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**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2019/2020**

**SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN PHARMACY**

**PHA 2208: BIOCHEMISTRY VIII**

**DATE: FEBRUARY, 2020 TIME: 2 HOURS**

**SECTION A: CHOOSE ONE CORRECT ANSWER FOR EACH QUESTION**

1. Which gland is responsible for flight-or fight response:-

a. Adrenal gland

b. Parathyroid gland

c. Pituitzny gland

d. Pancreese

2. Hormones can be made of each of the following EXCEPT:-

a. Carbohydrates

b. Lipity

c. Proteins

d. Amines

3. How many hormone are secreted by the ????? Lobe of the pituitary gland?

a. 3

b. 5

c. 7

d. 6

4. Dwarfism is caused by a deficiency in

a. Sonatotropin hormone

b. Luteinizing hormone

c. Adrenalin

d. ACTH

5. Each of the following is lipid-soluble EXCEPT

a. Aldosterare

b. Thyroid hormone

c. Insulin

d. Cortisone

6. Which endarire gland produces vitamin D?

a. Bore

b. Pituitary

c. Hypothalamus

d. None of the above

7. Which of the following is NOT true of glucocarticcids?

a. They play a role in lipid metabolism

b. They play a role in bone formation

c. They have anti-inflammatory effect

d. They play a main role in short term stress response

8. Which of the following is involved in producing androgens from precursor androgens?

a. 17 hydrocysterod detydrogenase

b. Pyrarate kinase

c. Pyruvate carboxylse

d. Lipoprotein lipase

9. The zona fasciculate of the adrenal cortesy produces hormone collectively known as

a. Mineralcorticoids

b. Glucocorticcid

c. Androgens

d. Catectolamines

10. A hormone that increase the rate of glucose oxidation and release by the liver is

a. Insulin

b. Glycogen

c. Glucagon

d. Gilucocorticcids

11. Which is the endocrine gland which secretes thynosin?

a. Thymus

b. Hypotralamus

c. Pancreas

d. Adreral gland

12. Which drug may be used to treat high testosterone in …….?

a. Spironolactare

b. Prednisone

c. Calcitriol

d. Lypressin

13. Which hormone stimulates milk production in lactating woren?

a. Prolactin

b. Oxytoan

c. Corticosteroids

d. Thtyroxire

14. Which hormone promotes water reabsorption?

a. Tyroxire

b. Prugesterone

c. Antidiuretic hormone (ADH)

d. Calutonin

15. Which hormone promotes vasoconstriction?

a. Vasopressin

b. Insulin

c. IAPP

d. Luteinizing hormone

16. Which of the following use Ca2+ as a second messenger

a. TSH

b. Calcitonin

c. Angiotensin II

d. Glucagon

17. Which of the following in INCORRECT?

a. Amylin *slows down* gastric emptying

b. Amylin *secretion* is inhibited by amino acids

c. Amylin *suppresses caloric in take*

d. Amylin is involved in appetite control

18. Where is melatonin produced?

a. The pineal gland

b. The thymus

c. The hypothalamus

d. The pituitary

19. Which key enzyme in retogenesis is inhibited by insulin?

a. Cholesterol desmoluse

b. II B-hydroxylase

c. HM’???? CoA synthatase

d. Pyruvate carboxylase

20. Prolactin is secreted by

a. Pustenor pituitary

b. Antenos pituitary

c. Thyroid gland

d. Hypothalamus

21. Which of the following is a sulptonurea

a. Clomphere

b. Octrectide

c. Regrisonard

d. Gilipizide

22. Which G1 protein leads to prosptolipase – cadivation?

a. G1q

b. G1I

c. GIs

d. Go

23. The insulin recestor

a. Is an ion-channel linked receptor

b. Is an enzyme linked receptor

c. Is a GIPCR

d. Is a nuclear receptor

24. Which of the following is NOT an effect of insulin on the liver?

a. Increased lipogenesis

b. Reduced mobilization of fatty acids

c. Increase glycogen synthesis

d. Increased gluconeogenesis

25. Which of the following is a humoral stimulus?

a. Decreased osmolarity of ECF

b. Sympathetic nervous stimulation

c. Feedback stimuli

d. Seasonal change

26. Which of the following is an effector GIPCR?

a. Adrenergic 

b. Adrenergic 

c. Musarinic 

d. Dopamine 

27. Oxytocics may NOT be used to

a. Augnent labor

b. Suppress premature labor

c. Induce abortion

d. Cause vasodilatation

28. Lypressin as an aralogue of

a. FSH

b. Luteinizing hormony

c. ADH

d. Grouth hormony

29. Pancreatic  cells secrete

a. Progesterone

b. Gilucagon

c. Anylin

d. None of the above

30. Which of these is a proynflamnatory crystalline?

a. Reactive oxygen species

b. Interlealcin -6

c. Adponectin

d. AKt

**SECTION B: STRUCTURED QUESTIONS**

**ANSWER ALL QUESTIONS (30 MARKS)**

1. Briefly explain how insulin resistance causes -cell destruction.

(5 marks)

2. Briefly explain signal transduction from binding of glucagon. (5 marks)

3. List FIVE examples of biological rhythms in chronoscopic control of hormone secretion. (5 marks)

4. List FIVE classes of anti-diabetic drugs. (5 marks)

5. List FIVE functions of glucocarticuids. (5 marks)

6. Briefly describe the mectenism of action of Antidiuretic hormone. (5 marks)

**SECTION C**

**ESSAY QUESTIONS: ANSWER ANY TWO QUESTIONS**

1. a. Describe the biosynthesis of coltisol and aldosterare. (10 marks)

b. Explain insulin secretion due to glucose in cells. (10 marks)

2. Explain the development of insulin resistance through stress-induced Kinases. (2 marks)

3. Discuss hormones in carcinogenesis. (20 marks)