



قائمة الاسئلة

كيمياء حيوية 2- طب - الثاني - درجة هذا الاختبار (50)

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- 1) Saliva act as a mild antibacterial, because it contains
 - 1) - Alpha amylase
 - 2) - Lingual lipase
 - 3) + Muramidase, lactoferrin and IgA
 - 4) - Epidermal growth factor
- 2) An enzyme in saliva which hydrolyzes starch is
 - 1) - Pepsinogen
 - 2) - Chymotrypsin
 - 3) + alpha-Amylase
 - 4) - Trehalase
- 3) GLUT2 is
 - 1) - Sodium dependent monosaccharide co-transporter
 - 2) + Sodium independent monosaccharide transporter
 - 3) - Specific for transport fructose from intestinal lumen into enterocytes
 - 4) - Insulin dependent monosaccharide transporter
- 4) In the intestine the rate of absorption is highest for
 - 1) + Glucose and galactose
 - 2) - Fructose and mannose
 - 3) - Fructose and lactose
 - 4) - Mannose and maltose
- 5) After digestion amino acids
 - 1) + Are absorbed into portal circulation
 - 2) - Are absorbed into lymph
 - 3) - Are excreted to the extent of 50%
 - 4) - Converted into glucose in the intestine
- 6) Renin converts casein to paracasein in presence of
 - 1) + Ca⁺⁺
 - 2) - Cl⁺⁺
 - 3) - Na⁺
 - 4) - K⁺
- 7) The clinical condition of patients with Hartnup's disease can be improved by feeding the patients with
 - 1) + Dipeptides and tripeptides containing tryptophan
 - 2) - Dipeptides and tripeptides containing basic amino acids
 - 3) - Dipeptides and tripeptides containing dicarboxylic amino acids
 - 4) - Dipeptides and tripeptides containing methionine
- 8) Blue diaper syndrome is a result of
 - 1) + Tryptophan malabsorption
 - 2) - Methionine malabsorption
 - 3) - Lysinuric protein intolerance
 - 4) - Cystinuria
- 9) Trypsinogen is converted to active trypsin by
 - 1) + Enterokinase
 - 2) - Bile salts
 - 3) - HCl
 - 4) - Mg⁺⁺
- 10) All the following are Bile Salts significant functions EXCEPT





- 1) - Facilitate the digestion of dietary triacylglycerols
 - 2) Elimination of excess water-soluble vitamins
 - 3) - Facilitate the intestinal absorption of fat-soluble vitamins.
 - 4) - Solubilize cholesterol in the bile, thereby preventing gallbladder stone formation
- 11) Chymotrypsin is specific for peptide bonds containing
- 1) Aromatic amino acids
 - 2) - Acidic amino acids
 - 3) - Basic amino acid
 - 4) - Small amino acid residue
- 12) Pancreatic lipase converts triacylglycerols into
- 1) - 2, 3-Diacylglycerol
 - 2) - 1-Monoacylglycerol
 - 3) 2-Monoacylglycerol
 - 4) - 3-Monoacylglycerol
- 13) Dietary lipid is absorbed by the small intestine and transported in the lymph as
- 1) - VLDL
 - 2) - Free fatty acids bound to albumin
 - 3) - LDLs
 - 4) Chylomicrons
- 14) Fat-soluble vitamins are absorbed
- 1) - By specific vitamin transporter
 - 2) - By sodium dependent transporter
 - 3) Same like long fatty acids
 - 4) - By Transient Potential Receptor Vanilloid 6 calcium channel
- 15) In normal person gastric lipase hydrolyze 15% of the dietary fat, while in patients with pancreatic insufficiency gastric lipase hydrolyze 1/3 of the dietary fat why?
- 1) Because gastric lipase continues to hydrolyze fat in the intestine
 - 2) - Because of lingual lipase continues to hydrolyze fat in the intestine
 - 3) - Because pancreatic colipase activates gastric lipase
 - 4) - Because the absorption of Medium- and Short-Chain Fatty Acids start at stomach
- 16) 8-year-old vegetarian female presented to her doctor with fatigue and tingling/numbness in her extremities (bilateral). The symptoms were gradually getting worse over the last year. She reported frequent episodes of diarrhea and weight loss. On examination, she was pale with tachycardia. Her tongue was beefy red. Neurological examination revealed numbness in all extremities with decreased vibration senses. What is the most likely diagnosis?
- 1) - Cystinuria
 - 2) Cobalamin (vitamin B12) deficiency.
 - 3) - Niacin deficiency
 - 4) - Vitamin D deficiency
- 17) Parents brought their 7-year-old son to the pediatrician with the complaint of frequent fevers and failure to grow. The child had three bouts of pneumonia during the past 1 year and was bothered by chronic bronchitis, which caused him to cough up copious amounts of thick, yellow, mucoid sputum. What is the most likely diagnosis?
- 1) Cystic fibrosis
 - 2) - Hiatal hernia
 - 3) - Ulcerative Colitis
 - 4) - Constipation
- 18) Secretin stimulation test is requested to evaluate
- 1) - Gastric secretory response





- 2) pancreatic secretory response
3) Salivary secretory response
4) Bile duct secretory response
- 19) An overabundance of gastrin secretion (ectopic gastrin secretion) may be due to
1) Zollinger-Ellison
2) Sjögren's syndrome
3) Celiac disease
4) Cystic fibrosis
- 20) Which of the following is not a risk factor for Gastroesophageal reflux
1) Obesity
2) Pregnancy
3) Hiatal hernia
4) Taking medicine containing bicarbonate
- 21) Neutralization of xenobiotics and active endogenous metabolites often occurs via introduction of an oxygen atom into the substrate molecule. What process occurs as the result?
1) Hydroxylation
2) Decarboxylation
3) Transamination
4) Deaminization
- 22) Which of the following process is not phase I of xenobiotics metabolism
1) Oxidation
2) Reduction
3) Glucuronic acid conjugation
4) Hydrolysis
- 23) Cytochromes P450 (P450) are membrane-bound enzymes that catalyze the monooxygenation of a diverse array of xenobiotic and endogenous compounds
1) Phenobarbital increases activity of P450
2) All isoforms of the P450 enzyme exhibit same catalytic activity
3) The mitochondrial P450 enzymes are main enzymes involved in metabolism of xenobiotic drugs
4) The anticoagulant warfarin is not metabolized by P450
- 24) Oxidation by P450 followed by glucuronic conjugation is a very important biotransformation of
1) Large aliphatic molecules
2) Very small acid molecules
3) Glycine
4) Sulfate
- 25) Which of the following compound is used to treat acute poisoning by arsenic, mercury, and lead
1) Formic acid
2) Dimercaprol
3) Glutamine
4) S-adenosylmethionine
- 26) All the following about hemoglobin are true except:
1) Metallprotein
2) Simple protein
3) Globular protein
4) Conjugated protein
- 27) In pre-hepatic jaundice is characterized by:
1) Increased serum unconjugated bilirubin
2) Increased serum conjugated bilirubin





- 3) - Decreased serum unconjugated bilirubin
4) - No correct answers
- 28) All the following statements about hemochromatosis are correct except:
1) - Liver is damaged
2) - Damage β -cells of pancreas
3) Excessive copper in the blood
4) - Bronzed diabetes
- 29) Plasma albumin is precipitated by:
1) Full saturation with ammonium sulfate
2) - 25% ammonium sulfate
3) - 50% ammonium sulfate
4) - 10% ammonium sulfate
- 30) Iron deficiency causes:
1) - Thalassemia trait
2) Microcytic anemia
3) - Favism
4) - Pernicious anemia
- 31) The faster hemoglobin in the electrophoresis technique is:
1) - Hemoglobin F
2) Hemoglobin A
3) - Hemoglobin S
4) - No correct answers
- 32) All the following of globin genes are present in chromosome 16 except:
1) - ζ -globin gene
2) - $\alpha 2$ -globin gene
3) - $\alpha 1$ -globin gene
4) b-globin gene
- 33) In the mucosal cells of intestine, the absorbed ferrous form of iron is converted to ferric form by:
1) Ferroxidase enzyme
2) - Ascorbic acid
3) - Ferric reductase
4) - Ceruloplasmin
- 34) Transferrin is a type of:
1) - Lipoprotein
2) β -globulin
3) - $\alpha 1$ - globulin
4) - $\alpha 2$ - globulin
- 35) In infants, bilirubin moves from blood stream into brain tissue a condition called:
1) - Hemochromatosis
2) - Thalassemia
3) Kernicterus
4) - Ketoacidosis
- 36) Sickle-cell anemia is due to a change (missense mutation) in the single nucleotide:
1) - Thymine \rightarrow uracil
2) Thymine \rightarrow adenine
3) - Guanine \rightarrow uracil
4) - Uracil \rightarrow adenine
- 37) Decreased albumin with increased $\alpha 2$ -globulin occurs in the following condition:
1) Nephrotic syndrome





- 2) - Multiple myeloma
3) - Primary immune deficiency
4) - Acute infections
- 38) In γ -chain of HbF, the glutamic acid is replaced by amino acid at position 6.
1) - Alanine
2) - Leucine
3) - Glutamic acid
4) Lysine
- 39) All the following enzymes about porphyrias are occurs in liver (hepatic) except:
1) - Variegate porphyria
2) Hereditary protoporphyria
3) - Hereditary coproporphyria
4) - Acute intermittent porphyria
- 40) Iron is stored in the form of:
1) - Ferritin and transferrin
2) - Transferrin and hemosiderin
3) - Transserrin only
4) Ferritin and hemosiderin
- 41) The protein bind with progesterone in circulation is:
1) Orosomuroid
2) - Hemopexin
3) - Ceruloplasmin
4) - Transcortin
- 42) Defect in the synthesis of alpha and beta chains of globulins leads to:
1) - Hemolytic anemia
2) Thalassemias
3) - Porphyria's
4) - Sickle-cell anemia
- 43) Increased glycosylated hemoglobin (HbA1c) indicate to:
1) - Diabetic insipidus
2) - Bronze diabetic
3) Diabetic mellitus
4) - Hypoglycemia
- 44) All the following are α_1 -globulins except:
1) - Retinol binding protein
2) Haptoglobins
3) - Transcortin
4) - Orosomuroid
- 45) Hemoglobin C caused by substitution of glutamate by:
1) - Lysine in the 121 position of β -chain
2) Lysine in the sixth position of β -chain
3) - Glutamine in the 121 position of β -chain
4) - Leucine in the sixth position of β -chain
- 46) Zeta chain and epsilon chain ($\zeta_2\epsilon_2$) are composed of:
1) - Hb A
2) - Hb Gower-2
3) - Hb F
4) Hb Gower-I
- 47) 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
- 48) Which of the following is synthesized in mitochondria:
- 1) Protoporphyrinogen IX
 - 2) - Porphobilinogen
 - 3) - Uroporphyrinogen III
 - 4) - No correct answers
- 49) Deficiency of uroporphyrinogen III cosynthase enzyme cause (leads to):
- 1) - Porphyria cutanea tarda
 - 2) - Variegate porphyria
 - 3) Congenital erythropoietic porphyria
 - 4) - No correct answers
- 50) Heme is synthesized from, (in the first step):
- 1) - Succinyl CoA and valine
 - 2) - Alpha-ketoglutarate and glycine
 - 3) - Succinyl CoA and alanine
 - 4) Succinyl CoA and glycine

