

Cell biology  
med- term  
archive



1) Metachromasia is :

a Staining of tissue by color of original stain

b. Staining of phagocytic cells by trypan blue

c Staining of a tissue by a color differs from the original stain a Staining of living cells outside the body

e Staining of dead tissue inside the body

2) Which of the following is NOT a function of smooth endoplasmic reticulum :

a Making fats or lipide

b enzyme synthesis

c dystroying toxic

d regionlating calcium

e cholesterol metabolism

3) Choose the INCORRECT statement?

a Tight junctions control the transport of molecules through the cells

B Tight junctions are random spot attachments between cells that prevent splitting of tissue

c Desmosomes serve as anchoring Junctions between cells

d es junctions are very well developed in epithelial cells

e Anchoring junctions integrins is linked to laminin molecules extracellularly and to cytoskeleton keratin Old Regulating calcium

e Cholesterol metabolism

4) Which of the following is a non-membranous organelle?

a mitochondrion

b The rough endoplasmic reticulum

c centeriol

d A lysosome

e A Peroxisome

5) Which of the following is NOT a function of smooth endoplasmic reticulum?

a Making fats or kids

b Enzyme synthesis

c Destroying toxic

d Regulating calcium

e Cholesterol metabolm

6) All the following statements about Freezing tichnique are wrong EXCEPT :

a slow technique to diagnosis

d som section can be obtained

c done using femol salin

e preserve fore long time

e fore histochemical studies



7) which of the following is CORRECTLY matched?

a channel proteins ..... are part for new protein synthetization

b single pass transmembranous proteins .....- span the lipid bilayer once

c marker molecules ..... are primarily steroids

d receptor molecules .....-attach to cholesterol molecules

e peripheral proteins .....penetrate the lipid Dilaver from one surface to the other

8 ) A cel is recognized by other tissue members as self by its surface :

a Cholesterol Postate

b phosphate surface

c glycoprotein

d ketoglutarate

e glyco**car**bohydrate

9 )ChoOSE thE INCORRECT statement?

cell white sc water is

G13

0.90 Nacl solution (saline) is Isotonic to a cell while seawater is : 

a hypertonic to the cell

b Isotong to the cell

c hypotonic to the call

d with water potential

e with equal water patentier

10 )The largest percentages of molecules that make up the cell membrane are

a carbohydrates, nucleic acids, and proteins

b carbohydrates, water and nucleic acids

c phospholipids, cholesterol and proteins nucleic acids, amino acids and fatty acids water carbohydrates and cholesterol

x

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11) One of the following is INCORRECT concerning

x

/

mitochondria?

o alus composed of outer membrane that encloses a fuld-filled matrix

o Every type of cell has a different amount of mitochondria

O c There is high number of mitochondna in heart muscle cells

The Inner membrane folds to form cristae

O e Cellular respiration occurs in the cristae

12) The cell adhesion molecules (CAMS) that form the tight junctions are

O a Connexin // Integnnns

O b. Claudins ir Adherins

O c Occludins i// Connexins

O d Occludins i Claudins

13)The resolution power of light microscope equals *d*arked out of

:

a 0.2 millimeter

b 0.2 nanometer

c 2 micrometer

d 0.5 micrometer

e 10 angstroms

14) in which ways are facilitated diffusion and simple diffusion similar. Both

a require energy

b require protein carriers

c move substances from low to high concentration

d move substances from high to low concentration

e require protein channels

15) Choose the INCORRECT statement among the followings?

a. Phase contrast microscopy is used for visualizing cells in tissue cultures

b. In situ hybridization is used to demonstrate the pattern of expression of enzymes

c. When a tissue is stained using Hematoxylin & Eosin, the nucleus appears blue because it is which reacts with hematoxylin

\

d One thousand micrometers are equal to one millimeter

e The condenser of light microscope is used to augment the illumination power

16) Which of the following is NOT TRUE regarding routine histological stains Hematoxylin and Eosin?

a Hematoxylin is a blue dye

b cytoplasmic RNA will attract Hematoxylin

c The nucleus is basophilic

d Eosin is a red basic dye

e Eosin is a negatively charged dye

17) in you want to examine a tissue composed of different types of cells. The cells to examine can be distinguished by external

shape, size and three-dimensional characteristics Which would be the optimum method for your study?

a Light microscopy using living unlained samples

b celt fractionation Bio Transmission electron microscopy

Light ieroscopy using the routine stains "Hettatoxylin and Eosin

Scanning electron microscopy

18) Suburils of nbosomes are manufactured in the

a Clasketston

b. Endoplasmic reticulum

c Gubapparatus which reacts with hemaloxxy done thousand micrometers are equal to one millimeter

e The condenser of light microscope is used to augment the illumination power

19) You place blood cells in an unknown solution and observe them with a microscope you notice that most of the cells have shriveled. Therefore, you conclude that the unknown solution is to

the cells?

a SOSTIC

b Hyperos moto

c cisalonic

d Hypattonic

e Hypolone

20) The smooth endoplasmic reticulum functions are :

a musthos, Stana and Transport A bi Tipoll Espalion, and synthesis

b Hypertonic

c Hypotonic

21) The rough endoplasmic reticulum functions are :

a Synthesis storage and transport

b Transport, respiration and synthesis t Contraction, transport and diffusion

e Storage transport and digestion e thesis digestion and movement

e Actin

22) All of the following processes can move substances inside the cell EXCEPT

- a Exocytosis
- b Simple diffusion
- c Active transport
- d Phagocytosis
- e Antiport system

23) EXCEPT?

- a The Nucleus
- b The Endoplasmic Reticulum
- c The Golgi Complex
- d Transport Vesicles & Cytoskeleton

24) Microtubules arranged to form a 9x2 arrangement (axoneme) are found in which portion of the cell?



Select one

a Perinuclear cisterna

O b Mitotic spindle

O Microvillus

O d triner nuclear envelope

O e Cilium

25) Land \_connect epithelial cells to their basement membrane and adjacent cells respectively?

a Gap junction // Hemidesmosome

O D. Zonula adherens // Macula densea

O c Hemdesmosome//Desmosome 9

O d Zonula occludens //Zonula adherens

O e Hemidesmosomell Synapse

26) Choose the CORRECT statement regarding the cell?

O a Prokaryotic cell contains nuclear envelope

b Eukaryotic cell has membranous cell organelles

The genetic materials are in the nucleoid region of eukaryotes

O c The genophore is scattered in the cytoplasm of eukaryotes

0 D The prokaryotes replicate by mitosis  
An desmosomes, desmoplakin and desmoglein link to

27) An of the following are synthesized along various sites of the endoplasmic reticulum EXCEPT? 

0 a Proteins

o b Fatty acids ORNA

d Phospholipias

0 e Steroids

28) The main purpose of using the microscope 15

a Fication

0 b Staining

0 c Mounting

0 d Resolution

0 c charing



29) Bulk transport includes all of the following EXCEPT?

- a Antipor transport
- b Phagocytosis
- c Pinocytosis
- d Exocytosis
- e Receptor-Mediated Endocytosis

30) Band o blood groups are marked by surface

- a Cholesterol
- b Glycolpids
- c Glycocarbohydrates
- d Glycerol
- ee Glutetales

31) Astructure made of two or more fissues that work together is caited :

a organelles

b <sup>organ</sup> hargan

d Glycerol

e Giulerales

لا فغصه

32) A structure *made of two* or more issues that work *together* is called :

a Organelles

b Organ

c Organ system

d Cells

e Organism

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33) The primary function of intermediate filaments is to  
\_?

a Generale movement

b Transport organelles within the cell Provide tension beanng

d Manufacture polysaccharides

e Translation of mRNA

34) The sodium-potassium pump located in the plasma membrane :

a passively moves potassium outside cells

b osmotically moves sodium into cells

c actively moves sodium outside cells

d moves chlonne out of cells

e passively moves sodium into cells

35) If a carrier protein were to move both hydrogen and chloride ions from the inside of a cell to the extracellular ATP in the process, it would be considered :

0 a moves chione out of cells

0 b passively moves sodium into cells

36) It a carrier protein were to move both hydrogen and chlonde ions from the inside of a cell to the extracellular fluid, and consume **ATP** in the process. It would be considered a:

0 a Symport system

0 b **uraport system**

*active transport*

0 c Facilitated diffusion system

37) cel funcions that stabilize cell membrane proteins of cell-surface receptors are called

o a Gap Junctions

b Desmosomes

c Hemidesmosomes

d Zonta adherens 19

e Zonus ocdudens

38) Acer with abundant peroxisomes would most likely be involved in

á Setrellon n

b Storage of glycogen

c Detoxification activities

Celular communication I

e Change shape

39) Which of the following statements best describes the extracellular matrix?

a Provides an impermeable barrier between cells

b is a non-cellular component present within all tissues and organs Bone extra cellular matrix is rubbery in consistency

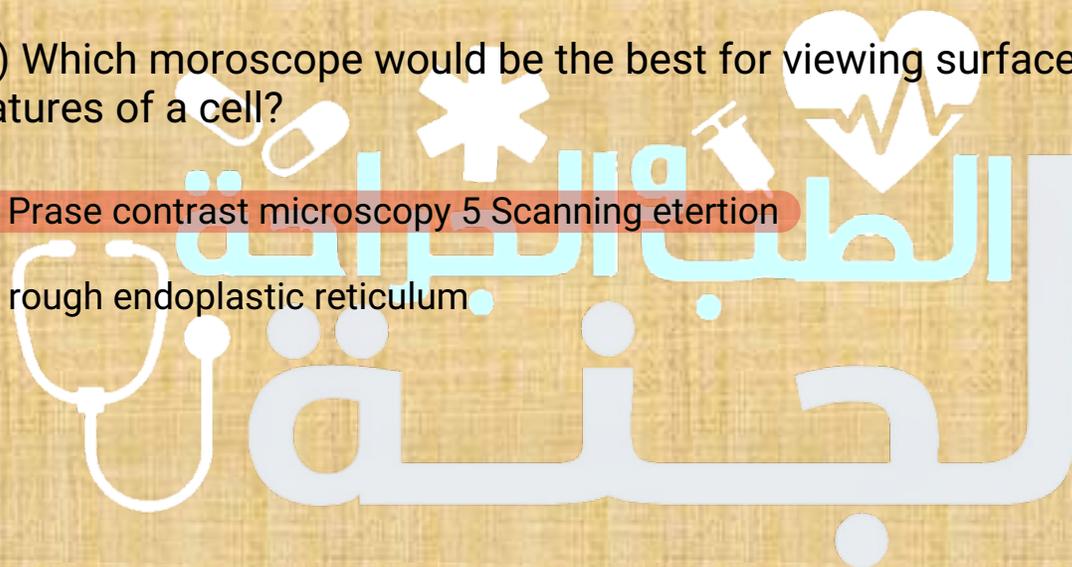
d Always contain equal amounts of water, proteins and electrolytes

e it is physiologically inactive and only serve to separate the cells of tissues

40) Which microscope would be the best for viewing surface features of a cell?

a Phase contrast microscopy  Scanning electron

b rough endoplasmic reticulum



41) Which of the following is a method for studying DNA localization?

a Cell fractionation

b Ecctoibaresis

c SE VC Funesence in situ hybridization

d Histochemistry

e imunotestochemustry

42) The structures of the cytoskeleton from thinnest to thickest?

a Microlubules microfilaments, intermediate filaments 10 6

b Microfilaments Intermediate filaments, microtubules

c Intermediate filaments microtubules, microfilaments

d Microtubules intermediate filaments microfilaments

e Microfilaments microtubules, intermediate filaments

43) Winchonng junctions may volve all of the following EXCEP? 

a Extracellular matrix

b buntegrins

c Melintiaiments

d Conneron

44) Where is calcium stored?



a mitochondna

b smooth endoplasmic reticulum

c centroles

d rough endoplasmic reticulum

e microtubules

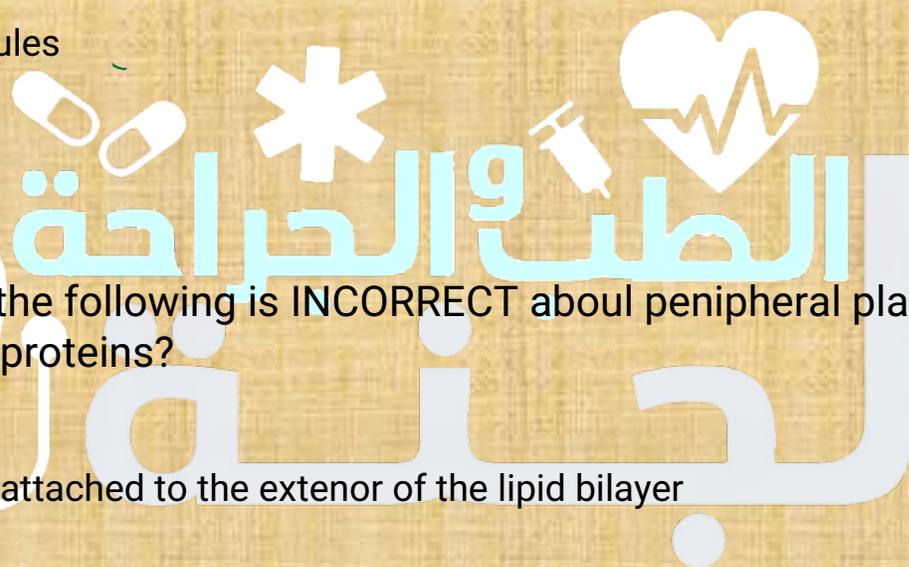
45) One of the following is INCORRECT about penipheral plasma membrane proteins?

a They are attached to the extenor of the lipid bilayer

b They form 20 10 30% of plasma membrane proteins

c They do not span the plasma membrane

d They alached non-covalently to proteins that span the membrane @  
They may be single-pass or mutu pass transmembrane proteins



46) of the followings are the four basic issues of the body EXCEPT?

a) Connective tissue

b) Epithelium

c) Muscle tissue

47) One of the following is CORRECTLY matched?

a) Passive diffusion..... hydrophilic molecules

b) hydrophobic molecules .....Facilitated diffusion

c) amino acids .....Facilitated diffusion polar molecules

d) Passive diffusion .....transport proteins

48) Fixation of histological specimens in 10 % formal saline is essential to

a) Gradual removal of water from tissue

Inhibi degeneration e Replace alcohol

o clear the section and making it transparent for slaining

e Keep the cells alive

49)The *omanelle* that protects *cells from the damaging* effects of medications and toxins is the

a rosome

b microtubule

c smooth endoplasmic reticulum

d secretory vesicle

e nagella

50)Which of these statements about facilitated allfusion is TRUE?

a In facilitated duusioruhet movement against the concentration gradient

b Facilitated diffusion requires the expenditure of energy

c Facilitated dimusion does not require a carrier protein NB Facilitated diffusion moves materials through membrane channels

d Fatuitated diffusion move malenals in vesicles

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