Second year medical
Lipid metabolism

[ ] 1) Mevalonate and squalene are intermediate in the synthesis of cholesterol

[ ] 2) mevalonate is converted into 3-phospho-6-pyrophospho mevalonate by three consecutive phosphorylations

[ ] 3) bile salts are highly effective detergents because they contain polar and nonpolar regions

[ ] 4) fatty acids are synthesized and degraded by the same pathway enzymes

[ ] 5) all the carbon atoms in ceramide are derived from palmitoyl coA and serine

[ ] 6) fatty acid synthase is inhibited by citrate and stimulated by malonyl coA and palmitoyl coA

[ ] 7) palmitic acid synthesis requires 8 molecules of acetyl coA and 7 NADPH 7 FADH2 and 7 ATP

[ ] 8) glycosphingolipids are are combinations of sphingosine with one or more sugar residues

[ ] 9) generalized gangloisidosis is characterized by accumulation of galactoceramide due to deficeincy of GM1 β-galactosidase

[ ] 10) Tay-Sachs disease is inherited due to deficiency of Hexoseaminidase that leads to mental retardation, liver enlargement ,and blindness

[ ] 11) lovastatin and mevastatin are drugs that are used as inhibitors of HMG CoA reductase to reduce the cholesterol level

[ ] 12) glycerol released can not be metabolized by liver cells because they lack glycerol kinase

[ ] 13) the mobilization of stored fat is initiated by hormone sensitive lipase that requires Apo CII as activator

[ ] 14) liver mitochondria have the ability to form and utilize acetoacetic acid

[ ] 15) acetyl CoA carboxylase is one of the multicomplex enzyme (fatty acid synthase) that contain biotin covalently linked to lysine residue

[ ] 16) Fatty acid originate from three sources ,deit,adipocyte and denovo synthesis

[ ] 17) Tangiers disease is inherited homozygote disease characterized by the accumulation of cholesterol ester in the tissue and absence of HDL

[ ] 18) type III hyperlipidemia is characterized by an increase in cholesterol only due to deficiency of remnant metabolism by the liver caused by abnormality in Apo E

[ ] 19) most LDL appears to be formed from VLDL and it is good carrier for TAG and cholesterol from the liver to peripheral tissues

[ ] 20) β ketoacyl synthtase is one of the β oxidation enzymes activated by citrate

[ ] 21) Arachidonic acid contains 20 carbon atoms with two double bonds and it is the precursor of prostaglandins

[ ] 22) Essential fatty acids are polyunsaturated fatty acids which can not be synthesized by the body and have to be supplied in the diet

[ ] 23) Phosphatidic acid is a compound in which two fatty acids and a phosphoric acid are esterified to the three hydroxyl groups of glycerol

[ ] 24) Ceramides are the parent compounds of sphingomyeline, cerebrosides ,and gangliosides

[ ] 25) All the carbon atoms in cholesterol and other steroids in the body are derived from malonyl coA

[ ] 26) The major pathway for denovo synthesis of fatty acids is located in the cytosol and requires bicarbonate and NAD

[ ] 27) Fatty liver can result from excessive ingestion of lipids, alcohol, or toxic substances such as carbon tetrachloride

[ ] 28) The ketone bodies are synthesized in the cytosol of the liver cells and utilized for energy by peripheral tissues

[ ] 29) Acylated carnitine can not cross the mitochondrial membrane whereas the acyl coA does

[ ] 30) Lovastatin is a drug used in the treatment of hyprtriacylglycerolemia

[ ] 31) Wolman disease is caused by the deficiency of the lysosomal cholesterol ester hydrolase that metabolise LDL

[ ] 32) Tangeirs disease is a homozygous disease caused by the absence of LDL

[ ] 33) VLDL is synthesized in the liver and is a good donar of apo CII ,apoE and apoA

[ ] 34) The sequence of cholesterol biosynhesis begins with the condensation in the cytosol of two acetylcoA and the reaction is catalysed by thiolase

[ ] 35) HMG coA is an important intermediate for the biosynthesis of both ketone bodies and cholesterol

[ ] 36) The first reaction in beta oxidation is catalysed by acyl coA dehydrogenase which requires FAD as coenzyme

[ ] 37) Ketone biodies are synthesized in the liver and diffuse into the blood where they are carried to other tissues without carrier

[ ] 38) Cholecystokinin hormone act on the gallbladder to release bile acids and on pancreas to release pancreatic lipase and watery solution containing bicarbonate

[ ] 39) Fatty acids are activated in the cytosol into fatty acyl coA which cannot pass into the mitochondria

[ ] 40) Beta oxidation of odd number fatty acids proceeds by the same mechanism as that of even number till the final 3 carbons are reached

[ ]41) Palmitic acid can not be synthesized in human and must be supplied in the diet

[ ]42) Gangliosides are nerve tissue lipids and contain sialic acid beside hexose residue

[ ] 43) VLDL is synthesized in small intestine and carry the endogenous TAG to peripheral tissues

[ ]44) Oxidation of oleic acid requires additional enzyme enoyl CoA isomerase

[ ] 45) Complete oxidation of stearic acid produces 129 ATP molecules

[ ] 46) Acyl coA reacts with carnitine to yield acyl carnitine derivative by the enzyme acylcarnitine transferase I

[ ] 47) Beta oxidation enzymes are located mainly in mitochondria and they require NADP and FAD coenzymes

[ ] 48) All cholesterol carbons are derived from acetyl coA

[ ] 49) Animal fed on high cholesterol diet exhibit reduced cholesterol synthesis by the liver because of inhibition of HMG coA reductase

[ ] 50) The cholesterol ring structure cannot be broken down by humans into smaller molecules for excretion

[ ] 51) Endogenous TAG is synthesized in the liver and hydrolyzed to glycerol and fatty acids by pancreatic lipase

[ ] 52) fatty acid synthase is inhibited by citrate and stimulated by malonyl coA and palmitoyl coA

[ ] 53) Acetoacetic acid and betahydroxybutyric acid are produced by the muscle and serve as an excellent fuel for other tissues

[ ] 54) HDL serves in the transport of cholesterol from the circulation into the liver where it is metabolized

[ ] 55) Bile salts are derived from cholesterol and are good emulsifying agents for fat

[ ] 56) β oxidation of short chain fatty acids is carnitine independent

[ ] 57) LCAT deficiency decreases the transport of cholesterol from the peripheral tissues to the liver

[ ] 58) Biotin is required for fatty acid synthesis

[ ] 59) Insulin is an antilipolytic hormone

[ ] 60) Refsums disease is an inherited disease in which a person can not oxidize phytanic acid

GOOD LUCK

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