

Course No: DNTS 1240
Course Title: Cell Biology
Date: 23/05/2013
No. of Questions: (4)
Time: 2hours
Using Calculator (No)

University of Palestine



Final term Exam
3^{ed} 2012/2013
Total Grade:60

Instructor Name:Dr. Essam Elzatma
Student No.: _____
Student Name: _____
College Name: _____
Dep. / Specialist: _____
Using Dictionary (No)

10- When human immunodeficiency virus (HIV) attaches to a host cell what genetic material is released into the cell's cytoplasm?

- A. chromosome B. RNA C. DNA D. ligand

11- What host cell membrane structures enable the attachment of a virus like human immunodeficiency virus (HIV)?

- A. ion channels C. nuclear pores D. ribosomes E. receptors

12- Name the process a cell such as a neutrophil or a macrophage uses to ingest (eat) its prey

- A. halitosis B. chemotaxis C. botulism D. phagocytosis

13- Which of these produces and secretes antibodies in the body?

- A. bacteria B. plasma cell C. red blood cell
D.virus E. both A and D

14- What is the term applied to white blood cells squeezing between endothelial cells lining the blood vessel to reach the site of an infection?

- A. diapedesis B. chemotaxis C. phagocytosis D. enucleation

15- Which two hormones are released from the posterior lobe of the pituitary gland?

- A. ADH and GH B. CTH and TSH
C. ADH and oxytocin D. TRH and CRH

16- Hormones released by nerve cells of the _____ regulate hormones secreted by the _____.

- A. hypothalamus, anterior pituitary. B. hypothalamus, posterior pituitary.
C. anterior pituitary, hypothalamus. D. cerebellum, posterior pituitary.

17- Which statement is false?

- A. the endocrine system is composed of ductless glands.
B. contents of the endocrine system are released into the bloodstream.
C. the mammary gland is part of the endocrine system.
D. exocrine glands are not part of the endocrine system.

18- What is the target of ACTH?

- A. most cells B. thyroid gland C. mammary glands D. adrenal cortex

19- The following are cell junctions, EXCEPT

- A. loose junctions B. gap junctions C. desmosomes D. tight junctions

20- The longest part of the cell cycle is the

- A. interphase B. mitosis
B. cytokinesis D. binary fission

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21-The hepatitis viruses that transmitted by fecal oral route are

- A. hepatitis B and C
- B. hepatitis D and F
- C. hepatitis B and A
- D. hepatitis A and E

22- Chickenpox and shingles are caused by

- A. varicella-zoster herpes virus
- B. hepatitis B virus
- C. influenza virus
- D. human T-lymphotropic virus.

23- Vaccine is a substance used to :-

- A. treat diseases
- B. Prevent disease
- C. palliatives (make a disease less painful)
- D. all of the above

24- The shuttle system that translocate protein from the nucleus to the cytosol and vice versa

- A. GTPase (Ran) is active when bound to GTP.
- B. GTPase (Ran) is active when bound to GDP.
- C. GTPase (Ran) is inactive when bound to GTP.
- D. GTPase (Ran) is inactive when bound to ATP.

25- Plasmodesmata of plant cells are functionally equivalent to _____ of animal cells.

- A. gap junctions
- B. dermatomes
- C. tight junctions
- D. cell surface receptors.

26- What part of the cell is responsible for breaking down and digesting things?

- A. ribosomes
- B. lysosomes
- C. endoplasmic reticulum
- D. vacuole

27- The nucleus is NOT important as the site of

- A. DNA synthesis.
- B. RNA synthesis.
- C. synthesis of ribosomal subunits.
- D. protein synthesis

28- After being formed by ribosomes located on the endoplasmic reticulum, what is the next organelle to which a protein could be transported?

- A. mitochondria
- B. smooth endoplasmic reticulum
- C. golgi apparatus
- D. nucleus
- E. chloroplast

29- Which of the following statements about gap junctions is incorrect?

- A. They are formed from six subunits.
- B. They are found in both plants and animals.
- C. They allow small solute molecules to pass between the cytosol of one cell and the cytosol of

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its neighbor.

- A. They allow electrical current to pass between the cytosol of one cell and the cytosol of its neighbor.
- A. They can switch (gate) to a closed state.

30- A cell with a high density of nuclear pores is likely to be

- A. digesting and destroying other cells.
- B. using lots of the energy currency ATP.
- C. synthesizing lots of protein.
- D. communicating electrically with its neighbors.
- E. undergoing or soon to enter mitosis.

Q2: Indicate the following statements are true (T) or false (F).(10 marks)

- 1- It is possible to see the details of viruses under normal light microscope. (T / F)
- 2- It's usually accepted to say that DNA viruses are more infectious than RNA viruses. (T / F)
- 3- The viruses need to enter the host cells to protect themselves from antibiotics. (T / F)
- 4- Reverse transcriptase is an enzyme used by DNA viruses to replicate. (T / F)
- 5- Bacteriophage is an opportunistic virus because it infects immune-deficient people. (T / F)
- 6- Thymus is the place for B lymphocytes maturation. (T / F)
- 7- All antigenic substances are pathogenic. (T / F)
- 8- Humoral immune response depends primarily on the action of T lymphocytes. (T / F)
- 9- Anchoring junctions are the tools by which cells exchange small metabolites. (T / F)
- 10- Plant cells do not have any type of junctions between them. (T / F)
- 11- Delivery of proteins to the nucleus is a type of intracellular vesicular trafficking. (T / F)
- 12- Proteins secreted outside the cell are made by ribosomes located of the endoplasmic reticulum. (T / F)
- 13- Cells produced by meiosis are not genetically identical. (T / F)
- 14- Botulism is a food poisoning illness which caused by *staphylococcus aureus* bacteria. (T / F)

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- 15- Histamine increases blood flow to the injured area and increases the permeability of surrounding capillaries. (T / F)
- 16- Macrophages are often the first cells of the immune system infected with HIV. (T / F)
- 17- A person found to be HIV positive, he will transmit the virus to others by hand shaking. (T / F)
- 18- Thyroid hormone deficiency is known as hyperthyroidism. (T / F)
- 19- In females, LH and FSH stimulate secretion of estrogen and progesterone from the ovaries. (T / F)
- 20- Insulin lowers the blood sugar level by stimulating muscle to store glucose or use it for energy. (T / F)

Q3: Match the sentences in left with sentences in the write. (10 marks)

- | | |
|---------------------------------|-----------------------------------|
| 1- Low insulin level | -----nucleus and cytosol |
| 2- Mature in thymus | ----- diabetes mellitus |
| 3- BcI-2 and BcI-X _L | -----insulin and glucagon |
| 4- Antagonistic hormones | -----cell cycle S phase |
| 5- Associated with inflammation | -----pineal gland |
| 6- Mitochondria | -----gap junctions |
| 7- Antiapoptotic factors | -----necrosis |
| 8- Conexon | -----T lymphocyte |
| 9- DNA duplication | -----melatonin |
| 10- Gated traslocation | ----- intrinsic apoptotic pathway |

Q4: Answer the following questions. (25 marks)

- 1-Why is secondary immune response is faster and more specific than primary immune response?

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2-Write two criteria to consider HIV positive person has developed AIDS?

3-What is the difference between endocrine and exocrine hormones?

4-Give one reason why is apoptosis faster than mitosis

5-Why is proteins glycosylated by mannose-6-phosphate detach from their receptors inside lysosomes?

Good Luck