

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 :

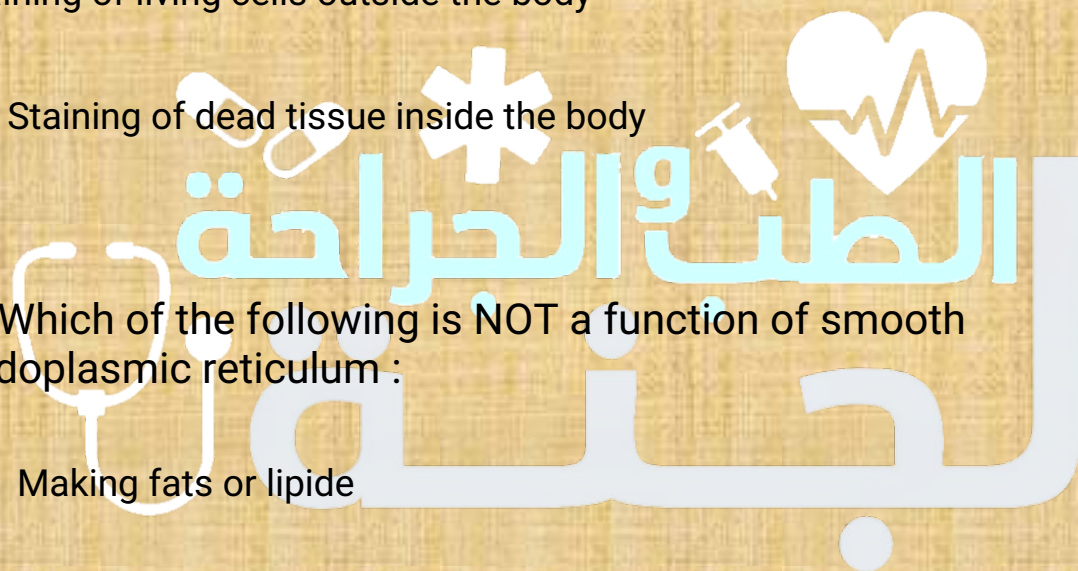
a Making fats or lipide

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 proteinspenetrate the lipid bilayer from one surface to the other

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

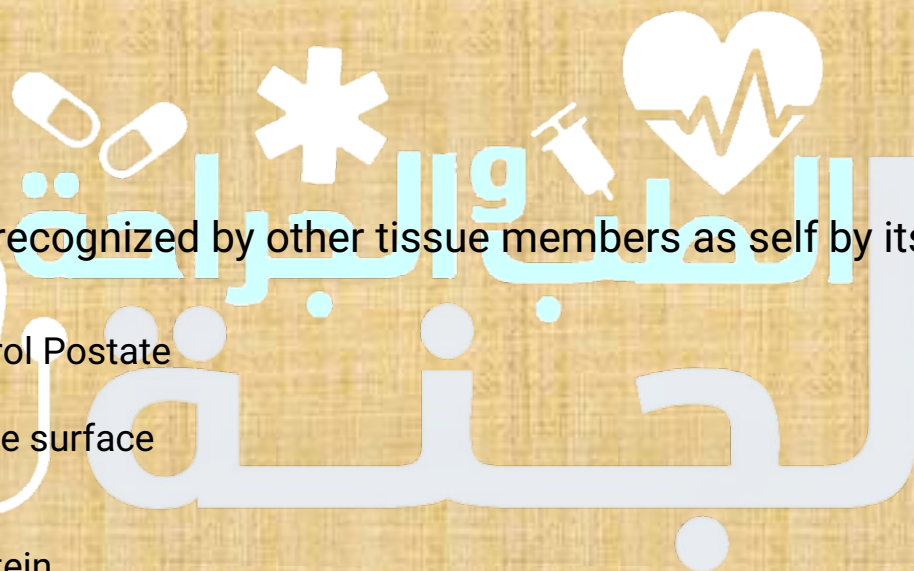
a Cholesterol phosphate

b phosphate surface

c glycoprotein

d ketoglutarate

e glyco carbohydrate



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

11) One of the following is INCORRECT concerning

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

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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 unlabeled samples

b cell fractionation Bio Transmission electron microscopy

c Light microscopy using the routine stains "Hettatoxylin and Eosin

d Scanning electron microscopy

18) Subunits of ribosomes are manufactured in the

a Golgi apparatus

b. Endoplasmic reticulum

c Golgi apparatus which reacts with hematoxylin one thousand micrometers are equal to one millimeter

d 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 south endoplasmic retaurum functions are :

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

b Hypertonic

c Hypotonic

21)The tough 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
- b Mitotic spindle
- c Microvillus
- d trier nuclear envelope
- e Cilium

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

- a Gap junction // Hemidesmosome
- b Zonula adherens // Macula densa
- c Hemidesmosome // Desmosome
- d Zonula occludens // Zonula adherens
- e Hemidesmosome // Synapse

26) Choose the CORRECT statement regarding the cell?

- a Prokaryotic cell contains nuclear envelope
- b Eukaryotic cell has membranous cell organelles
The genetic materials are in the nucleoid region of eukaryotes
- c The genome 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
- 0 d Phospholipias
- 0 e Sterolds

28) The main purpose of using the microscope 15

- 0 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
- e Glutetales

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

0 a organelles

0 b hargan

0 d Glycerol

0 e Giulerales

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

0 a Organelles

0 b Organ

0 c Organ system

0 d Cells

0 e Organism

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



a Generale movement

b Transport organelles within the cell Provide tension beannng

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 chloride out of cells

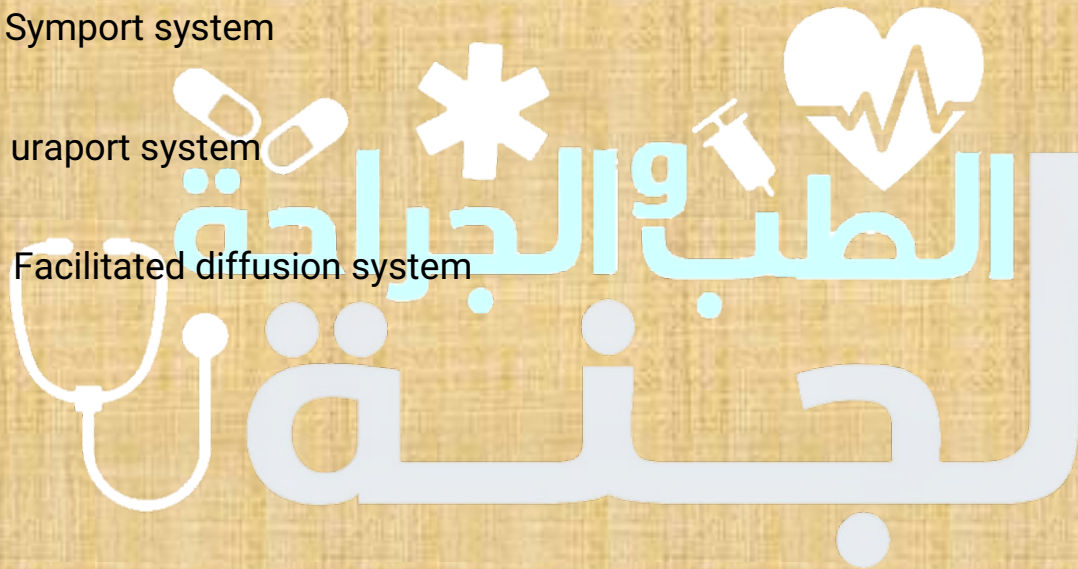
0 b passively moves sodium into cells

36) If a carrier protein were to move both hydrogen and chloride 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 antiport system

0 c Facilitated diffusion system



37) Cell functions that stabilize cell membrane proteins of cell-surface receptors are called

0 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

- a Setrellon n
- b Storage of glycogen
- c Dedication activities
- d Celular communication I
- e Change shape



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

0 a Provides an impermeable barrier between cells

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

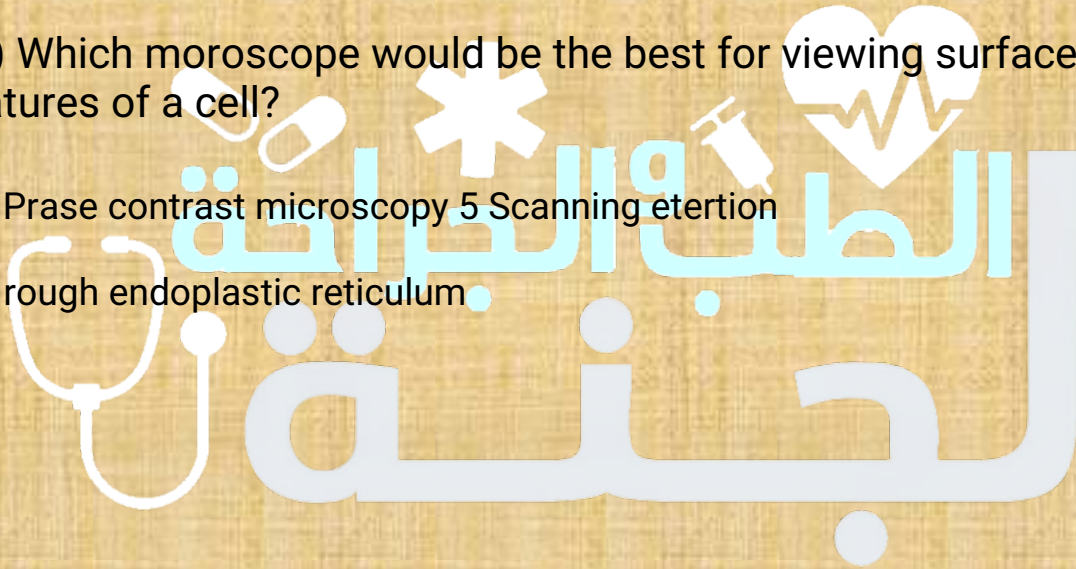
0 d Always contain equal amounts of water, proteins and electrolytes

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

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

0 a Prase contrast microscopy 5 Scanning etertion

0 b rough endoplastic 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
Microfilaments Intermediate filaments, microtubules

b Intermediate filaments microtubules, microfilaments

c 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 dse tissue

b Estenaltese

c Muscle tissue

47) One of the following is CORRECTLY matched?

a Passive diffusion..... hydrophilic molecules

b hydrophobic moleculesFacilitated diffusion Parsive dimusion

c amino acidsFacitated ditlusion polar molecules

e Passive diffusiontransport proteins

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

a Graduat removal of water frem 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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