قائمة الاسئلة

اختبار النهائي للعام الجامعي 2025/2024م-كلية الطب - شعبة ..الطب البشري :: كيمياء حيوية - طب بشري -الثاني - درجة هذا الاختبار (80)

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1) Iron is transported in the plasma by:
   1) - Ferritin
   2) + Transferrin
   3) - Hemosiderin
   4) - Heptoglobin
2) The causes of hereditary coproporphyria is:
   1) + Deficiency of coproporphyrinogen oxidase enzyme
   2) - Increased of coproporphyrinogen oxidase enzyme
   3) - Deficiency of ferrochlatase enzyme
   4) - Deficiency of uroporphylinogen I synthase enzyme
3) Which of the following of globin genes are present in chromosome 11:
   1) - ζ-globin gene
   2) - α2-globin gene
   3) - α1-globin gene
   4) + b-globin gene
4) In the mucosal cells of intestine, the absorbed ferrous form of iron is converted to ferric form by:
   1) - Ferric reductase
   2) - Ascorbic acid
   3) + Ferroxidase enzyme
   4) - Ceruloplasmin
5) Sickle-cell anemia occurs due to a change (missense mutation) in the single nucleotide:
   1) - Thymine → uracil
   2) - Thymine → guanine
   3) - Guanine → uracil
   4) + Thymine → adenine
6) Which of the following enzyme about porphyrias are occurs in erythrocytes:
   1) - Hereditary coproporphyria
   2) + Hereditary protoporphyria
   3) - Acute intermittent porphyria
   4) - Porphyria cutanea tarda
7) All the following are b-globulins except:
   1) + Orosomucoid
   2) - Hemopexin
   3) - Transferrin
   4) - Plasminogen
8) All the following statements about hemochromatosis are correct except:
   1) - Accumulation of iron in liver
   2) - Damage β-cells of pancreas
   3) - Bronzed-pigmentation of the skin
   4) + Accumulation of copper in liver
9) A sharp and distinct M band appears in the g-globulin fraction occurs in the following condition:
   1) - Nephrotic syndrome

2) + Multiple myeloma
3) - Primary immune deficiency
4) - Liver cirrhosis

10) Haptoglobin is a type of:
1) - g-globulin
2) - β-globulin
3) + α2- globulin
4) - α1- globulin

11) Which of the following is non-heme iron compound:
1) + Transferrin
2) - Hemoglobin
3) - Cytochrome
4) - Catalase

12) Emphysema is a term used to represent the abnormal distension of lungs caused by:
1) - Increase of copper
2) + Deficiency of a1-antitrypsin
3) - Increase of a1-antitrypsin
4) - Decrease of plasminogen

13) In infants, bilirubin moves from blood stream into brain tissue a condition called:
1) - Hemochromatosis
2) - Brian tumor
3) + Kernicterus
4) - Ketoacidosis

14) Transporter of heme occur by:
1) - Orosomucoid
2) + Hemopexin
3) - Haptoglobin
4) - Transcortin

15) Alpha chain and epsilon chain (α2ε2) are composed of:
1) - Hb C
2) - Hb F
3) + Hb Gower-2
4) - Hb Gower-I

16) Failure of the pituitary to stop producing growth H after puberty leads to:
1) - Gigantism.
2) - Tetany
3) - Kidney failure.
4) + Acromegaly.

17) One of the following not occurs in hypothyroidism:
1) - Poor memory.
2) - Brittle fingernail
3) + Mental retardation.
4) - Weight gain

18) Deficiency of estrogen after menopause leads to:
1) + Decreased bone density
2) - Increased bone density
3) - stimulate fat synthesis
4) - None of that

19) Inhibition of glucagon secretion occurs by:

1) - Increase lipid in the diet.
2) - Low blood sugar.
3) + Increase blood sugar.
4) - High protein in diet.

20) Somatostatin is secreted by the?
1) - Pancreatic F-cells
2) + Pancreatic delta cells
3) - Zona fasciculata
4) - Parafollicular cells

21) The main function of thyroxine is:
1) + Calorigenic
2) - Cause hyperglycemic
3) - low blood pressure
4) - leads to hypoglycemia

22) Which of the following is not true about insulin?
1) - It stimulates protein synthesis in tissues.
2) + It is secreted from C-cells in pancreas.
3) - It inhibits hormone sensitive lipase.
4) - It affects cell growth.

23) Regulating of water balance in the body occurs by:
1) - Aldosterone
2) + Antidiuretic hormone (ADH)
3) - Cortisol
4) - Insulin

24) What is the function testosterone?
1) - Regulate blood sugar
2) - Regulate metabolism
3) - Control stress response
4) + Promote male secondary sexual characteristics

25) Adrenaline receptor is located at;
1) + Cell membrane
2) - Intracellular
3) - Extracellular
4) - None of the above

26) ACTH controls the secretion of:
1) + Cortisol
2) - Estrogen
3) - Epinephrine
4) - Testosterone

27) The rate of metabolism of all body cells is regulated by:
1) - Parathyroid hormone
2) - Aldosterone
3) - Calcitonin
4) + Thyroid hormone

28) What type of receptor do steroid hormones bind?
1) - Membrane receptors
2) + Intracellular receptors
3) - G-protein coupled receptors
4) - Ion channel receptors

29) The common effect of glucocorticoids is to:
- 1) - Promoting inflammation
- 2) + Increasing blood glucose levels
- 3) - Decreasing blood pressure
- 4) - Stimulating insulin release

30) Hormones increases sodium reabsorption in the kidneys is;
- 1) + Aldosterone
- 2) - Cortisol
- 3) - Insulin
- 4) - Parathyroid hormone

31) All of the following about cortisol are not true except:
- 1) - A hormone derived from tyrosine
- 2) - A polypeptide hormone
- 3) - A hydrophilic hormone
- 4) + A steroid hormone

32) What does the hormone oxytocin regulate?
- 1) - Blood pressure
- 2) + Milk ejection during breastfeeding
- 3) - Blood glucose levels
- 4) - Metabolism

33) which of the following about ADH is true?
- 1) - Is secreted by anterior lobe of pituitary gland
- 2) - It stimulates growth hormone secretion
- 3) + Is secreted by posterior lobe of pituitary gland
- 4) - Is secreted by hypothalamus

34) Sex hormone binding globulin is important for:
- 1) - Stimulate hormone production
- 2) - Inhibit testosterone secretion
- 3) + transport free estrogen an androgen
- 4) - All of that are correct

35) All of the following about growth hormone are true except:
- 1) - Secretion may be stimulated by heavy exercise
- 2) + Is secreted by hypothalamus
- 3) - Stimulates synthesis and secretion of IGH by liver
- 4) - Controls growth during childhood

36) Hormone that binds to intracellular receptor is
- 1) - Adrenocorticotropic hormone
- 2) + Thyroxine
- 3) - Follicle stimulating hormone
- 4) - Thyroid stimulating hormone

37) One of the following is the primary effect of calcitonin:
- 1) - Increase blood glucose
- 2) - Decrease blood glucose
- 3) - Increase blood calcium
- 4) + Decrease blood calcium

38) Hormone of "fight or flight" response is:
- 1) - Cortisol
- 2) + Epinephrine
- 3) - Insulin

4) - Glucagon

39) The precursor for all steroid hormones is:
1) + Cholesterol
2) - Phospholipids
3) - Fatty acids
4) - Amino acids

40) Hormone secreted by the placenta during pregnancy:
1) - Progesterone
2) + HCG (Human Chorionic gonadotropin)
3) - Estrogen
4) - All of the above

41) Muramidase, lactoferrin and IgA in saliva act as
1) + A mild antibacterial
2) - Epidermal growth factors
3) - Carbohydrate digestion Enzymes
4) - Neutralization of xenobiotics

42) Xerostomia means
1) - Absence of stomach HCL secretion
2) - Absence of pancreatic secretion
3) - Absence of intestinal secretion
4) + Dryness in the mouth

43) Insulin dependent monosaccharide transporter is
1) - GLUT2
2) - GLUT1
3) + GLUT4
4) - GLUT3

44) Carbohydrates digestion and absorption are highest in
1) - Mouth
2) - Stomach
3) + Small intestine
4) - Large intestine

45) After digestion of carbohydrates, lipids and proteins
1) - Amino acids, monosaccharides and fatty acids are absorbed into lymph
2) + Amino acids and monosaccharides are absorbed into portal circulation
3) - Small and large fatty acids are absorbed into portal circulation
4) - Amino acids, monosaccharides and fatty acids are absorbed into portal circulation

46) Feeding with dipeptides and tripeptides containing tryptophan improve
1) - Patients with dicarboxylic aminoaciduria
2) + Patients with Hartnup’s disease
3) - Patients with Blue diaper syndrome
4) - Patients with Cystinuria

47) Enteropeptidase
1) - Converts inactive chymotrypsinogen into active chymotrypsin
2) + Converts inactive trypsinogen into active trypsin
3) - Converts inactive pepsinogen into active pepsin
4) - Converts inactive procarboxypeptidase into active carboxypeptidase

48) Which of the following is prevent gallbladder stone formation?
1) - Water-soluble vitamins
2) - Cholesterol

3) - Fat-soluble vitamins
4) + Bile salts

49) Enzyme that is specific for peptide bonds containing basic amino acid
1) + Trypsin
2) - Chymotrypsin
3) - Pepsin
4) - Elastase

50) Triacylglycerols is mostly hydrolyzed fatty acids and 2-Monoacylglycerol by
1) + Pancreatic lipase
2) - Lingual lipase
3) - Gastric lipase
4) - Phospholipase A2

51) Dimercaprol is used as
1) - Chelating agent combines cystine to form a soluble disulfide complex
2) - To treat Constipation
3) + To treat acute poisoning by arsenic, mercury, and lead
4) - As oral rehydration therapy

52) A condition may cause exocrine pancreatic insufficiency?
1) - Ulcerative Colitis
2) + Cystic fibrosis
3) - Celiac Disease
4) - Diarrhea

53) Water-soluble vitamins are absorbed
1) - Same like long fatty acids
2) + By specific vitamin transporters
3) - Transient Potential Receptor Vanilloid 6 calcium channel
4) - Divalent metal transporter 1 (DMT1)

54) A process that is a phase II of xenobiotics metabolism?
1) - Oxidation
2) - Reduction
3) + Glucuronic acid conjugation
4) - Hydrolysis

55) Zollinger-Ellison syndrome is diagnosed by
1) - An overabundance of serotonin and 5-hydroxyindoleacetic acid
2) - Anti-tissue transglutaminase (Anti-tTG) IgA and IgG are positive
3) + An overabundance of gastrin secretion and serum chromogranin A
4) - Presence of Helicobacter pylori infection

56) Excess hydrogen ions (H+) in the blood leads to
1) - Metabolic alkalosis
2) - Respiratory alkalosis
3) + Metabolic acidosis
4) - Hypernatremia

57) The glomerular filtration rate (GFR) is primarily regulated by:
1) - The liver
2) + Renal blood flow and hydrostatic pressure
3) - The small intestine
4) - The pancreas

58) Regarding to Energy sources of the kidney, 90% of ATP is derived from
1) - Oxidation of glucose and lactate

2) - Oxidation of amino acids and glucose
3) + β-oxidation of fatty acids and ketone bodies.
4) - Not listed

59) What is the primary function of buffers in the body?
1) - Maintain blood glucose levels
2) - Regulate oxygen transport
3) + Stabilize blood pH
4) - Promote protein synthesis

60) What condition is characterized by abnormally high serum sodium levels?
1) - Hyperkalemia
2) - Hyponatremia
3) + Hypernatremia
4) - Hypocalcemia

61) What is the primary role of the kidneys in maintaining acid-base balance?
1) - Excretion of bicarbonate ions and reabsorption of hydrogen ions
2) + Reabsorption of bicarbonate ions and excretion of hydrogen ions
3) - Reabsorption of sodium ions and excretion of potassium ions
4) - Regulation of glucose levels in the blood

62) Hormone regulates water reabsorption by acting on collecting ducts
1) - Aldosterone
2) + Vasopressin (ADH)
3) - Insulin
4) - Parathyroid hormone

63) Buffer system in human blood maintain acid-base balance in the kidneys
1) - Phosphate buffer system
2) - Bicarbonate buffer system
3) - Protein buffer system
4) + Ammonium buffer system

64) Activation of renin-angiotensin-aldosterone system (RAAS) occurs by
1) + Renin
2) - Amylase
3) - Carbonic anhydrase
4) - Angiotensin-converting enzyme (ACE)

65) Which marker is commonly used to assess kidney function in clinical practice?
1) + Creatinine
2) - Hemoglobin
3) - Glucose
4) - Uric acid

66) Which process describes the movement of substances from the blood into the nephron to form urine?
1) + Filtration
2) - Reabsorption
3) - Secretion
4) - Diffusion

67) Which of the following is not a cause of hyperuricemia?
1) - Renal retention
2) - Organic acidemia
3) + Defects in pyrimidine metabolism
4) - Primary gout

68) Which electrolyte imbalance is commonly associated with metabolic acidosis?

1) - Hypernatremia
2) + Hyperkalemia
3) - Hypocalcemia
4) - Hypermagnesemia

69) Which enzyme in the kidney is responsible for the production of ammonia during amino acid metabolism?
1) + Glutaminase
2) - Glutamate dehydrogenase
3) - Urease
4) - Arginase

70) Which of the following is an important renal function for regulating blood pressure?
1) - Excretion of urea
2) - Production of erythropoietin
3) + Secretion of renin
4) - Reabsorption of glucose

71) A patient is in metabolic alkalosis due to diuretic therapy. How do you expect the potassium level and bicarbonate level to be affected?
1) - Decreased potassium level and decreased bicarb level
2) - Increased potassium level and decreased bicarb level
3) + Decreased potassium level and increase bicarb level
4) - Increased potassium level and increased bicarb level

72) In chronic kidney disease, which biochemical change is commonly observed?
1) - Hypercalcemia
2) + Hyperkalemia
3) - Hypophosphatemia
4) - Increased bicarbonate levels

73) All are true for renal handling of acids in metabolic acidosis except
1) - Hydrogen ion secretion is increased
2) + Bicarbonate reabsorption is decreased
3) - Urinary acidity is increased
4) - Urinary ammonia is increased.

74) The primary function of the kidney is to:
1) + Regulate acid-base balance
2) - Produce bile
3) - Synthesize clotting factors
4) - Metabolize carbohydrates

75) The phenomenon of osmosis is opposite to that of
1) + Diffusion
2) - Effusion
3) - Affusion
4) - Coagulation

76) Oedema
1) - A.Increase in capillary hydrostatic pressure
2) - B.Decreased colloidal osmotic pressure
3) - C.Increased permeability of the capillary
4) + D.Both A & B

77) An important renal response to acidemia is
1) - Increased potassium excretion
2) - Decreased excretion of $H2PO^{-}$
3) + Increased production of ammonia

4) - Increased production of HPO_2^-

78) The kidneys are an organ capable of gluconeogenesis. This process takes place in
1) - Collecting Ducts cells
2) - The cells of Distal Tubules
3) + The cells of Proximal Tubules.
4) - Bowman Capsules cells

79) Elevated potassium levels in ECF directly effect on adrenal cells to
1) + Secret Aldosterone
2) - Inhibit Renin-angiotensin system
3) - Increase Na excretion through kidney
4) - All of the above

80) If HCO_3^- caused the acidosis or the alkalosis, it is ?
1) + Metabolic
2) - Respiratory
3) - Combined
4) - None