

BIOCHEMISTRY

Test Bank 3

بسم الله الرحمن الرحيم



QUIZES LINK
SCAN or TAP

Lipids

Lectures 8,9 and 10

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Q1: Each of the following is true about lipids except:

- A) They usually associate by covalent interaction
- B) They are structural components of membranes
- C) They are an intracellular energy source
- D) They are poorly soluble in H₂O

Q2: The precursor of omega-3 fatty acids is:

- a) Arachidonic acid
- b) Palmitic acid
- c) Linolenic acid
- d) Stearic acid
- e) Linoleic acid

Answer: C

Q3) Which of the following statements concerning eicosanoids is CORRECT?

- a) The precursor of most eicosanoids is cholesterol.
- b) Eicosanoids are hormones transported in the blood to their site of action.
- c) Both thromboxanes and leukotrienes are types of eicosanoids.
- d) more than one statement is correct.
- e) no correct statements.

Q4) _____ Eicosanoids are oxygenated derivatives of:

- a) cholesterol
- b) glycerophospholipids
- c) polyunsaturated 20-carbon fatty acids.
- d) saturated fatty acids with less than 18 carbon atoms.

Answer:C

Q5) Linoleic acid has the following properties Except :

- a) it contains 18 Carbon atoms
- b) it contains 2 double bonds
- c) it's w3 fatty acid
- d) it's an essential Fatty acid

Answer:C

Q6) In which of the following types of lipids are two ester linkages and one amide linkage present?

- a) glycerophospholipids
- b) sphingophospholipids
- c) Sphingoglycolipids
- d) tricylglycerol

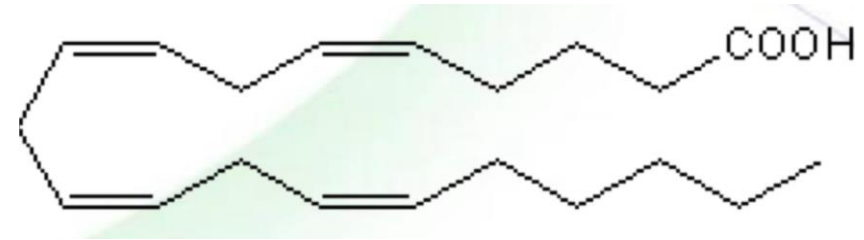
Q7) Which of the following is false about fatty acids?

- a) Melting point of fatty acids decreases with increase in degree of saturation
- b) Lipids in tissues that are subjected to cooling are more unsaturated
- c) Naturally occurring unsaturated long-chain fatty acids are nearly Trans-configuration
- d) The membrane lipids contain mostly unsaturated fatty acids

Q8) All the following are omega-6 fatty acids except:

- a) Linoleic acid
- b) α -Linolenic acid
- c) γ -Linolenic acid
- d) Arachidonic acid

Q9) All of the following sentences are CORRECT regarding the structure except :



- a) it is the precursor of eicosanoids
- b) inflammatory molecules 20 carbon
- c) It synthesizes all Eicosanoids
- d) is derived Docosacchexaenoic acid (DHA)
- e) C and D

Q10) Which of the following class of molecules are derived from arachidonic acid?

- a) Cholesterol.
- b) Glycolipids.
- c) Phospholipids.
- d) Prostaglandins.
- e) Triacylglycerols.

Answer:D

Q11) Regarding the hydrogenated vegetable oil ,The reaction with hydrogen will increase the content of:

- a) Saturated fatty acids and make the oil more liquid
- b) Saturated fatty acid and make the oil less liquid
- c) unsaturated fatty acids and make the oil less liquid
- d) unsaturated fatty acids and make the oil more liquid
- e) both types of fatty acids with no effect on the liquid state

Answer:B

Q12) If the fatty acid is esterified with an alcohol of high molecular in molecular weight instead of glycerol, The resulting compound is:

- a) Lipoprotein
- b) Plasmalogen
- c) Wax
- d) Cephalin
- e) Oil or fat

Answer:C

Q13) Arrange the following fatty acids according to their melting point starting from the largest to the smallest (oleic acid, linoleic acid, palmitic acid and palmitoleic acid)

- a) palmitic acid, oleic acid, palmitoleic acid and linoleic acid
- b) palmitic acid, palmitoleic acid, oleic acid and linoleic acid
- c) linoleic acid, palmitoleic acid, palmitic acid and oleic acid
- d) linoleic acid, palmitoleic acid, oleic acid and palmitic acid

Q14) percentage of the amount of Lipid content in Chylomicrons and the lowest lipoprotein respectively :

- a) 80% , LDL
- b) 80% , chylomicrons
- c) 99% , LDL
- d) 99% , chylomicrons

Q15) Dietary triacylglycerols are transported from intestine to hepatic and extrahepatic tissues by which of the following lipoproteins?

- a) Chylomicrons
- b) VLDL
- c) LDL
- d) HDL

Q16) Which one of the following sequences places the lipoproteins in the order of densest to least dense?

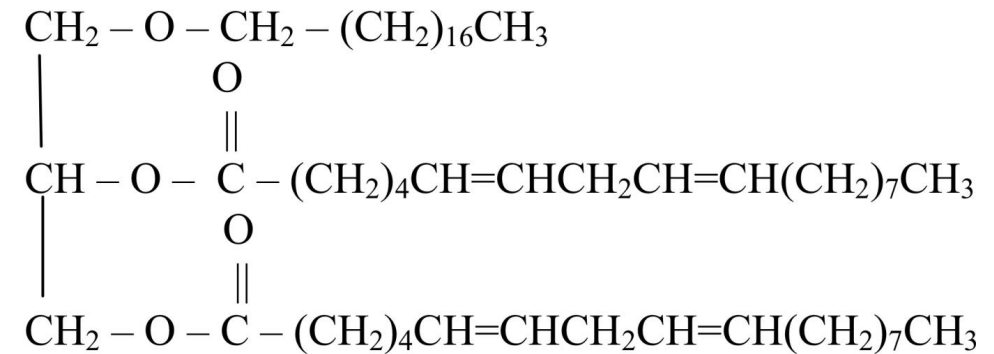
- a) HDL/VLDL/chylomicrons/LDL
- b) HDL/LDL/VLDL/chylomicrons
- c) LDL/chylomicrons/HDL/VLDL
- d) VLDL/chylomicrons/LDL/HDL
- e) LDL/chylomicrons/VLDL/HDL

Answer:B

Q17) Which of the following statements about the structure of steroids is CORRECT?

- a) It will contain a fused ring system with 3 six- membered rings and 1 five-membered ring.
- b) It will contain a fused ring system with 2 six- membered rings and 2 five-membered rings.
- c) It will contain a fused ring system with 4 six- membered rings.
- d) It will contain a linear chain of carbon atoms.

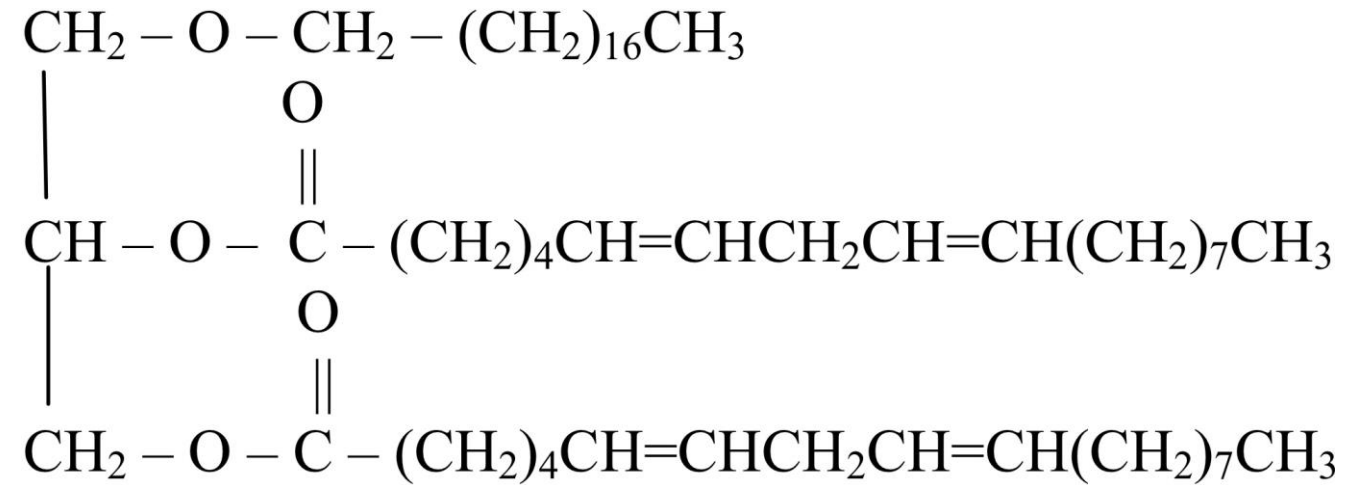
Q18) Which property does this lipid share with a typical triacylglycerol?



- a) Both contain an ether bond.
- b) Both contain a long-chain alcohol.
- c) Both are amphipathic.
- d) Both are saponifiable.

Answer:D

Q19) Which characteristic does this lipid share with a wax?



- a) Both contain a polar head.
- b) Both contain three fatty acids.
- c) Both contain one or more ester bonds.
- d) Both contain one or more carboxyl groups.

Answer:C

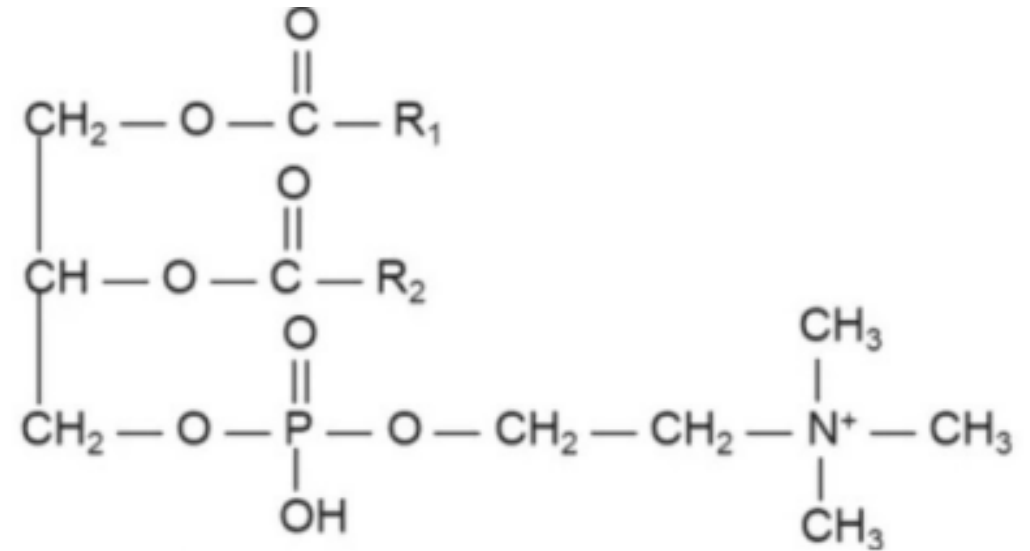
Q20) Which membrane lipid contains an amide bond?

- a) cholesterol
- b) phosphatidylserine
- c) phosphatidic acid
- d) sphingomyelin

Answer:D

Q21) All of the following sentences are CORRECT regarding the structure except:

- A) Most abundant of membrane lipids
- B) The bond formed between glycerol and phosphate group is ester bond
- C) The head group is ethanolamine
- D) is a fatty substance that is a natural emulsifier



Answer: C

Q22: What are the components of a Galactocerebroside ?

- A) Sphingosine + fatty acid + Galactose
- B) Glycerol + Fatty acids + Phosphoric acid + Galactose
- C) Glycerol + Fatty acids + Phosphoric acid Nitrogenous base + Galactose
- D) Sphingosine + fatty acid + phosphate + Galactose

Q23: Glycerol is present in:

- A) Cerebrosides
- B) Gangliosides
- C) Sphingomyelin
- D) Plasmalogen

Answer: D

Q24: Atherosclerosis can cause blood?

- A) Thinning
- B) Clotting
- C) Thickening
- D) none of these

Answer: B

Q25: Which vitamin is derived from cholesterol?

A) A

B) C

C) D

D) K

Answer: C

Q26: Which of the following statements about plasmalogens is INCORRECT ?

- A) Plasmalogens are derived from dihydroxyacetone phosphate (DHAP).
- B) Plasmalogens contain unsaturated fatty acids
- C) Plasmalogens are found predominantly in mammalian tissues.
- D) Plasmalogens are not found in brain

Q27: In the context of glycolipids, which of the following statements is true ?

- A) Globosides contain only glucose and galactose
- B) Cerebrosides are complex glycolipids with multiple oligosaccharide chains.
- C) Gangliosides are bound by cholera toxin, which facilitates their endocytosis into cells.
- D) Globosides do not contain N-acetylgalactosamine

Q28: Cholesterol CANNOT be used to synthesize?

- A) Bile acids
- B) Progesterone
- C) Cardiolipin
- D) Estrogen
- E) Vitamin D

Answer: C

Q29: Which of the following does NOT contain sphingosine:

- A) Phosphatidyl choline
- B) Globoside
- C) Sphingomyelin
- D) Ceramide
- E) Galactocerebroside

Q30: Ether bond is found in:

- A) Sphingomyelin
- B) cerebroside.
- C) lecithin.
- D) phosphatidyl serine
- E) plasmalogen

Answer: E

Q31: Creating a cholesterol ester from cholesterol results in:

- A) Facilitating of cholesterol transport via lipoproteins
- B) Cholesterol being more hydrophobic
- C) Increasing the density of lipoproteins
- D) Cholesterol being amphipathic
- E) Emulsification of cholesterol

Q32: EPA and DHA are omega 6 fatty acids.?

- A) True
- B) False

Answer: B