

Course No: DNTS 1204
Course Title: Cell Biology
Date: 20-03-2014
No. of Questions: (3)
Time: 1 hours
Using Calculator (No)

University of Palestine

Summer Term Exam
2014/2013/
Total Grade: 20

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

Q1: Multiple choice questions (10 Marks)

1- Which of the following is the most common means of HIV transmission?

- A) receiving a blood transfusion
- B) performing experiments with HIV
- C) shaking hands with a person who has AIDS
- D) having sexual contact with an HIV-infected person

2- The two main hormones which control the blood glucose level are:

- A) insulin and adrenaline
- B) glucagon and adrenaline
- C) adrenaline and noradrenaline
- D) insulin and glucagon

3- Endocrine glands

- A) function only after puberty.
- B) function only before puberty.
- C) release products through ducts.
- D) release products into the bloodstream.

4- The two main hormones which control the blood glucose level are:

- A) insulin and adrenaline
- B) glucagon and adrenaline
- C) adrenaline and noradrenaline
- D) insulin and glucagon

5- Tumor-suppressor genes includes *p53* and *Rb*. How would their mutation likely affect the cell?

- A) the cell would divide constantly because of the loss of cell cycle repression.
- B) the cell would divide much less frequently because of the extra cell cycle repression
- C) the cell would divide normally because these genes have no effect on cell cycle control.
- D) the cell would commit suicide by apoptosis.

6- Cells that are metabolically active but not destined to proliferate are said to be in ____ phase

- A) G₂
- B) S phase
- C) metaphase
- D) G₀
- E) G₁

7- A eukaryotic cell that receives a “go-ahead” signal at the G₁ checkpoint of the cell cycle will

- A) complete the cycle and divide
- B) move directly into the M phase
- C) move directly into the G₂ phase
- D) enter a resting stage.
- B) stop growing.

8- What is diabetes insipidus?

- A) undersecretion of ADH.
- B) undersecretion of adrenal cortex.
- C) high levels of glucose in the bloodstream
- D) a form of high blood pressure.

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9- Steroid hormones

- A) are produced only by the adrenal cortex.
- B) have only cell surface receptors.
- C) are water-soluble.
- D) act by altering gene expression in the target cell.

10- hypothalamus produces the two hormones

- A) oxytocin and ADH
- B) oxytoxin and epinephrine
- C) ADH and growth hormone
- D) ADH and ACTH

11- Brown eye is a dominant trait over green eye, that means

- A) one brown allele and one green allele produce green eye color
- B) one brown allele and one green allele produce brown eye color
- C) two brown alleles should be present to produce brown eye color
- D) one brown allele and one green allele produce blue eye color

12- Tumor suppressor gene p53 regulates the cell cycle transition from----to---

- A. S to G2
- B. M to G1
- C. G2 to M
- D. M to G2
- E. G1 to S

13- Pro-apoptotic members of the Bcl-2 family are located where?

- A. Inner mitochondrial membrane.
- B. Outer mitochondrial membrane.
- C. Matrix
- D. Nucleus

14- All the followings are characteristics of apoptosis EXCEPT

- A. Disintegration of internal organelles.
- B. Induction of inflammations.
- C. Agregation of DNA.
- D. Induction of caspases enzymes

15- Which of the followings are the pro-apoptotic family members?

- A. Bax and Bcl-2
- B. Bak and Bax
- C. Bid and Bcl-2
- D. Bcl-2 and Bcl-XL
- E. Bcl-xL and Bid

16- 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

17- 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

18- Which statement is false?

- A. the endocrine system is composed of ductless glands.

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- 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

19- What is the target of ACTH?

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

20- A cell with damaged DNA can lead to cancer if it is allowed to divide. In the normally functioning cell cycle such cells are prevented from division by ____.

- A- the G₁/S and G₂/M checkpoints
- B- the product of mutated p53 genes
- C- the M checkpoint
- D- cdc mutations

Q2: Indicate the following statements are true (T) or false (F). (5 Marks).

- 1- A "fight or flight" situation stimulates the secretion of adrenaline. (T / F)
- 2- An enlargement of the thyroid gland is the condition known as parathyroidism. (T / F)
- 3- Calcium level in the blood is regulated by the adrenal medulla. (T / F)
- 4- The hormone involved in rhythmic activities, such as day/night and seasonal changes is melatonin. (T / F)
- 5- The hormones of the pituitary gland reach their target cells through the neurosecretory cells. (T / F)
- 6- Thyroid hormone deficiency is known as hyperthyroidism. (T / F)
- 7- In females, LH and FSH stimulate secretion of estrogen and progesterone from the ovaries. (T / F)
- 8- Insulin lowers the blood sugar level by stimulating muscle to store glucose or use it for energy. (T / F)
- 9- The endocrine glands secrete hormones and deliver them to the blood through specialized tubes. (T / F)
- 10- Cells that are metabolically active but not destined to proliferate are said to be in G₀ phase.

