

LECTURE QUIZZ 1 Chap1 and 3 2401- F16 CG ANSWERS- 44 Q -0.5/Q +3 EC= 25 Points-
Question type: Multiple Choice

1) Which term describes the study of the functions of body structures?

- a) anatomy
- b) physiology
- c) endocrinology
- d) histology
- e) immunology

Answer: b

2) Which term defines a group of cells that work together to perform a particular function?

- a) tissue
- b) organ
- c) molecules
- d) compounds
- e) organism

Answer: a

3) Which term refers to the sum of all chemical processes that occur in the body?

- a) metabolism
- b) anabolism
- c) catabolism
- d) auscultation
- e) palpation

Answer: a

4) Which body fluid fills the narrow spaces between cells and tissues and directly affects the proper functioning of cells?

- a) lymph
- b) blood plasma
- c) interstitial fluid
- d) intracellular fluid
- e) vitreous body

Answer: c

5) Which feedback system structure receives output from the control center?

- a) receptor
- b) stimulus
- c) response
- d) effector
- e) efferent pathway

Answer: d

6) Which feedback system structure provides input to the control center?

- a) receptor
- b) muscle
- c) response
- d) effector
- e) efferent pathway

Answer: a

7) A condition NOT regulated by a negative feedback loop would be:

- a) childbirth
- b) body temperature
- c) blood pressure
- d) heart rate
- e) blood sugar

Answer: a

8) The lungs are located in the

- a) cranial cavity.
- b) vertebral cavity.
- c) abdominal cavity.
- d) pericardial cavity.
- e) pleural cavity.

Answer: e

9) The function of the secretions of a serous membrane, like the pleura, is to

- a) separate the thoracic and abdominal cavities.
- b) protect the central nervous system.
- c) prevent infection.
- d) reduce friction between neighboring organs.
- e) carry nervous impulses.

Answer: d

10) Which of the following noninvasive diagnostic techniques is an example of inspection?

- a) tapping and listening for an echo to detect fluid in the lungs
- b) feeling the abdomen to detect tender organs
- c) listening for crackling sounds during breathing
- d) examining the surface of patient's skin for presence of a rash
- e) feeling the gonads to detect abnormal masses

Answer: d

11) Which subspecialty of physiology deals with the study of the functional properties of nerve cells?

- a) endocrinology
- b) cardiovascular physiology
- c) neurophysiology
- d) immunology
- e) pathophysiology

Answer: c

11) Which subspecialty of physiology deals with the study of functional changes associated with disease?

- a) exercise physiology
- b) renal physiology
- c) pathophysiology
- d) cardiovascular physiology
- e) immunology

Answer: c

13) An embryonic stem cell undergoes _____ to become a neuron.

- a) catabolism
- b) growth
- c) reproduction
- d) anabolism
- e) differentiation

Answer: e

14) Which of the following describes a body process that is controlled using a positive feedback loop?

- a) increasing body temperature in response to a drop in body temperature
- b) decreasing body temperature in response to elevated body temperature
- c) decreasing blood [glucose] in response to elevated blood [glucose]
- d) increasing strength of uterine contractions in response to cervical stretch
- e) decreasing heart rate in response to elevated blood pressure

Answer: d

15) Which of the following represents the largest and most complex level of structural organization in the human body?

- a) chemical level
- b) cellular level
- c) tissue level
- d) organ level
- e) organismal level

Answer : e

16) Which of the following correctly list the levels of structural organization in the human body from largest to smallest?

- a) chemical - cellular - tissue - organ - organ system - organism
- b) cellular - chemical - tissue - organ - organ system - organism
- c) organism - organ system - organ - tissue - cellular - chemical
- d) organ - organ system - organism - tissue - cellular - chemical
- e) tissue - cellular - organ - organ system - organism - chemical

Answer: c

17) Which of the following is a safe non-invasive imaging technique that uses the reflection of high frequency sound waves off of body tissues to visualize a fetus during pregnancy?

- a) computed tomography
- b) magnetic resonance imaging
- c) ultrasound scanning
- d) radionuclide scanning
- e) amniocentesis

Answer: c

18) Mammography and bone densitometry are good examples of which of the following types of medical imaging?

- a) computed tomography

- b) magnetic resonance imaging
- c) ultrasound scanning
- d) radionuclide scanning
- e) low-dose radiography

Answer: e

Chapter Number: 03

19) What are the three main parts of a eukaryotic cell?

- a) plasma membrane, organelles, cytoplasm
- b) plasma membrane, organelles, nucleus
- c) plasma membrane, cytoplasm, organelles
- d) plasma membrane, cytoplasm, nucleus
- e) plasma membrane, cytosol, organelles

Answer: d

20) What are the nonpolar parts of phospholipids?

- a) phosphate-containing head groups
- b) fatty acid tail groups
- c) Both the head and tail groups are nonpolar.
- d) Neither the head nor tail groups are nonpolar.

Answer: b

21) This type of membrane protein extends across the entire lipid bilayer of the plasma membrane touching both intracellular fluid and the extracellular fluid.

- a) complement protein
- b) transmembrane protein
- c) peripheral protein
- d) lipoprotein
- e) All of these choices are correct.

Answer: b

22) Plasma membranes are _____, which means that some chemicals move easily through plasma membrane while other chemicals do not.

- a) selectively permeable
- b) concentration graded
- c) electrically graded
- d) selectively soluble

e) electrical insulators

Answer: a

15) This is the transport process by which gases, like O₂ and CO₂, move through a membrane.

- a) osmosis
- b) active transport
- c) secondary active transport
- d) simple diffusion
- e) endocytosis

Answer: d

23) In this type of transport process, a solute (e.g. glucose) binds to a specific carrier protein on one side of the membrane. This binding induces a conformational change in the carrier protein that results in the solute moving down its concentration gradient to the other side of the membrane.

- a) osmosis
- b) active transport
- c) secondary active transport
- d) facilitated diffusion
- e) endocytosis

Answer: d

24) If the solute concentration is greater inside of the cell than outside the cell, water will move by osmosis

- a) into the cell.
- b) out of the cell.
- c) into and out of the cell at the same rate resulting in no net water movement.
- d) All of these answer choices are correct.
- e) None of these answers are correct.

Answer: a

25) Which of the following transport processes uses vesicles that fuse with the plasma membrane to secrete materials into the extracellular fluid?

- a) endocytosis
- b) exocytosis
- c) facilitated diffusion
- d) osmosis
- e) Both endocytosis and exocytosis.

Answer: b

26) Which of the following transport process uses vesicles formed at the plasma membrane to take up extracellular substances and import them into the cell?

- a) endocytosis
- b) exocytosis
- c) facilitated diffusion
- d) osmosis
- e) Both endocytosis and exocytosis.

Answer: a

27) Microfilaments, intermediate filaments and microtubules are all components of a cell's

- a) cytoskeleton.
- b) nucleus.
- c) plasma membrane.
- d) flagella.
- e) ribosome.

Answer: a

28) This cellular organelle is comprised of a pair of centrioles and the surrounding pericentriolar material.

- a) cytoskeleton
- b) cilia
- c) centrosome
- d) flagella
- e) peroxisomes

Answer: c

29) Spermatozoa is the only type of human cell that contains a _____, which is a whip-like structure that helps propel the sperm towards an oocyte.

- a) cilium
- b) flagellum
- c) mitochondria
- d) centrosome
- e) microvillus

Answer: b

30) Which of the following membrane-enclosed organelles is the site of synthesis of membrane proteins and secretory proteins?

- a) rough endoplasmic reticulum
- b) smooth endoplasmic reticulum
- c) nucleus
- d) centrosome
- e) Golgi complex

Answer: a

31) Which of the following membrane-enclosed organelles modifies, sorts, and packages proteins destined for other regions of the cell?

- a) endoplasmic reticulum
- b) Golgi complex
- c) peroxisomes
- d) nucleus
- e) proteasome

Answer: b

32) Which of the following membrane-enclosed organelles contains several oxidases that are involved in oxidation of fatty acids and amino acids during normal metabolism and in detoxification of chemicals like alcohol in the liver?

- a) peroxisomes
- b) mitochondria
- c) proteasome
- d) ribosomes
- e) lysosomes

Answer: a

33) Which of the following protects the contents of the nucleus?

- a) nucleic acids
- b) nuclear membrane
- c) centrosome
- d) cilia
- e) Golgi complex

Answer: b

34) What is the major function of histones?

- a) needed for helix formation of the DNA
- b) add negative charge to the DNA
- c) help organize coiling and folding of the DNA
- d) degrade faulty proteins in the nucleus
- e) catalyze methylation of the DNA

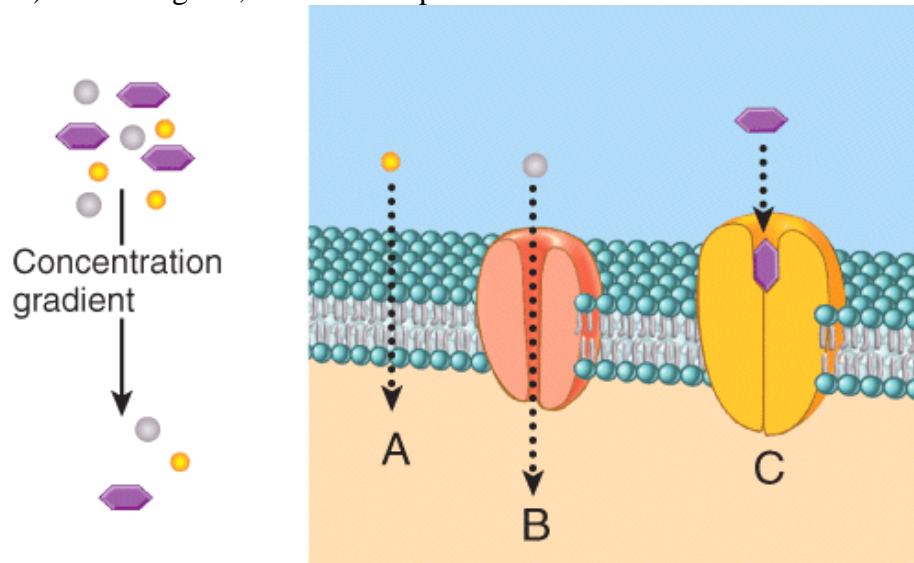
Answer: c

35) This portion of a DNA segment does not code for a protein.

- a) RNA
- b) introns
- c) exons
- d) polyribosome
- e) ribosome

Answer: b

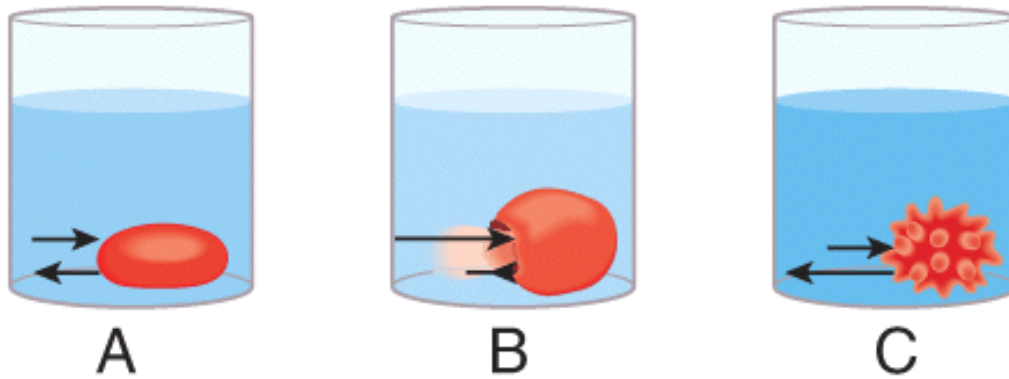
36) In the diagram, which one represents carrier-mediated facilitated diffusion?



- a) A
- b) B
- c) C
- d) Both A and C
- e) Both B and C

Answer: c

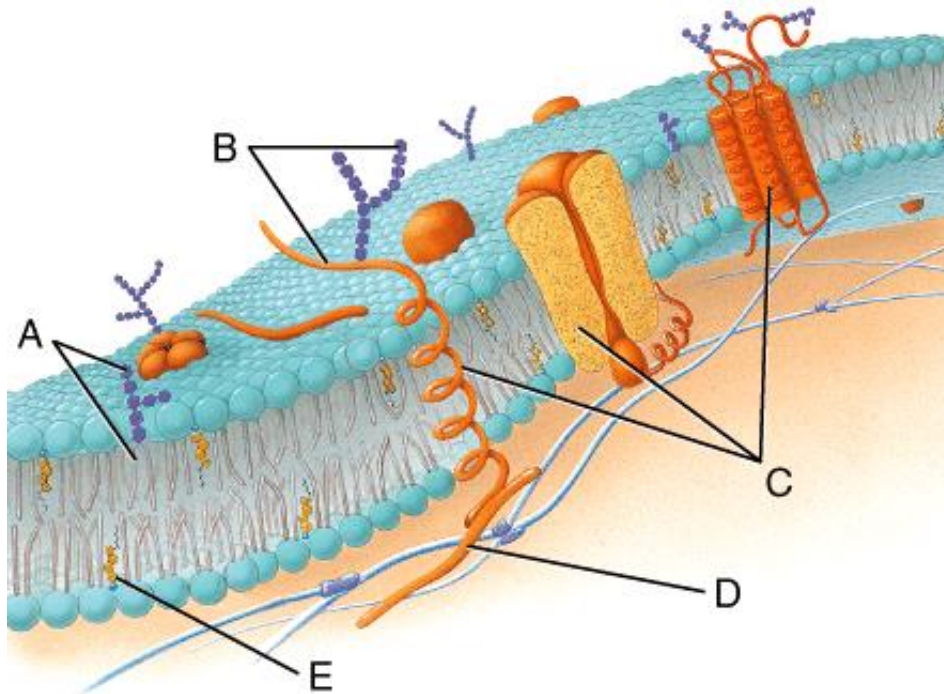
37) In the diagram, which one represents a hypertonic solution



- a) A
- b) B
- c) C
- d) Both B and C
- e) All of these choices are correct.

Answer: c

38) What structural components of the membrane are labeled (C) in the diagram?

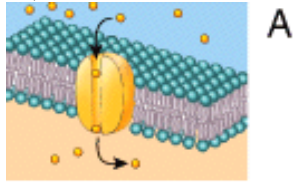


- a) peripheral proteins
- b) cholesterol molecules
- c) pores
- d) integral proteins

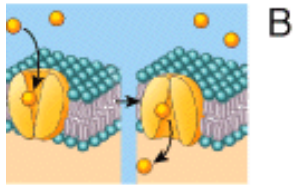
e) phospholipids

Answer: d

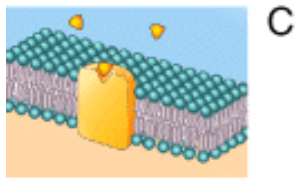
39) Which of the following represents an ion channel?



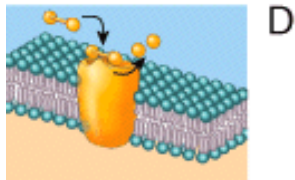
A



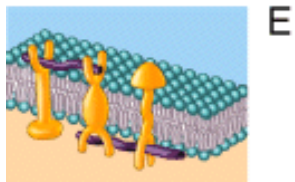
B



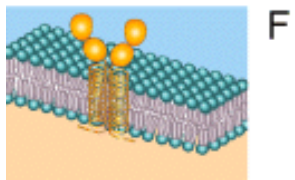
C



D



E



F

a) F

b) C

c) D

d) A

e) E

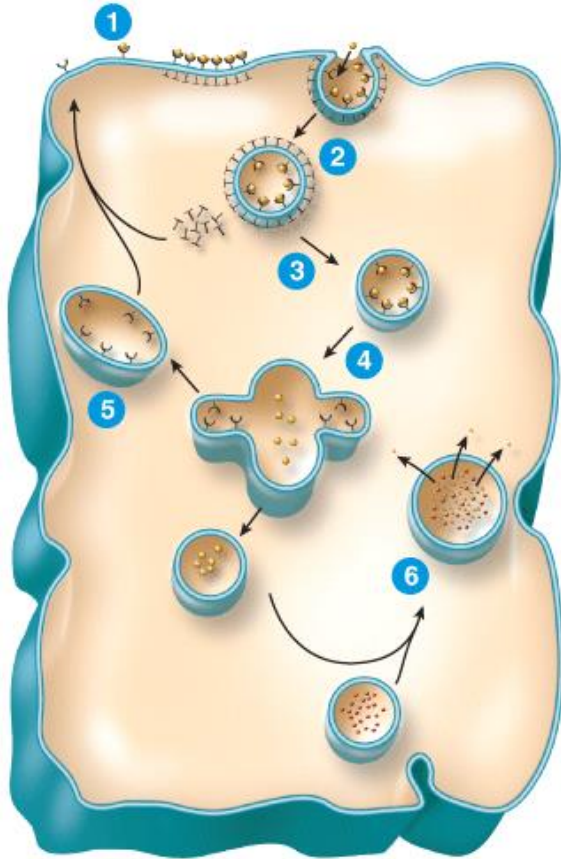
Answer: d

40) Most intravenous solutions are _____ with respect to blood cells?

- a) tonicity
- b) isotonic
- c) hypertonic
- d) osmotic
- e) hypotonic

Answer: b

41) Which of the following is the correct sequence of events in receptor-mediated endocytosis shown in the figure?



- a) binding > degradation in lysosomes > vesicle formation > uncoating > recycling of receptors to plasma membrane > fusion with endosome
- b) degradation in lysosomes > fusion with endosome > recycling of receptors to plasma membrane > uncoating > vesicle formation > binding
- c) degradation in lysosomes > recycling of receptors to plasma membrane > fusion with endosome > uncoating > vesicle formation > binding
- d) binding > vesicle formation > uncoating > fusion with endosome > recycling of receptors to plasma membrane > degradation in lysosomes
- e) binding > uncoating > vesicle formation > fusion with endosome > degradation in lysosomes > recycling of receptors to plasma membrane

Answer: d

42) Which organelle is responsible for synthesis of steroids, phospholipids and functions as a reservoir for Ca^{2+} ?

- a) mitochondrion
- b) secretory vesicle
- c) smooth endoplasmic reticulum
- d) rough endoplasmic reticulum
- e) lysosome

Answer: c

43) What other organelle besides the nucleus contain DNA?

- a) Golgi complex
- b) lysosome
- c) ribosomes
- d) mitochondrion
- e) centrosome

Answer: d

44) This is the site of synthesis of rRNA and assembly of rRNA and proteins into ribosomal subunits.

- a) nucleus
- b) nucleolus
- c) smooth endoplasmic reticulum
- d) rough endoplasmic reticulum
- e) Golgi complex

Answer: b