- Integrative function of hormones.

6- Peptide bond.

Good Luck

Examiners: Dr. Salim J. Khalaf

Q1- MCQs (Give one correct answer) (40 Marks)

21. The active sites of enzymes
a. consists of few amino acid residues
b. active site is three dimensional
c. are clefts within the enzyme molecule
d. all of the above

22. Acetyl CoA is oxidized to CO2 by a series of reactions collectively called:
a. urea cycle
b. β-oxidation
c. Tricarboxylic acid cycle
a. not of the above

23. The organic molecule that loosely attached to enzyme called
a. apoenzyme
b. Prosthetic group
c. isoenzyme
d. coenzyme

24. Digestion of carbohydrates in mouth by
a. ptyalin
b. lipase
c. HCl
d. all of the above

25. Enzymetic digestion of triglyceride by
b. elastase
c. lipase
d. amylase
e. not of the above

26. Cholesterol is the precursor for synthesis of
e. Vitamin D
f. Thyroid hormones
g. Melanins
h. Neurotransmitters

27. The active form of vitamin B1 is
e. pyridoxal phosphate
f. thiamin pyrophosphate

g. cobolamin
h. niacin

28. Amino acid which has the longest of all side chains:
a- arginine
b- lysine
c- glutamine
d- serine

29. Amino acid which has a sulfhydryl group in its structure:
a- methionine
b- leucine
c- valine
d- arginine

30. The interaction between several chains of peptide bonds form
a- primary structure of protein
b- tertiary structure of protein
c- quaternary structure of protein
d- secondary structure of protein

31. Example of essential fatty acids is:
a-oleic.
b- palmitate..
c- linolenate.
d- acetone.

32. Hormones:
i- needed in very small amounts
j- are regulated by negative-feedback mechanisms
k- may be steroid
l- all of the above.

33. β-oxidation of fatty acids happen in:
e- cytosol.
f- nucleus.
g- endoplasmic reticulum.
h- mitochonderia.

34. Two systems control all physiologic processes :
a- nervous & digestive systems.
b- endocrine & repiratory systems.
c- endocrine & nervous systems.
d- not of the above.

35. In DNA structure, the amount of thymine (T) equals the amount of :

a- adenine (A).

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c- cytosine (C).

d- uracil (U).

36. Insulin can't be taken as an oral medication due to

e. it denature by gastric acid
f. it destroyed by enzymes
g. it is not absorbed
h. not of the above

37. The active form of vitamin B1 is

a. pyridoxal phosphate
b. thiamin pyrophosphate
c. cobolamin
d. niacin

38. Glucose structure is:

a- $C_3H_3O_3$.

b- $C_6H_{12}O_6$.

c- $C_6H_6O_6$.

d-Not of the above.

39. Calcium in the adult body about:

a- 2-3 Kg
b- 3-4 Kg
c- 1-1.5 Kg
d- 2-2.5 Kg

40. It is sometimes called "good" cholesterol:

a-LDL-c.

b-HDL-c.

c- VLDL-c.

d- FFA.

Q2- Fill the blanks with suitable words (20 Marks)

1- Enzyme molecules contain a special pocket or cleft for binding of substrate called the …… .

2- The severe thiamin deficiency disease known as ……..

3- The biologically active form of vitamin D is termed ……. .

4- The half-life (protein turnover) of liver protein about ……. .

5- The main two forms of calcium occur in the circulation, almost 50% …….. and 40% ……. .

6- The active form of folic acid is ……..

7- The first pathway which begins the complete oxidation of glucose is called ……. .

8- Glycogen is primarily stored in the …… and …… cells of animals.

Q3- Talk briefly about (<u>Five</u>) of the followings: (40 Mark)

1- When and why biotin deficiency happened? 2- Types of lipoproteins.

3- Metabolic fates of glucose in the body. 4- Permissive function of hormones.

5- Draw structures of nucleic acid bases. 6- sources of nitrogen from amino acids.

Good Luck

Ministry of Higher Education & Scientific Research
Tikrit University
Dentistry College of
Dept Basic Science.

Stage.second: Class
Subject: General Histology
hours 3: Time
Form (A)

Q1/ Choose the wright answer (Choose 25 only): 25 marks

1- In --------- , the proteins contained in the keratohyalin granules mediate the aggregation of tonofibrils.

a-Stratum corneum. b- S tratum basale. c- Stratum lucidum d- Stratum spinosum e- none.

2- Middle tunic in the heart, this layer is composed of cardiac muscle and is called ----------.

a- myocardium., b- tunica media. c- endocardium. d- epicardium. e- none

3- Exocrine glands, aiding in digestion and/or lubrication, are located in lamina propria is called ------

a- liver. b- Brunner's glands. c- gastric glands, d- goblet cells. e- none.

4- --------- Forms the stroma of lymphatic tissues and organs.

a- Type II. b- Type III. c- Type IV. d- Type I. e- none.

5- Glands of Bowman are present in .

a- Lamina Propria of nose . b- Lamina Propria of trachea. c- Lamina Propria of duodenum. d- Lamina Propria of esophagus. e- none

6- Each uriniferous tubule consists of an excretory part called --------- .

a- Urethra b- nephrons and a system of collecting ducts c- Malpighian corpuscle d- none.

6- After antigen stimulation, a central pale core called --------- .

a- nodule center. b- germinal center. c- both. d- none.

7- This method of release is used by both exocrine and endocrine glands.

a- Apocrine b- Holocrine c- Diffusion d- Merocrine e- all

8- -------- released their products by the holocrine mode of secretion.

a- Sebaceous glands. b- Apocrine sweat glands. c- Merocrine sweat glands. d- all e- none

9- -Pores lacking diaphragms are uniquely present in ----------.

a- the endocrine organs capillaries b- the glomerular capillaries c- Discontinuous capillaries d- none e- all

10- Possesses few isogenous groups.

a- Hyaline cartilage b- Elastic cartilage c- Fibrocartilage d- none e-all

11- Pancreas resembles --------- except the it has centroacinar cells and fewer ducts.

a- liver b- submandibular gland c- sublingual gland d- parotid gland e- none

12- Respiratory bronchioles are lined by---------- .

a- pseudostratified ciliated columnar epithelium b- simple cuboidal epithelium c- simple ciliated columnar epithelium d- none e- all

13- ------ is a primary lymphoid organ that receives immature lymphocytes.

a- Bone marrow b- Spleen c- Thymus d- none e- all

14 -Have thicker walls and smaller lumens

a- Blood vessels b- Arteries c- Veins d- none e-all

15- Consists of a coil of Schwann cells around a nerve terminal

a- Ruffini ending b- Pacinian corpuscle c- Meissner's corpuscle d- none e-all

16- Oxytocin causes smooth muscle and myoepithelial cell contraction..

a- Pars nervosa b- Pars distalis c- Pars tuberalis d- none e- all

17- -------- Modified smooth muscle cells in wall of an afferent arteriole

a- Macula densa b- interlobar arteries c- Juxtaglomerular cells d- none e- all

18- Carries deoxygenated blood and high in absorbed nutrients.

a- Hepatic vein. b- Hepatic artery c- Hepatic portal artery d- Hepatic portal vein e-none

19- composed of compact bone, is hollow and is usually lined by a thin band of spongy bone.

a- epiphysis b- diaphysis c- Metaphysis d- Fibrous trigones e- Semilunar valves

20- ------ Filled primarily with lymphoid nodules composed of B lymphocytes

a- Inner zone b- Capsule c- Sinuses d- Outer zone e- none.

21- --------- located in the dermal papillae

a-Papillary plexus b- Cutaneous plexus c- Arteriovenous anastomoses d- none e-all

22- The radiating foot processes of podocytes give rise to many secondary processes called ---

a- slit diaphragms. b- filtration slits. c- Filtration barrier. d- all e- none .

23- Simple, coiled tubular.

a- intestinal glands b- fundic glands. c- sweat glands. d- sebaceous glands e- none.

24- -------- phagocytose foreign matter.

a- Plasma cells b- dendritic cells c- T lymphocytes d- B lymphocytes e- none

25- Primary structures of compact lamellar bone

a- Inner circumferential lamellae. b- Outer circumferential lamellae. c- osteons d- none e-all.

26- -------- Secrete prolactin which stimulates milk production.

a- Mammotropes b- Somatotropes c- Thyrotropes d- Gonadotropes e-none.

27- Spherical cells with microvilli and abundant, vacuolated cytoplasm; bulge into alveolar space

a- Squamous alveolar or type I cells b- Lamellar bodies c- Support cells d- Basal cells e- none.

28- Provides energy storage and insulation.

a- Adipose connective tissue. b- Elastic connective tissue. c- Mucus connective tissue. d- Reticular connective tissue. e- none.

29- Bile is produced by hepatocytes in the liver and released into ---- located between two adjacent hepatocytes.

a- bile ducts b- hepatic duct. c- bile canaliculi. d- cystic ducts. e- none.

30- ----- are the vessels that regulate blood pressure and deliver blood under low pressure.

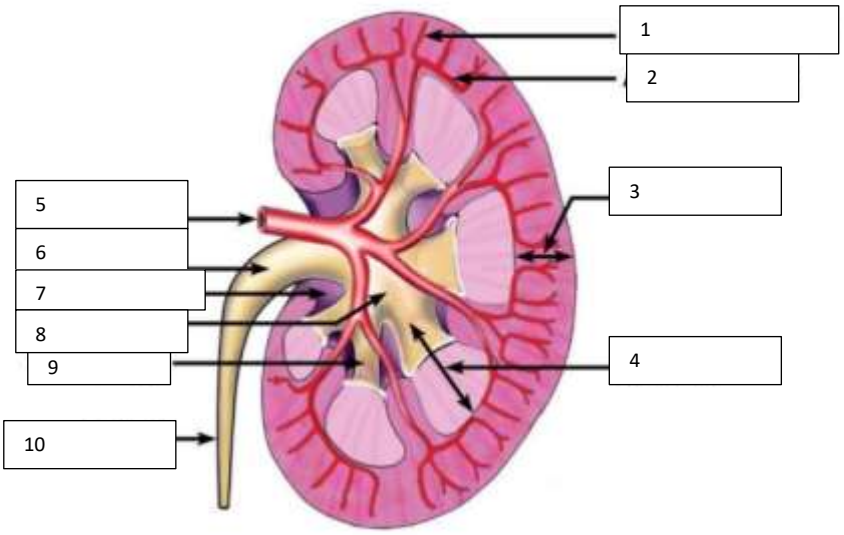
a- Small arteries b- capillaries c- Venules d- arterioles e- none.

Q2/ Answer by true (T) or False (F)(Choose 25 only): 25 marks

1- Pseudostratified epithelium Forms the lining of the intestines and gall bladder.
2- Secondary nodule. The nodule present before antigen stimulation. The spherical nodule consists primarily of densely packed B lymphocytes.
3- Pacinian corpuscle. Responds to vibration and deep pressure.
4- Two upper chambers, atria (singular, atrium), receive blood from the body and lungs; two ventricles pump blood out of the heart.
5- Yellow marrow is restricted to spongy bone areas of selected bones in the adult.
6- Distal convoluted tubule. Composed of a simple cuboidal epithelium with microvilli.
7- The central vein runs parallel to the long axis of hepatic lobule.
8- Rathke's pouch, an outgrowth of ectoderm from the roof of the mouth.
9- Vocal ligament is a skeletal muscle, lies within each true vocal fold. This muscle alters the shape of the vocal fold and aids in phonation.
10- Mast cells mediate immediate hypersensitivity reaction and anaphylaxis by releasing immune modulators from cytoplasmic granules.
11- Cilia ,present on cells lining the epididymis and ductus deferens in the male reproductive tract.

12- Lymph nodes, small, encapsulated, kidney-shaped organs occurring in chains or groups along lymph vessels.
13- Reticular layer is a thick layer composed of dense, irregular connective tissue.
14- External elastic laminae. Consists of fenestrated elastic sheets at the junction of the tunica media and tunica adventitia.
15- Inner circumferential lamellae. stacks of lamellae extend at least partially around the outer circumference of a long bone.
16- Minor calyx. Four or five per kidney; formed by the confluence of minor calyces.
17- Ascending colon. Rises on the right side of the abdominal cavity.
18- Basophils. Hormone-containing granules in the cytoplasm of these cells stain with basic dyes, e.g., hematoxylin and eosin.
19- The pleura is a serous membrane (serosa) that lines each thoracic cavity and is reflected over the interior surface of each lung.
20- connective tissues are the only tissues that possess extensive extracellular components (stroma) in addition to parenchymal cells.
21- Macula adherens. Disk-like junctions scattered over the surface of the cell, which are paired with similar structures in adjacent cells.
22- Hassall's corpuscles are the degenerating remains of the epithelial reticular cells with their keratin granules and are diagnostic for the thymus.
23- Eponychium is a thickened epidermis, secures the nail at the fingertip.
24- Atrioventricular valves at the bases of the aortic and pulmonary trunks prevent backflow of blood into the heart.
25- Collagen type I fibers comprise the majority of the organic matrix. Their predominance causes bone to stain pink with eosin.
26- Interlobular arteries.Arch between medulla and cortex; give rise to interlobular arteries.
27- Hepatic artery Supplies about 75% of the blood to the liver.
28- The capillaries anastomose into the hypophyseal portal vessels which travel down the infundibulum and end in a second capillary network within the adenohypophysis.
29- Alveolar capillaries abundant capillaries anastomose to form pulmonary veins.
30- Elastic fibers difficult to differentiate from collagen with conventional stains.

Q3/ Fill in the blanks (Choose 2 only) : 20 marks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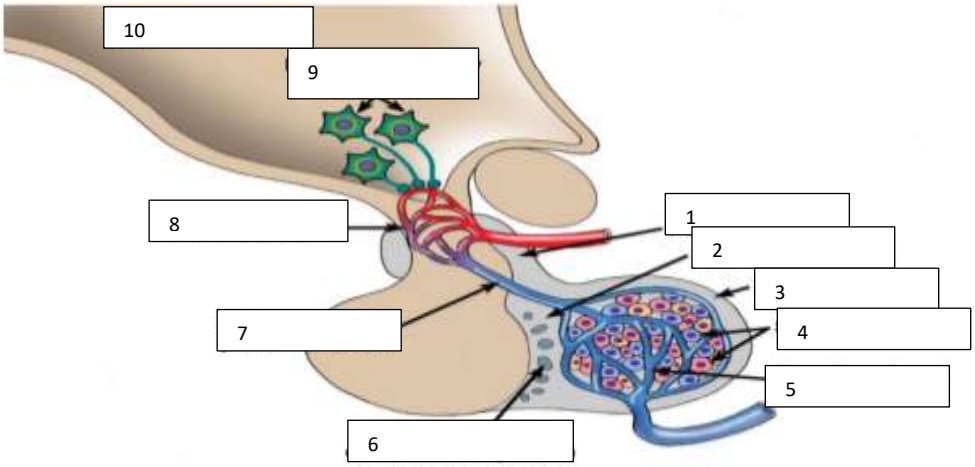
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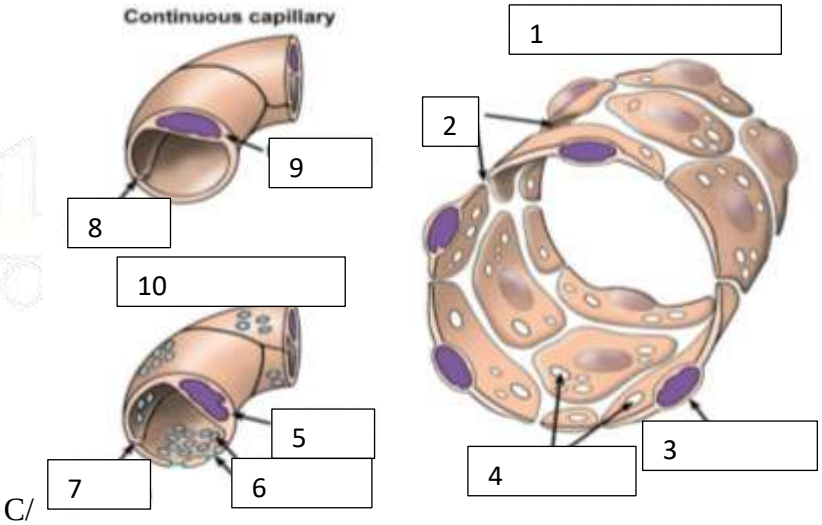
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C/

Q4/ **Answer 5 only (30 marks):**

1-.Explain distal tubule, convoluted portion.

2- Explain true vocal folds.

3- Explain Endocrine pancreas

4- By four histological points differentiate between thick and thin skin.

5- Enumerate major lymphoid cell types and explain which mature in thymus.

6- How can you differentiate between the three regions of stomach (cardiac, fundic and pyloric regions)?

7- Explain regulation of adenohypophyseal secretion.

8- Explain Impulse conducting system

Good Luck

Examiners **Head of the Dep.....**

Assist Prof. Dr. Mahmood N. Mustafa

Assist Prof. Shaymaa A. Mahdy

Ministry of Higher Education
& Scientific Research
Tikrit University
College of ..Dentistry.
Dep .basic sciences

2017-2018

Class ...second.....
Subject . G. Histology
Time...3 Hours...

Form (A)

Q1/ Enumerate Types of Secretory Products of Exocrine glands and explain which organized into tubules .

Q2/ Explain mechanism of contraction, sliding filament model.

Q3/ Explain high endothelial venules.

Q4/ Enumerate layers of the epidermis and explain the deepest layer.

Q5/ Explain structures that increase the surface area of the small intestine.

Q6/ Explain true vocal folds.

Q7/ Enumerate with Explain major lymphoid cell types.

Good Luck

Examiners

Head of the Dep.....

Assist Prof. Dr. Mahmood N. Mustafa

Assist Prof. Shaymaa A. Mahdy

Anatomy / 2nd year

Tikrit University/College of Dentistry

Dept. Basic Science/Anatomy/2nd Y

Q1/ complete the following:[14]

1/…… is a small circular fold of dura mater that forms the roof for the sella turcica

2/ The …… and ……..nerves are branches of the frontal nerve.

3/ Lymph vessels in the anterior part of the scalp and forehead drain into the …… lymph nodes.

4/ ……. lies in the free lower margin of the falx cerebri.

5/…….muscle arises from the maxilla above the central incisor and is attached to the nasal septum.

6/ The skin over the parotid gland and part of the auricle of the ear supplied by …… nerve.

7/ ……. vein is formed in the infratemporal fossa from the pterygoid venous plexus.

8/The …… invests the brain and spinal cord. It is made of thin vascular fibrous tissue.

9/……. is a sickle-shaped fold of dura mater that lies in the midline between the two cerebral hemispheres.

10/The face receives a rich blood supply from two main vessels, …… and ……. arteries.

11/…… nerve supplies a small area of skin over the lateral part of the upper lid.

12/lymph vessels in the part of the scalp above and behind the ear drain into the ……nodes.

Q2/ Enumerate parts or areas of the body supplied by the following structures:[10]

1/Posterior auricular nerve

2/Dorsal nasal artery

3/ Occipital artery

Q3/ Mention the origin, insertion, nerve supply and action of masseter.[8]

نموذج ثاني

Q: ANSWER THE FOLLOWING (Choose 25 only):-

1. Loss of taste over the anterior two-thirds of the tongue indicates damage to the:
   a. Lingual branch of the mandibular division of trigeminal nerve.
   b. Chorda tympani branch of the facial nerve.
   c. Lingual branch of glossopharyngeal nerve.
   d. Hypoglossal nerve.
   e. All the above.
2. The important structures associated with cavernous sinus:

a. The external carotid artery and the 6th cranial nerve.
b. The artery of face
c. In the lateral wall, the 3rd and 4th cranial nerve
d. The pituitary gland, which lie laterally in the sella turcica.
e. The superior and inferior sagittal sinuses

3. Brain surrounded by:
a. endosteal layer
b. meningeal layer
c. Arachnoid layer and piamater layer
d. only b and c
e. all of the above

4. Which of the following foramina is **NOT** in the middle cranial fossa?
a. foramen rotundum
b. foramen spinosum
c. foramen lacerum
d. groove of greater petrosal nerve
e. foramen magnum

5. How many muscles are responsible to control the eye movement ?
a. Two
b. Four
c. Six
d. Eight
e. Ten

6. The ……. Is an elliptical opening between the eyelids and is the entrance into the conjunctival sac.
a. anterior chamber
b. posterior chamber
c. palpebral fissure
d. medial angle
e. lateral angle

7. The supratrochlear nerve is a branch from ……, but infratrochlear nerve is a branch from ……
a. frontal , nasociliary
b. nasociliary , frontal
c. infraorbital , frontal
d. frontal, infraorbital
e. all of the above

8. superior oblique muscle supplied by …….., lateral rectus muscle supplied by ……., but all rectus supplied by …….
a. 4^{th} C.N, 3^{rd} C.N, 6^{th} C.N

b. 4th C.N, 6th C.N, 3rd C.N
c. 6th C.N, 4th C.N, 3rd C.N
d. 6th C.N, 3rd C.N, 4th C.N
e. 3rd C.N, 4th C.N, 6th C.N

9. Blood Supplies to the Nasal Cavity are:
a. Anterior ethmoidal artery and posterior ethmoidal artery branches from ophthalmic artery
b. Sphenopalatine artery and greater palatine artery branches from the maxillary artery
c. Septal branch of the superior labial artery a branch from the facial artery
d. only **a** and **b**
e. All of the above

10. Which of these sinuses open in to the hiatus semilunaris
a. maxillary sinus
b. frontal sinus
c. posterior ethmoidal sinus
d. anterior ethmoidal sinus
e. middle ethmoidal sinus

11. Sickle-shaped fold of dura mater that lies in the midline between two cerebral hemispheres
a. Falx cerebri
b. Falx cerebelli
c. Tentorium cerebelli
d. Diaphragm sellae

12. The floor of maxillary sinus is related to
a. floor of orbit
b. the premolars and molar teeth and its alveolar process
c. the maxilla
d. maxilla and zygoma
e. zygoma

13. Dislocation is treated by forcing the mandible
a. Upwards and backwards
b. Upwards and forwards
c. Downwards and forwards
d. Downwards and backwards

Ministry of Higher Education

& Scientific Research

Tikrit University

Dentistry College of

Dept Basic Science.

2nd stage: Class

Subject: Physiology

hours 3.:Time

Q1:**Fill in the blanks.(50 mark)**

1- …… Movement of air into and out of lungs.

2-…….. Part of respiratory system where gas exchange does not take place.

3- In …….carbon dioxide combines with water inside RBCs to form carbonic acid which dissociates to form bicarbonate ions and hydrogen ions

4- …..…….which conducts impulses from the sinus node to the atrioventricular (A-V) node.

5-....., which conduct impulses to all parts of the ventricles.

6- The……Waves, which is caused by atrial contraction.

7- The remaining volume in each ventricle, about 40 to 50 milliliters, is called the ……. .

8- The A-V valves have …….muscles attached to them by the……

9- The "lub" is associated with closure of the atrioventricular (A-V) valves at the beginning of ……

10- The difference between systolic and diastolic pressure Is called ……..

11- …….stimulates interstitial cells of the testes to produce testosterone.

12- Growth hormone inhibited by ……. .

13- ……causes kidney tubules to reabsorb more water.

14- PTH stimulates ……..activity to digest bone matrix and releases calcium and phosphates to the blood.

15- The events that occur from the beginning of one heartbeat to the beginning of the next are called the……..

16-The cranial nerves of parasympathetic system are……. and……..

17- ……..Carry impulses away from the cell body.

18- Types of neurons are…….. , …… , …… .
19- ……nerves system inhibits peristalsis and secretion.
20- Division of the peripheral nerves are …….and…….
21- The nephron is …….. .
22- Each glomerulus is fed by an…….And drained by an……..
23- The function of urethra is…….
24- GFR isdepends on …… , ……and……
25- Represent Renin ……..where as Renin…….

Q2: Match (30 mark)

1. Adrenaline	a. potential difference across membrane opposing electrical gradient that increasingly tends to stop K+ from moving across the membrane
2. Active Transport	b. nerve membrane cannot be excited again because of the closure of inactivation gate.
3. Smooth muscle	c. released by the body to override the homeostatic control of glucose in emergencies
4. Absolute refractory period	d. composed of actin, Tropomyosin، and Troponin
5. Actin Filament	e. net movement of material from an area of high concentration of that substance to an area with lower concentration of that substance .
6. Hyperpolarization	f. If the stimulus is any strength above threshold, the nerve or muscle fiber will give a complete response or otherwise no response at all.
7. Electrical driving force	g. are believed to exert an attractive influence on the acetylcholine vesicles، forcing these vesicles to fuse with the neural membrane and empty their acetylcholine into the synaptic space via the process of exocytosis.
8. calcium ions	h. 3 Na+ pumped in for every 2 K+ pumped out; creates a membrane potential
9. Diffusion	i. resting membrane potential may be about -55mV
10. All or none law	j. membrane potential becomes more negative due to efflux of K+ or influx of Cl-.

Q2: Answer Two of the following ?(20 mark)

1. Function of saliva for oral hygiene?
2. Composition of pancreatic juice and regulation of secretion?

3. Briefly explain Sliding Filament Mechanism?

Good Luck & Ramadan Mubarak

Examiner **Head of the Dep..... Dr. Takea shaker Ahmed**

Dr. Raghad Tahseen Thanoon

Ministry of Higher Education & Scientific Research

Tikrit University

Dentistry College of

Dept Basic Science.

2nd stage: Class

Subject: Physiology

hours 3.:Time

Q1:Fill in the blanks.(60 mark)

1- …… Movement of air into and out of lungs.

2- The……Waves, which is caused by atrial contraction.

3- The remaining volume in each ventricle, about 40 to 50 milliliters, is called the ……. .

4- The A-V valves have …….muscles attached to them by the……

5- The "lub" is associated with closure of the atrioventricular (A-V) valves at the beginning of ……

6- The difference between systolic and diastolic pressure Is called ……..

7- …….stimulates interstitial cells of the testes to produce testosterone.

8- Growth hormone inhibited by ……. .

9- ……causes kidney tubules to reabsorb more water.

10- ……nerves system inhibits peristalsis and secretion.

11- Division of the peripheral nerves are …….and…….

12- The nephron is …….. .

13- Each glomerulus is fed by an…….And drained by an……..

14- The function of urethra is…….

15- GFR isdepends on …… , ……and……

Q2: Answer Two of the following ?(20 mark)

1. Function of stomach?
2. Composition of gastric juice and regulation of secretion?
3. Briefly explain Sliding Filament Mechanism?

Q3: Answer the following?(20 mark)

1. Analyze the physiological basis of pain perception. How do nociceptors function, and what are the pathways that transmit pain signals to the brain?
2. Discuss the role of the blood-brain barrier (BBB) in protecting the brain. What substances can cross the BBB, and what are the mechanisms that allow or prevent this passage?

Good Luck & Ramadan Mubarak

Examiner **Head of the Dep.....**

Dr. Takea Shaker Ahmed

Dr. Raghad Tahseen Thanoon

نماذج اسئلة لمقررات مواد المرحلة الثالثة:

Ministry of Higher Education
& Scientific Research
Tikrit University
College of Dentistry
Dept of Basic Sciences

3rd.Class
Oral Microbiol..Subject
Time3 hrs. **Form(3)**
.

Note : Attempt all questions

Q1/ Choose only one appropriate answer of the following questions (2 marks of each)

1- A process by which two living bacteria bind together and transfer genetic information is called

a. conjugation b. transformation c. transduction d. encapsulation

2-Which of the following is Not a mechanism of action of an antibiotic?

a. inhibiting cell wall synthesis
b. inhibiting conjugation
c. inhibiting protein synthesis
d. inhibiting DNA synthesis

3-Each of the following organisms is an important cause of UTI EXCEPT.

a- E. coli
b- Proteus mirabilis
c- Klebsiella pneumonia
d- Bacteroidesfragilis

4- Candida albicans is cause

a. sneezes and coughs b.headach c.white thrush d. tooth staining

5-Which of the following toxins stimulate the production of cyclic AMP

a- Diphtheria toxin
b- Tetanus toxin
c- Botulinum toxin
d- Cholera toxin

6-What virulence factor is common to all Gram negative bacilli?

a- Capsule
b- Exotoxin
c- Endotoxin
d- DNase

7-Which of the following components is present in gram-positive bacteria but not in gram-negative bacteria?

a- Peptidoglycan
b- Teichoic acid
c- Capsule
d- Flagella

8-Which genus of the enteric group is considered to be a primary pathogen?

a. *Serratia*
b. *Shigella*
c. *Escherichia*
d. *Klebsiella*

9-What is the reservoir for *Salmonellatyphi*?

a. Wild rodents
b. Soil
c. Humans
d. Pigs

10-Which of the following bacteria that infects the gastrointestinal tract is the MOST frequent cause of bacteremia?

a- Shigella flexneri
b- Campylobacter jejuni
c- Vibrio cholera
d- Salmonella typhi

11-The 70S procaryotic ribosomes consist of

a. two 40S subunits.

b. a 50S and a 30S subunit.
c. a 40S and a 30S subunit.
d. a 50S and a 20S subunit.

12-The most promonent and common organism found on the skin is

a- Staph. aureus
b- Bacteroidesfragilis
c- E. coli
d- Staph. epidermidis

13-Which of the following antimicrobial categories is used on superficial wounds

a- Preservative
b- Antibiotic
c- Disinfectant
d- Antiseptic

14-Which one of the following is the major antigenic protein in the cell wall of *Streptococcus pyogenes* ?

a- Teichoic acid
b- M protein
c- Protein A
d- Capsule

15- What is the most serious streptococcal pathogen of humans?

a- *Streptococcus agalactiae*
b- Streptococcus mutans
c- Streptococcus pyogenes
d- viridance streptococci

Q2/ Answer only two of the following questions (10 marks for each)

a- List the hierarchy in the levels of classification
b- . According to pathogenesis List the types of *E. coli.*
c- Mention the properties of the cellwall of Gram-negative bacteria

---

Q3/ Answer the following questions :(10 marks for each)

a- List the types of oral streptococci.
b- Write short notes about typhoid fever
c- list the Host defense mechanism directed against gonococci

---

Q4/ Match the following aggresins with their respective modes of action from A to F: (2 marks of each) ?

1. Hyaluronidase	A. Destroys RBC's and other tissues
2. Haemolysins	B. Breaks down connective tissues, increases permeability of tissue space
3. Streptokinase	C. Causes lysis of RBC's and other tissues
4. Collagenase	D. Digest the fibrin of blood
5- Capsule	E. Dissolves collagen.
	F. None

Q5/Brifly ,write short note about gray pseudomembrane ?. (10 marks)

Good Luck

Examiner **Head of the Dep .**

Ass. Prof. Dr. Chateen I. Ali Pambuk **Prof. Dr. Rajaa Suheil Najim**

Ass. Prof. Dr. Hadeel Mizher Younus

Dr. Hind ISAM Abdullah ALMASHTAA

Ministry of Higher Education

& Scientific Research

Tikrit University

.Dentistry.College of

Dept Basic Sciences

3rd class.Class

Oral Microbiology.Subject

2 hrs...Time

Form (2)

Note : Attempt all questions

Q1/ Choose only one appropriate answer of the following questions : (1 mark for each)

1-Which situation below describes an example of innate immunity?

a. antibody production by plasma cells.
b. antigen removal by cilia in the respiratory tract.
c. complement activation by antibody bound to the surface of a bacterium.
d. memory response to influenza virus
e. recognition and killing of virus-infected cells by cytotoxic T cells.

2- The outermost boundary of prokaryotic cells is their _____.

A. plasma membrane B. nuclear envelope C. cytoplasm D. cell wall

3- One of the followings is true regarding the function of macrophage

a- non-cytokine producing cell b- As specific Ag reseptor

c- phagocytosis without the aid of opsonin d- a and b are true **e**- b and c are true

4- The correct order of taxonomic groups from higher to lower rank is?

a) Kingdom—Order—Class—Family
b) Order—Class—Division—Family—Genus—Species
c) Kingdom—Order—Division—Family—Class—Genus—Species
d) Kingdom—Division—Class—Order—Family—Genus—Species

5-Another name for innate immunity:

A) Is artificial immunity b) Is specific immunity.
C) Is non-specific immunity - D) Is acquired immunity

6-Regarding the immune system

(a) antibodies play a crucial role in the innate immune system
(b) The classical pathway of complement activation is part of adaptive immunity
(c) T cell are important for ulternative complement activation
(d) C reactive protein is a by-product of various adaptive immunity responses
(e) none of the above is true

7-The two types of lymphocytes are:

A) B-cells and the T-cells . B)- T-cells and erythrocytes.
C) Platelets and erythrocytes. D) Platelets and the T-cells.

8- Which of the following immunity is called the first line of defence?

(a) Innate Immunity (b) Active immunity (c) Passive immunity (d) Acquired immunity

9- In the binomial system, the first word of the name is the _____.

A. species B. genus C. family D. domain

10-The discipline of identifying and classifying organisms according to certain rules is called _____.

A. taxonomy B. statistics C. ecology D. taxidermy

11-nasopharynx of infant is

A- sterile B- none sterile

C-within 12 hours of birth found staphyllococci D- both a and c

12-radiation effect on :

A-cell wall of bacteria B- cell membrane of bacteria

C- nuclic acid of bacteria D- all of above

13- Which of the following areas of the body do not have a resident microbial flora:

A-upper respiratory tract B- eyes C- bladder D- ear

14- Which of the following organisms is most likely to be implicated in dental caries?

A. *Staphylococcus aureus*
B. *Staphylococcus epidermidis*
C. *Streptococcus sangius and streptococcus mutans*
D. *Escherichia coli*

15-Which of the following is the general mechanism of action for erythromycin?

A-Inhibition of a metabolic enzyme B-Inhibition of cell wall synthesis

C- Disruption of protein synthesis D- Inhibition of nucleic acid transcription and replication

16- extra chromosomal circular double strand self replicated DNA molecule in bacteria :

A-cosmide B-plasmide C-phagemed D-both a and b

17-Teichoich acid present in cell wall of

A-Mycoplasma B-Gram positive bacteria

C-Gram negative bacteria D- All bacteria

18-salts of heavy metals used as disinfectant is:

A-merthiolate B- phenyl mercury nitrate C- mercurochrome D-all of above

19- The resistance mechanism of microorganisms to antimicrobial agents is:

A-Modification of chloramphenicol by phosphorylation of free hydroxyl grope.

B- hydrolysis of betalactam ringe or acetylation of hydroxyl grope.

C-phosphorylation of free hydroxyle grope and acetylation of acetyle grope of aminoglycoside.

D-both c and b

20- The most active stage in the sigmoid curve of bacteria in which maximum growth is attained

A. Lag phase B. Stationary phase C. Decline phase D. Log phase

……

Q2/ Answer only two of the following questions : (10 mark)

a- Mention in brief the useful Metabolic properties in bacterial classification
b- List the second line innate immune soluble factors .
c- List the types of Interferon's

Q3\ Answer the following questions (10 marks)

A\what are the types of normal flora give differences between them ?

B\Draw the interaction between host , microbs ,and antimicrobial agent ?

With our best wishes

Asst. Prof. Dr. Chateen I. Ali
Examiner

Prof. Dr. Hadeel Mizher Y.
Examiner and Head Of Dept.

TIKRIT UNIVERSITY
COLLEGE OF DENTISTRY
LEVEL:3RD YEAR (PHARMACOLOGY)

Q1/ MULTIPLE CHOICE QUESTIONS (MCQ) (51 Marks)

Choose the appropriate answer for the following questions:
(Fill the table with suitable answer)

1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
11.	**12.**	**13.**	**14.**	**15.**	**16.**	**17.**	**18.**	**19.**	**20.**
21.	**22.**	**23.**	**24.**	**25.**	**26.**	**27.**	**28.**	**29.**	**30.**
31.	**32.**	**33.**	**34.**						

1. Which of the following describes the first-pass effect?
A. Inactivation of a drug as a result of the gastric acids.
B. Absorption of a drug through the duodenum.
C. Drug given orally is metabolized by the liver before entering the circulation.
D. Drug given IV accumulates quickly in the central nervous system.

2. A 54-year-old man asks about how to reduce the risk of myocardial infarction . Which of the following is the most effective in reducing risk of myocardial infarction?
A. Acetaminophen.
B. Aspirin.
C. Celecoxib.
D. Ibuprofen.

3. Which of the following is the advantage of specific cyclooxygenase-2 (COX-2) inhibitors?
A. Decreased gastrointestinal side effects.
B. Decreased vasoconstrictor activity.
C. Increased anti-inflammatory activity.
D. Increased inhibition of platelet aggregation.

4. Pharmacokinetics is:
A. The study of absorption, distribution, metabolism and excretion of drugs.
B. The study of biological and therapeutic effects of drugs.
C. The study of mechanisms of drug action.
D. The study of methods of new drug development.

5. Paracetamol is categorized by FDA as pregnancy category A, this mean that the drug is
A. absolutely safe to use.
B. contraindicated during pregnancy.
C. used in third trimester.
D. used with caution during pregnancy.

6. The advantage of administering medication through rectal route includes:
A. Easy to administer.
B. Minimize liver metabolism.
C. No adverse effect.
D. Very fast absorption.

7. Half-life (t ½) is the time required to:
A. Absorb a half of an introduced drug.
B. Bind a half of an introduced drug to plasma proteins.
C. Change the amount of a drug in plasma by half during elimination.
D. Metabolize a half of an introduced drug into the active metabolite.

8. Therapeutic index (TI) is a ratio used to evaluate the
A. bioavailability of a drug.
B. effectiveness of a drug.
C. elimination of a drug.
D. safety of a drug.

9. Another name for biotransformation of a drug is
A. absorption.
B. dilution.
C. excretion.
D. metabolism.

10. Which of the following route is altered by the first-pass effect?
A. Intravenous.
B. Oral.
C. Subcutaneous.
D. Sublingual.

11. In order to achieve the most rapid onset of action, the healthcare provider would administer the medication
A. intramuscularly.
B. intrathecally.
C. intravenously.
D. subcutaneously.

12. Clients with renal failure would likely have problems with drug
A. absorption.
B. distribution.
C. excretion.
D. metabolism.

13. The ratio between a drug's therapeutic effect and toxic effect is called
A. affinity.
B. cumulative effect.
C. therapeutic ratio.
D. tolerance.

14. Which of the following adverse effects would happen to a client after taking paracetamol with a total ingested dose of 14 g/day (over dose)?

A. Acute hepatic necrosis.
B. Kidney stones.
C. Metabolic alkalosis.
D. Renal failure.

15. Although NSAIDs such as diclofenac are beneficial in managing pain, which of the following side effects the dentist should be alert?
A. Constipation.
B. Nystamus.
C. GIT bleeding.
D. Urinary incontinence.

16. Which of the following drugs is second generation of antihistamine?
A. Diphenhydramine.
B. Chlorphenramine.
C. Loratadine.
D. Cinnarizine.

17. Which enzyme facilitates the breakdown of a specific neurotransmitter into choline and acetate?
A. Monoamine oxidase.
B. Acetylcholinesterase.
C. Catechol-O-methyltransferase.
D. Phenylethanolamine-N-methyltransferase.

18. Which is the primary neurotransmitter at neuroeffector sites in the parasympathetic nervous system?
A. Dopamine.
B. Epinephrine.
C. Acetylcholine.
D. Noradrenaline.

19. Which drug is a synthetic catecholamine?
A. Dopamine.
B. Adrenaline.
C. Isoproterenol.
D. Norepinephrine.

20. The most effective antidote for Hyoscine poisoning is:
A. Phenylephrine.
B. Adrenalin.
C. Hyoscine.
D. Physostigmine.

21. Elderly are more susceptible than adults to the following action of atropine:
A. Mydriasis.
B. Cycloplegia.
C. Atropine fever.
D. Tachycardia.

22. Adrenaline increases the concentration of all the following except

A. Cholesterol.
B. Free fatty acid in blood.
C. Glucose in blood.
D. Triglyceride in fat cell.

23. Actions of carbachol include all of the following except:
A. Diarrhea.
B. Salivation.
C. Miosis.
D. Dryness of mouth.

24. Which is the most important drug in the treatment of Malathion poisoning:
A. Methacholine.
B. Physostigmine.
C. Atropine.
D. Pralidoxime.

25. Clinical used of Beta-blocker include all of the following except
A. Angina pectoris.
B. Migrane.
C. Asthma.
D. Hypertension.

26. NorAdrenaline is a specific neurotransmitter at:
A. Parasympathetic postganglionic nerve endings.
B. Parasympathetic ganglia.
C. Sympathetic postganglionic nerve endings.
D. Sympathetic ganglia.

27. Atenolol
A. Is a lipid soluble drug.
B. Is cardioselective beta blocker.
C. Is contraindicated in glaucoma.
D. Increases renin release.

28. Muscarinic receptor blocker produces the following effects except:
A. Constipation.
B. Rise in blood pressure.
C. Tachycardia.
D. Dryness of mouth.

29. Adrenalin produces all of the following except
A. Tachycardia.
B. Mydriasis.
C. Increase in cardiac contractility.
D. Bronchoconstriction.

30. The following is a selective α2 adrenoceptor agonist:
A. Prazosin.
B. Phentolamine.

C. Yohimbine.
D. Clonidine.

31. Which of the following drugs produces xerostomia?
A. Clonidine.
B. Atropine.
C. Adrenaline.
D. Amphetamine.

32. For which effect is a 1 to 2 week withdrawal of β-blockers recommended?
A. Hypoglycemia.
B. Cold hands and feet.
C. Bronchoconstriction.
D. β-receptor sensitivity.

33. Which condition is effectively treated with neostigmine?
A. Asthma.
B. Glaucoma.
C. Hypertension.
D. Myasthenia gravis.

34. Which is a muscarinic effect of an anticholinesterase overdose?
A. Miosis.
B. Hypertension.
C. Tachycardia.
D. Muscular weakness.

Q2/ T & F **(16 Marks)**

Write T for true and F for False for each of the following statements:

1. All antihistamines have antiemetic and antiparkinsonian effects.
2. NSAIDs are only used for relieving fever.
3. Antihistamines can be used while driving or operating machinery.
4. Autacoids are produced by cells and act locally. Hence, they are also called 'local hormones'.
5. Betahistine can be used in patients with asthma and peptic ulcer.
6. Prolonged use of aspirin and other NSAIDs causes sodium and water retention.
7. COX-1 is constitutive (it is always present) and is widely distributed. It participates in various physiological functions such as protection of gastric mucosa, homeostasis, regulation of cell division, etc.
8. COX-2 is induced during inflammation by cytokines and endotoxins.
9. First-generation H_1-blockers Have no anticholinergic effects.
10. H_3 receptors are primarily found in the brain and are inhibitory autoreceptors located on histaminergic nerve terminals, which modulate the release of histamine.
11. Histamine has many valid clinical uses.
12. In people with G6PD deficiency glucose-6-phosphate dehydrogenase (G6PD), administration of salicylates may cause haemolytic anaemia.
13. NSAIDs may precipitate bronchospasm in patients with bronchial asthma.
14. Preanesthetic medication: Promethazine is used for its sedative and anticholinergic effects.

15. Second-generation H -blockers are used in various allergic disorders: rhinitis, dermatitis, conjunctivitis, urticaria, eczema, drug and food allergies.
16. Second-generation H_1-blockers can cross blood–brain barrier (BBB), hence cause drowsiness.

Q3: For each of the following statements choose the appropriate matching drug (20 Mark).

1- Inhibits the transfer of Ach into the vesicle……
2- Muscarinic receptor agonist used for diagnose bronchial hyperactivity.
3- Anticholinesterase drug used for Alzheimer's disease ……..
4- Muscarinic receptor blocker used for Peptic ulcer ……
5- Alpha 2 receptor blocker used for treatment of erectile dysfunction
6- Non Selective alpha receptor blocker used for pheochromocytoma
7- Beta blocker that has vasodilator activity. ……
8- Cardioselective beta blocker…….
9- Pure beta 2 receptor agonist used for asthma ……
10- Beta receptor Antagonist used as an eye drop for treatment of glaucoma. ……

Drugs:

Phenylephrine, Rivastigmine, Timolol, Salmeterol. Bethanchol, Ipratropium, Youhimbine, Penoxybenzamine. Metoprolol, Vesamichol, Labetalol, Pirenzepine, Hyoscine, Methacholine, Ephedrine, Phenylephrine, Botox, Adrenaline, Propranolol, Prazosin.

Q4/ Modified Essay question (MEQ)

A 25-year-old female came to the dentist's office because of toothache. According to her medical history, she has allergy to diclofenac.

	Marks	Scored	Comment
a. State **TWO (2)** analgesic drugs suitable to be used to manage the pain in this patient	4		
b. Explain mechanism of action of **ONE (1)** group mentioned in (a)	3		
c. State **THREE (3)** general side effects of the drugs stated in (a)?	3		
d. Name **ONE (1)** prophylaxis agent that concurrently used with analgesic drugs to prevent gastric ulcer.	1		
e. In case of pregnancy, which analgesic drug can be used in this patient?	2		
Total	**13**		

Good Luck

Q1/ Choose the correct answer? (30) only (30 Mark) 1. Coagulative necrosis. A. results from necrosis in which cellular enzymatic digestion predominates over denaturation B. is characterized by a marked leukocytic infiltrate C. is uncommon after myocardial infarction D. usually occurs after irreversible ischemic cellular damage E. is not usually seen in association with caseous necrosis 2. With regard to B lymphocytes. A. they constitute 50% of circulating lymphocytes. B. they are found in germinal centers in the red pulp of the spleen. C. they are genetically programmed to recognize specific antigens by means of antigen specific cell surface receptors. D. they release chemical mediators when attached to IgE Type I hypersensitivity reactions. E. they are not affected by HIV infection. 3- Endometrium involutes by the process of _____.

A. Autolysis B. Apoptosis C. Lysis D. Necrosis E. Atrophy

4- Zenker's degeneratin is found in _____.

A. Cardiac muscle B. Abdomin muscle C. Striated muscle D. Smooth muscle E. Neurone

5. which of the following is associated with Sex Chromosome Abnormalitie?

A. Thalassemia. B. Edward's Syndrome. C. Multiple endocrine neplasmas (MEN). D. All of the above. E. No one of the above.

6. In the process of necrosis, a reduction in the size of the nucleus and a condensation ofnuclear material is known as:

A.Pyknosis B. Karyolysis C. Karyorrhexis D. Metachromasia E. Hypochromasia

7. IgE plays a major role in:

A. Type I Hyperersensitivity reaction B. Type II hypersensitivity reaction C. Type III hypersensitivity reaction D. Type IV. hypersensitivity reaction E. Type . V hypersensitivity reaction

8. Syphilis Transmission is:

A.Venereal B. Through placenta C. Accidental Inoculation D. Both A and B E. All of the Above.

.EXCEPT9. Methods of infection in TUBERCULOSIS include all

A. Inhalation B. Ingestion C. Transplacental D. Blood transfution. E. All of the Above

Class 3rd class

Subject : General Pathology

3 hrs. . Time

Form (A)

Ministry of Higher Education

& Scientific Research

Tikrit University

College of Dentistry

Dept. Basic Sciences

2

10. Matching:

A. Acrocentric a. The duplication of chromosomes in somatic cell

B. Telocentric b. Limits the body's ability to make proteins

C. Mitosis c. The centromere is near one end

D. Meiosis d. Reduction of chromosomes in germ cell

E. Marfin syndrome e. Female with karyotype (45, X)

f. Centromere located at one end of the chromosome

11. The type of Amyloid associated with Chronic inflammation is:

A. AA B. AL C. B2 Amyloid D. Transthrefin E. B2 Microglobulin

12. Which of the following causes do not lead to muscle atrophy:

A. Excess worklod of muscles leading to their fatigue. B. Loss of innervation of muscles.

C. Prolonged immobilization of limbs. D. Terminal stages of cancer E. Senesence (old age) 13. Irreversible cell injury is characterized by A. dispersion of ribosomes. B. cell swelling. C. lysosomal rupture. D. cell membrane defects. E. nuclear chromatin clumping 14. Dysplasia A. is a feature of mesenchymal cells. B. inevitably progresses to cancer. C. is characterised by cellular pleomorphism D. is the same as carcinoma in situ. E. is not associated with tissue architectural abnormalities.

15-The first vascular response to injury is:

a-Stasis of the blood b-Arteriolar vasodilation c-Arteriolar vasoconstriction

d-Capillary enlargement secondary to arteriolar dilation.

16-Leukocytes move into the tissues from the vasculature(extravasation) in response to”

a-Arteriolar vasoconstriction b-Chemical gradients(endogenous and exogenous) c- phagocytosis with the aid of lysosomal enzymes

17-Inflammation occurs ……the blood vessels.

a-Outside b-Inside

18 - Regarding Chronic inflammation which of the following is FALSE

a-It is associated with persistent infection. b-It involves attempts at repair, rather than just tissue destruction.

c-Angiogenesis is not a feature. d-It may contribute to the formation of atherosclerosis.

19- Macrophages are derived from:

a-Monocytes. b-T cells c-B cells d-Eosinophils

20-In acute inflammation, which events occur in the correct chronological order:

a-transient vasoconstriction, stasis of blood flow, increased permeability, vasodilation .

3

b-transient vasoconstriction, increased permeability, vasodilation, stasis of blood flow.

c-vasodilation, increased permeability, stasis of blood flow, neutrophil accumulation.

d-transient vasoconstriction, vasodilation, stasis of blood flow. extravasation of leukocytes to the site of injury.

21-When leukocytes move towards the vessel wall, it is called

a-Chemotaxis. b-Transmigration. c-Margination d-Extravasation.

22-The frequency of myocardial infarction of the left anterior descending coronary artery is about (40%-50%), and involves:

A. The anterior wall of the left ventricle near the apex. B. The posterior wall of the left ventricle.

C. The lateral wall of the left ventricle.

23-Monockberg medical sclerosis:

A-Is characterized by the accumulation of fibrin in all the arteries through the body.

B-Is characterized by calcific deposits in muscular arteries in persons older than 50 years.

C-None of the above.

24- Hyperplastic Hypertension

A-It occurs in normal individuals. B- It occurs in sever malignant hypertension.

C-It occurs in both A and B.

25-Suppurative (purulent) inflammation means:

A-Leakage of fibrinogen into the extracellular space forming fibrin.

B-Accumulation of pus that contain dead neutrophils, liquefactive necrosis of the tissue edema and certain bacteria.

C-Accumulation of a thin fluid derived from the mesothelial lining of peritoneal, pleural and pericardial cavities .

26-Which of the following features would suggest healing by primary intention is indicated?

A-There is significant tissue loss, and the wound is dirty.

B-There is little tissue loss and the wound is clean. C-There is a chance of developing keloid scar

27-Malignant tumor of epithelial origin is called:

A-Carcinoma B-Sarcoma C-Papilloma D- All of the above.

28- Which ONE of the following represents a benign neoplasm that derived from the glands?

a-Squamous papilloma b-Melanoma c-Chondroma d-Adenoma e-Lipoma

29- Which of the following is most likely to be the first visible gross evidence for the formation of atherosclerosis?

A-Thrombus. B-Fatty streaks C-Calcification D-Ulceration.

4

30-Subacute Endocarditis

A-Typically involves normal heart valves and usually has an aggressive course.

B-Typically affects only abnormal valves, and its course is usually more indo;ent yhan that of the acute form.

31-Gross morphological features of Acute Rheumatic fever include the following except one:

A-Fibrinous exudates in the pericardium.

B-Scattered Aschoff bodies in the myocardium.

C-Verrucae. D- None of the above. 32- X- linked disorders: A. Males are always carriers. B. Females are always diseased C. Are inherited from the father D. Are inherited from the mother E. Sickle cell anemia is an example.

Q2/ Write brefly aboute Three ONLY? (15 Marks)

A. Syphilis is a worldwide chronic infection produced by Treponema pallidum, Syphilis classify three type . write aboute ?

B- Marfan syndrome

C- Caseous Necrosis

D/ Hyperplasia

Q3/ Answer of the following questions. (25 Marks)

A/ Define FOUR ONLY (Hapten, Caseous Necrosis, Acompression fractureis, Frame Shift Mutation, Oxidative Stress)

B/ FACTORS RELATING TO INFECTIOUS AGENTS.

Q4/ Answer ONE of the following questions? (10 Marks)

A-List down the morphological features of Chronic Inflammation

B- List down the morphological features of Atherosclerosis.

Q5 /Answer Two of the following questions: (20 Marks)

A-What are the complications of wound healing.

B-List down the Cellular events of acute inflammation then talk about one.

C-What are the morphological features of Hypertension.

D-Talk about the Classification of Infective Endocarditis.

Good Luck

1

Q1/ Answer Two Only?

A- Pigments Accumulation. (01Mark)

B- Events in Irreversible Cell Injury, with Draw? (01Mark)

C- Complete. (01Mark)

1. Plasma membrane is important in Na/K pump& cell receptor (identity).

2. Two examples of vascular atrophy are renal artery stenosis cause kidney atrophy & coronary atherosclerosis cause cardiac atrophy.

3. Necrosis is irreversible cell injury, death of a large number of cells associated with acute inflammation.

Q2/ A/ Definition CELLULAR ADAPTATION. List types of (10Mark)

Cell Adaptation and talk about ONE?

B/ Matching (10Mark)

Degeneration e a. is due to sudden arterial occlusion.

Accumulation d b. concentration of metabolites outside cells.

Deposition b c. increase in size and weight at organ

Congulative necrosis a d. concentration of metabolites inside cells

Hypertrophy c e. concentration of material formed outside

the cell and become inside any cell.

Q3/ Choose TWO only:

A- Fill in the blanks

1- ……..is a benign tumor of Fibrous tissue.

2-…….denote a cancer in which a tumor cells resemble stratified squamous epithelium.

3-…….is a collection of blood inside an organ or tissue outside the blood vessels, so it is not a true tumor.

4-……is a term which means lack of differentiation.

B- List down the morphological features of Chronic Inflammation?

C- List down the complications of Healing?

Q4/

A- Define Acute Inflammation then list down its cellular events ,finally choose one and explain it in details?

B-Write about the effects of activation of the complement system?

Class 3rd class

Subject

3 hrs. . Time

Form (B)

Ministry of Higher Education

& Scientific Research

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2

Q5/ Choice (encircle) the most correct answer (only 20) – from 1-22? (20 marks)

1. Which of the following will show hypertrophy: A. The uterine myometrium in pregnancy B. The female breast at puberty

C. The liver following partial resection D. The ovary following menopause

E. The cervix with chronic inflammation .

2. Arachidonic acid metabolites are cell derived mediators that are activated by one of the following mechanisms:

A- Clotting system B- Complement system C- Cyclooxygenase and Lipoxygenase pathway D- None of the above.

3. Cloudy swelling commonly affects: A. Parenchymatous cells B. Mucous membranes. C. Muscles cells. D. All of the above. E. None of the above.

4. Cells which may be found in Granulomas include:

A- Macrophages, plasma cells, Mast cells and Eosinophils. B- Plasma cells.

C- Macrophages only. E. None of the above.

5. Colliquative Necrosis occurs in:

A. Spleen B. Liver C. Heart D. Brain E. Kidneys

6.Which of the following is involved in the initiation of the clotting cascade, complement and kinin system?

A- Hageman factor(XII) B- Factor VII. C- Platelet activating factor D- Tissue factor

7. Amyloid material in primary amyloidosis is secreted by:

A. Histiocytes B. Eosinophils C. Mast cells D. All of the above. E. None of the above.

8.Which of the following terms refer to a malignant tumor of mesenchymal origin:

A. Sarcoma. B. Leukemia C. Carcinoma D. Hematoma

9. Systemic arterial hypertension leads to: A. left ventricular hypertrophy B. an increased incidence of infective endocarditis C. both D. neither

10 - products of activated macrophages that are specific in the process of tissue repair, include the following;

A. Growth factors, angiogenetic factors and some fibrogenic cytokines.

B. Reactive oxygen and nitrogen species.

C. None of the above.

3

11. Apoptosis differs from necrosis in all EXCEPT: A. It is an irreversible cell injury B. It is death of single cells

C. It is programmed by the cell D. It occurs as physiological or pathological process

12. Which of the following features would suggest healing by primary intention is indicated

A. The wound is clean and the edges may be approximated.

B. Granulation tissue is already present.

C. There is significant tissue loss. D. None of the above.

13. Reperfusion injury is due to:

A. Generation of Oxgen Free Radicals

B. Additional recruitment of polymorphs by cytokines from hepatic cells C. Both A & B. D. None of the above.

14. Suppurative Inflammation–

A. Accumulation of pus that contains dead neutrophils, liquefactive necrosis and bacteria like (e.g., staphylococci.)

B. Outpouring of serous fluid that may be derived from the plasma, peritoneal and pleural cavities like (burns blister).

C. Leakage of fibrinogen into the extracellular space forming fibrin only.

15. Which of the following is a feature of irreversible cell injury.

A. Swelling of Endoplasmic Reticulum. B. Formation of Bleb .ingondrial SwellhMitoc E.. angehC FattyD. . ucleiKaryolysis of N .C

16. Stable cells

A. Cells of this type are quiescent and have only minimal proliferative activity

B. Cells of this type are non-dividing, terminally differentiated cells.

C. Cells of this type are continuously being lost and replaced by proliferation and maturation of stem cells.

17. Which of the following is most likely associated with Caseation Necrosis:

A. Diabetic Gangrene B. Gas Gangrene C. Myocardial Infarction lenic Infarction. SpE usPissated Inp D.

18. Factors that influence wound healing include

A- Wounds with impaired blood supply heal slowly. B- Infection can delay wound healing.

C- Early movement at the site of injury can accelerate healing of the wound.

D- Chronic systemic disease like heart failure has no effect on wound healing.

4

19. Hyaline change occurs in all EXCEPT: A. Old connective tissue B. Chronic gastritis C. Walls of blood vessels D. Chronic glomerulonephritis E. Chronic pyelonephritis

20. Neutrophils have largely replaced by macrophages. Collagen fibers are now present in the margins and are vertically oriented, all these changes appear on:

A-12-24 hours. B-24-48hours C- 48-72 hours. D-1week.

21. The marked enlargement of the uterus that occurs with pregnancy is accompanied by histopathologic evidence for an increase in:

A. Myometrial cell numbers B. Nuclear anaplasia C. Cellular DNA content D. Myometrial cell size E. Fibroblasts and collagen

22. Margination of the leukocytes during acute inflammation means:

A. Rolling of the leukocytes along the surface of the endothelium.

B. Leukocytes emigration towards the site of injury by a process called chemotaxis.

C. As a result of stasis, blood flow slows, and more leukocytes accumulate along the vascular endothelial surface.

Good Luck

Examiners Head of the Dep .

Prof. Dr. Hadeel MizherYounus

General Pathology Questions:

Q1Choose the appropriate answer

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