**FATS AND FATTY ACID**

**1. An example of a hydroxy fatty acid is:**

(A) Ricinoleic acid (B) Crotonic acid

(C) Butyric acid (D) Oleic acid

**2. An example of a saturated fatty acid is**

(A) Palmitic acid (B) Oleic acid

(C) Linoleic acid D) Erucic acid

**3. If the fatty acid is esterified with an alcohol of high molecular weight instead of glycerol, the resulting compound is:**

(A) Lipositol (B) Plasmalogen

(C) Wax (D) Cephalin

**4. A fatty acid which is not synthesized in the body and has to be supplied in the diet is :**

(A) Palmitic acid (B) Lauric acid

(C) Linolenic acid (D) Palmitoleic acid

**5. Essential fatty acid:**

(A) Linoleic acid (B) Linolenic acid

(C) Arachidonic acid (D) All these

**7. The number of double bonds in arachidonic acid is :**

(A) 1 (B) 2

(C) 4 (D) 6

**8. In humans, a dietary essential fatty acid is :**

(A) Palmitic acid (B) Stearic acid

(C) Oleic acid (D) Linoleic acid

**9. A lipid containing alcoholic amine residue is :**

(A) Phosphatidic acid (B) Ganglioside

(C) Glucocerebroside (D) Sphingomyelin

**10. Cephalin consists of:**

(A) Glycerol, fatty acids, phosphoric acid and choline

(B) Glycerol, fatty acids, phosphoric acid and ethanolamine

(C) Glycerol, fatty acids, phosphoric acid and inositol

(D) Glycerol, fatty acids, phosphoric acid and Serine

**11. In mammals, the major fat in adipose tissues is :**

(A) Phospholipid (B) Cholesterol

(C) Sphingolipids (D) Triacylglycerol

**12. Glycosphingolipids are a combination of**

(A) Ceramide with one or more sugar residues

(B) Glycerol with galactose

(C) Sphingosine with galactose

(D) Sphingosine with phosphoric acid

**13. The importance of phospholipids as constituent of cell membrane is because they possess**

(A) Fatty acids (B) Both polar and nonpolar groups

(C) Glycerol (D) Phosphoric acid

**14. In neutral fats, the unsaponificable matter includes**

(A) Hydrocarbons (B) Triacylglycerol

(C) Phospholipids (D) Cholsesterol

**15. Higher alcohol present in waxes is :**

(A) Benzyl (B) Methyl

(C) Ethyl (D) Cetyl

**24. Deterioration of food (rancidity) is due to presence of :**

(A) Cholesterol (B) Vitamin E

(C) Peroxidation of lipids D) Phenolic compounds

**27. The cholesterol molecule is :**

(A) Benzene derivative (B) Quinoline derivative

(C) Steroid (D) Straight chain acid

**120. The end products of saponification:**

(A) glycerol (B) acid

(C) soap (D) Both (A) and (C)

**130. Which of the following is a polyunsaturated fatty acid?**

(A) Palmitic acid (B) Palmitoleic acid

(C) Linoleic acid (D) Oleic acid

**131. Which of the following is omega-3 polyunsaturated**

**fatty acid?**

(A) Linoleic acid (B) -Linolenic acid

(C) -Linolenic acid (D) Arachidonic acid

**132. Triglycerides are :**

(A) Heavier than water (B) Major constituents of membranes

(C) Non-polar (D) Hydrophilic

**137. Number of carbon atoms in cholesterol is :**

(A) 17 (B) 19

(C) 27 (D) 30

**141. The nitrogenous base in lecithin is :**

(A) Ethanolamine (B) Choline

(C) Serine (D) Betaine

**142. All the following are omega-6-fatty acids except :**

(A) Linoleic acid (B) α-Linolenic acid

(C) ᵧ -Linolenic acid (D) Arachidonic acid

**143. All the following have 18 carbon atoms except :**

(A) Linoleic acid (B) Linolenic acid

(C) Arachidonic acid (D) Stearic acid

**144. A 20-carbon fatty acid among the following is :**

(A) Linoleic acid (B) α-Linolenic acid

(C) β-Linolenic acid (D) Arachidonic acid

**165. Which of the following can be synthesized in the human body if precurors are available?**

(A) Oleic acid (B) Palmitoleic acid

(C) Arachidonic acid (D) All of these

 (D) Long chain fatty acids into mitochondria

**208. Carnitine acylcarnitine translocase is present :**

(A) In the inner mitochondrial membrane

(B) In the mitochondrial matrix

(C) On the outer surface of inner mitochondrial membrane

(D) On the inner surface of inner mitochondrial membrane

**209. Net ATP generation on complete oxidationof stearic acid is :**

(A) 129 (B) 131

(C) 146 (D) 148

**231. Sphingomyelins:**

(A) Phospholipids (B) Nitrolipids

(C) Alcohols (D) None of these

**275. Predominant fatty acids in meat are :**

(A) Saturated (B) Monounsaturated

(C) Polyunsaturated (D) Mono and poly-unsaturated

**316. Esters of fatty acids with higher alcohols other than glycerol are said to be :**

(A) Waxes (B) Fats

(C) Both (A) and (B) (D) None of these

**318. Hydrolysis of fats by alkali is called :**

(A) Saponification number (B) Saponification

(C) Both (A) and (B) (D) None of these

**321. Lecithin contains a nitrogenous base named as :**

(A) Ethanolamine (B) Choline

(C) Inositol (D) All of these

**323. Lecithins are soluble in ordinary solvents except :**

(A) Benzene (B) Ethyl alcohol

(C) Methyl alcohol (D) Acetone

**324. Lecithins combine with protein to form :**

(A) Phosphoprotein (B) Mucoprotein

**341. The number of carbon atoms in decanoic acid present in butter:**

(A) 6 (B) 8

(C) 10 (D) 12

**342. Arachidonic acid contains the number of double bonds:**

(A) 2 (B) 3

(C) 4 (D) 5

**344. The Iodine number of essential fatty acids of vegetable oils:**

(A) High (B) Very high (C) Very low (D) Low

**345. Cholesterol is a**

(A) Animal sterol (B) M.F. C27 H46O

(C) 5 methyl groups (D) All of these

**346. Waxes contain higher alcohols named as :**

(A) Methyl (B) Ethyl

(C) Phytyl (D) Cetyl

**367. Which of the following are classified as essential fatty acids?**

(A) Arachidonic acid (B) Oleic acid

(C) Acetic acid (D) Butyric acid

**370. Biological functions of lipids include**

(A) Source of energy (B) Insulating material

(C) Maintenance of cellular integrity (D) All of these

**371. Saponification number is :**

(A) mg of KOH required to saponify one gm of fat or oil

(B) mg of KOH required to neutralize free fatty acids of one gms of fat

(C) mg of KOH required to neutralize the acetic acid obtained by saponification of one gm of fat after it has been acetylated

(D) None of these

**372. Lipids have the following properties:**

(A) Insoluble in water and soluble in fat solvent

(B) High energy content

(C) Structural component of cell membrane

(D) All of these

**374. Which of the following is not an unsaturated fatty acid?**

(A) Oleic acid (B) Stearic acid

(C) Linaoleic acid (D) Palmitic acid

**379. Saponification:**

(A) Hydrolysis of fats by alkali

(B) Hydrolysis of glycerol by liposes

(C) Esterification

(D) Reduction

**382. Saponification number indicates :**

(A) Unsaturation in fat

(B) Average M.W of fatty acid

(C) Acetyl number

(D) Acid number

**385. Maximum energy produced by :**

(A) Fats (B) Carbohydrates

(C) Proteins (D) Nucleic acids

**386. Lecithins are composed of**

(A) Glycerol + Fatty acids + Phosphoric acid + Choline

(B) Glycerol + Fatty acids + Phosphoric acid +Ethanolamine

(C) Glycerol + Fatty acids + Phosphoric acid +Serine

(D) Glycerol + Fatty acids + Phosphoric acid +Beaine

**387. Sphingomyelins are composed of fatty acids, phosphoric acid and :**

(A) Sphingosine and choline (B) Glycerol and sphingosine

(C) Glycerol and Serine (D) Glycerol and Choline

**390. Which of the following is a hydroxy fatty acid?**

(A) Oleic acid (B) Ricinoleic acid

(C) Caproic acid (D) Stearic acid/

**395. A fatty acid which is not synthesized in human body and has to be supplied in the diet:**

(A) Palmitic acid (B) Oleic acid

(C) Linoleic acid (D) Stearic acid

**396. In cephalin, choline is replaced by :**

(A) Serine (B) Ethanolamine

(C) Betaine (D) Sphingosine

**398. Amphiphatic lipids are :**

(A) Hydrophilic (B) Hydrophobic

(C) Both (A) and (B) (D) Lipophilic

**399. Which of the following is not essential fatty acid?**

(A) Oleic acid (B) Linoleic acid

(C) Arachidonic acid (D) Linolenic acid

**400. The calorific value of lipid is :**

(A) 4.0 Kcal/gm (B) 6.0 Kcal/gm

(C) 9.0 Kcal/gm (D) 15 Kcal/gm

**404. Phosphatidic acid on hydrolysis yields :**

(A) Glycerol, fatty acids, phosphoric acid, choline

(B) Glycerol, fatty acids, phosphoric acid

(C) Glycerol, fatty acids, phosphoric acid,Glucose

(D) Sphingol, fatty acids, phosphoric acid

**405. The maximum number of double bonds present in essential fatty acid is :**

(A) 1 (B) 2

(C) 3 (D) 4

**418. A fatty acid not synthesized in man is**

(A) Oleic (B) Palmitic

(C) Linoleic (D) Stearic

**431. All long chain fatty acids with even number of carbon atoms are oxidized to a pool of \_\_\_\_\_\_\_\_\_ by** β **-oxidation.**

(A) CO2 (B) Propionic acid

(C) Acetic acid (D) Acetyl CoA

**435. Cholesterol molecule has \_\_\_\_\_\_\_ carbon atoms.**

(A) 27 (B) 21

(C) 15 (D) 12

**494. All the following statements describing lipids are true except :**

(A) They usually associate by covalent interactions

(B) They are structurally components of membranes

(C) They are an intracellular energy source

(D) They are poorly soluble in H2O

**502. High iodine value of a lipid indicates**

(A) Polymerization (B) Carboxyl groups

(C) Hydroxyl groups (D) Unsaturation

**525. Fats are solids at :**

(A) 10°C (B) 20°C

(C) 30°C (D) 40°C

**526. Esters of fatty acids with higher alcohol other than glycerol are called as :**

(A) Oils (B) Polyesters

(C) Waxes (D) Terpenoids

**546. A fatty acid which is not synthesized in human body and has to be supplied in the diet is:**

(A) Palmitic acid (B) Oleic acid

(C) Linoleic acid (D) Stearic acid

**548. Which of the following is not essential fatty acids?**

(A) Oleic acid (B) Linoleic acid

(C) Arachidonic acid (D) Linolenic acid

**549. The caloric value of lipids is :**

(A) 6.0 Kcal/g (B) 9.0 Kcal/g

(C) 15.0 Kcal/g (D) 12.0 Kcal/g

**550. The maximum number of double bonds present in essential fatty acid is :**

(A) 2 (B) 3

(C) 4 (D) 5

**555. When choline of lecithin is replaced by ethanolamine, the product is :**

(A) Spingomyelin (B) Cephalin

(C) Plasmalogens (D) Lysolecithin

**556. Which of the following is a hydroxyl fatty acid?**

(A) Oleic Acid (B) Ricinoleic acid

(C) Caproic (D) Arachidonic acid

 β β β α α ω ω

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**ANSWERS**

1. A 2. A 3. C 4. C 5. D 6. A

7. C 8. D 9. D 10. B 11. D 12. A

13. B 14. A 15. D 16. B 17. B 18. D

19. C 20. D 21. C 22. A 23. D 24. C

25. A 26. A 27. C 28. B 29. B 30. D

31. A 32. A 33. C 34. A 35. A 36. C

37. D 38. A 39. B 40. C 41. D 42. A

43. B 44. C 45. D 46. A 47. D 48. B

49. C 50. C 51. A 52. B 53. D 54. B

55. C 56. D 57. A 58. B 59. D 60. C

61. A 62. A 63. A 64. D 65. B 66. A

67. A 68. B 69. A 70. A 71. A 72. B

73. A 74. D 75. B 76. A 77. B 78. A

79. B 80. C 81. C 82. A 83. A 84. A

85. B 86. B 87. A 88. B 89. D 90. C

91. D 92. B 93. A 94. D 95. B 96. A

97. B 98. D 99. A 100. A 101. C 102. B

103. A 104. B 105. C 106. C 107. B 108. A

109 B 110. C 111. D 112. A 113. A 114. A

115. D 116. A 117. A 118. D 119. C 120. D

121. D 122. A 123. A 124. D 125. B 126. A

127. B 128. A 129. B 130. C 131. B 132. C

133. C 134. B 135. D 136. A 137. C 138. C

139. C 140. B 141. B 142. B 143. C 144. D

145. B 146. D 147. C 148. B 149. A 150. A

151. A 152. A 153. C 154. B 155. D 156. D

157. D 158. D 159. D 160. C 161. B 162. B

163. D 164. C 165. D 166. B 167. D 168. B

169. C 170. A 171. D 172. C 173. A 174. B

175. B 176. C 177. D 178. B 179. B 180. C

181. C 182. B 183. C 184. D 185. D 186. D

187. C 188. B 189. D 190. B 191. C 192. D

193. C 194. C 195. A 196. D 197. B 198. D

199. A 200. C 201. A 202. D 203. C 204. B

205. D 206. A 207. D 208. A 209. C 210. C

211. B 212. A 213. C 214. D 215. D 216. C

217. C 218. D 219. A 220. C 221. D 222. C

223. D 224. D 225. B 226. D 227. D 228. A

229. D 230. B 231. A 232. A 233. D 234. B

235. C 236. C 237. D 238. C 239. B 240. D

241. B 242. D 243. A 244. C 245. C 246. A

108 MCQs IN BIOCHEMISTRY

247. C 248. C 249. A 250. A 251. C 252. A

253. A 254. B 255. C 256. A 257. C 258. A

259. A 260. A 261. B 262. A 263. C 264. A

265. D 266. A 267. D 268. C 269. C 270. C

271. A 272. C 273. C 274. A 275. A 276. A

277. D 278. C 279. A 280. A 281. D 282. C

283. B 284. C 285. A 286. C 287. A 288. C

289. A 290. D 291. C 292. B 293. C 294. B

295. C 296. B 297. B 298. C 299. B 300. A

301. B 302. C 303. B 304. C 305. C 306. A

307. A 308. B 309. D 310. D 311. D 312. A

313. C 314. A 315. D 316. A 317. C 318. B

319. D 320. A 321. B 322. C 323. D 324. C

325. B 326. A 327. B 328. C 329. B 330. C

331. A 332. C 333. A 334. A 335. A 336. D

337. B 338. A 339. A 340. B 341. C 342. C

343. A 344. D 345. D 346. D 347. A 348. C

349. D 350. B 351. A 352. B 353. D 354. B

355. C 356. C 357. A 358. D 359. C 360. B

361. A 362. C 363. D 364. B 365. A 366. D

367. A 368. D 369. C 370. D 371. C 372. D

373. B 374. B 375. D 376. C 377. A 378. C

379. A 380. B 381. D 382. B 383. A 384. A

385. A 386. A 387. A 388. C 389. B 390. B

391. B 392. D 393. C 394. D 395. C 396. B

397. D 398. C 399. A 400. C 401. B 402. D

403. C 404. B 405. D 406. B 407. C 408. D

409. C 410. C 411. C 412. B 413. B 414. D

415. A 416. D 417. D 418. C 419. D 420. B

421. A 422. C 423. B 424. C 425. B 426. A

427. C 428. B 429. A 430. C 431. D 432. B

433. C 434. B 435. A 436. C 437. A 438. C

439. C 440. B 441. C 442. D 443. B 444. A

445. D 446. B 447. D 448. B 449. C 450. A

451. A 452. B 453. B 454. D 455. C 456. A

457. B 458. C 459. B 460. B 461. D 462. B

463. C 464. B 465. A 466. D 467. A 468. A

469. B 470. D 471. B 472. D 473. B 474. D

475. D 476. B 477. D 478. C 479. A 480. D

481. B 482. B 483. D 484. A 485. C 486. D

487. B 488. B 489. A 490. B 491. C 492. B

493. A 494. A 495. D 496. D 497. C 498. C

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499. B 500. D 501. A 502. D 503. D 504. A

505. C 506. B 507. B 508. D 509. D 510. D

511. D 512. A 513. A 514. A 515. D 516. D

517. C 518. A 519. B 520. C 521. B 522. A

523. C 524. B 525. B 526. C 527. D 528. C

529. B 530. B 531. D 532. C 533. B 534. A

535. D 536. B 537. C 538. D 539. B 540. D

541. D 542. B 543. A 544. C 545. D 546. C

547. D 548. A 549. B 550. C 551. B 552. B

553. D 554. D 555. B 556. B 557. B