Human Physiology 2 Exam 2

HUMAN PHYSIOLOGY II
THERE ARE 3 SECTIONS IN THIS PAPER
ANSWER ALL THE QUESTIONS.

1) What hormone does the pancreatic alpha cell secrete
a) Insulin
b) Somotostatin
c) Glucacon
d) Somatotropin

2) What stimulates the release of ADH from the posterior pituitary gland
a) Increased blood levels of sodium
b) Decreased blood levels of sodium
c) Increased blood levels of glucose
d) Decreased blood levels of glucose

3) In the adult which cells does thyroid hormone not affect
a) Pancreas
b) Stomach
c) Brain
d) Heart

4) In females the effect of follicle stimulating hormone is
a) The final maturation of the ovarian follicles and the release of oestrogen
b) The early maturation of the ovarian follicles and the release of progesterone
c) The final maturation of ovarian follicles and the release of progesterone
d) The early maturation of the ovarian follicles and the release of progesterone

5) What is the function of insulin
a) Increase glucose uptake by cells
b) Increase urine formation
c) Speed glucose excretion by the liver
d) Increase calcium deposition in bone

6) A decrease in secretion of antidiretic hormone will result in
a) Diabetes inspidus
b) Graves disease
c) Diabetes mellitus
d) Adrenogenital syndrome

7) Which the following is completely reabsorbed in the proximal convulated tubule
a. Sodium
b. urea
c. glucose

d. water

8) The main barrier precluding the free passage of albumin across the glomerular capillary walls is formed by:
A. the fenestrated glomerular endothelium
B. anionic proteoglycan clusters within the glomerular basement membrane
C. the filtration slits in between visceral epithelial cells (podocytes)
D. none are correct
E. all are correct

9) The following factor(s) tend(s) to INCREASE the rate of glomerular filtration (GFR):
A. decreased albumin concentration in plasma
B. vasodilation of the afferent (pre-glomerular) arteriole
C. vasoconstriction of the efferent (post-glomerular) arteriole
D. A and C are correct
E. all are correct

10) Which of the following is not a function of the kidneys
a. Which Blood pressure regulation
b. Regulate acid base balance
c. Production of vitamin B complex
d. Excretion of waste products

11) Concering the function of proximal convulated tubule
a) Most of the glumerular ultrafiltrate is reabsorbed in the proximal tubule in an iso osmatic fashion
b) The concentration of PAH doesn't change much along the length of the proximal tubule
c) Under normal conditions most of the filtered glucose and bicarbonate are reabsorped on the proximal tubule
d) A and C are correct

12 Which structure detects changes in temperature?
a) Which Pons
b) Medulla
c) Thermoreceptors
d) Pituitary gland

13 The action potential relies upon the movement of which of the ions into and out of the cell
a) Calcium and magnesium
b) Iron and iodide
c) Sodium and potassium
d) Iron and iodide

14 Which part of neuron receives information
a) The node of Rranvier
b) The myelin sheeth
c) The axion
d) The dentrite
15 Which of these is an example of a neurotransmitter

a) Dopamine
b) Norepinephrine
c) Acetylcholine
d) All the above

16 The beginning of reproduction age is known as
a) The menses
b) The menopause
c) Menstruation
d) Puberty

17 Sperms are produced at a temperature that is
a) Higher than body temperature
b) Immaterial
c) Lower than body temperature
d) The same is body temperature

18 When the lining of the uterus breaks down and is shed this is known as
a) Ovulation
b) Impregnation
c) Menstruation
d) Fertilization

19 Of the following male organs which one is considered primary sex organ
a) The ejaculatory ducts
b) The penis
c) The prostate glands
d) The testes

20 In general hormonal secretion may be stimulated by all the following except
a) Nerves
b) Alteration in the concentration of a specific substance
c) Instructions from another endocrine organ
d) Genetic make up

SHORT ANSWER QUESTIONS (SAQ)

1) Describe briefly the chemical structure and mechanism of action of hormones(6marks).
2) Explain the steps of thyroid hormone production (6 marks).
3) Describe the components of the glumerular filtration membrane and briefly explain the steps of urine formation.(8 marks)
4) Describe, in brief, the role of kidney in acid-base balance.(6 marks).
5. Describe the phases and events of menstrual cycle.(6 marks).
6. Describe spermatogenesis and oogenesis in termsof site, number of functional cells produced by each cell that undergoes meiosis, and timing of the process.(6 marks).
7 Define reflex, and name the five parts of a reflex arc. (6 marks).
8 Describe an electrical nerve impulse in terms of charges on either side of the neuron membrane. Describe how a nerve impulse crosses a synapse.(6 marks).

LONG ESSAY QUESTIONS.

1. Describe in detail the physiology of vision.

2. What are the changes that occur in the following systems during pregnancy.

A. Body fluids(3 marks)
B. Respiratory system (4 marks)
C. Digestive system (4 marks)
D. Cardiovascular system (4 marks)