APPROVED
at the Chair meeting of 12.12.25, minute no.5,
Head of the Biochemistry and Clinical
Biochemistry Chair,
MD, PhD., prof., Olga TAGADIUC
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BIOCHEMISTRY EXAM ITEMS

for the students of the Faculty of Medicine 2
(1st year, 1st semester, winter session, 2025-2026):

1 In which molecules hydrogen bonds can form?

2 Select from listed microelements the metals:

3 Select the biomacromolecules:

4 Select the biomacromolecules:

5 Select the biomolecules which contain the functional group –COOH:

6 Select the micromolecules:

7 Select the micromolecules:

8 Select which statements are correct for the chemical compound: H2N-CH2-CH2-OH

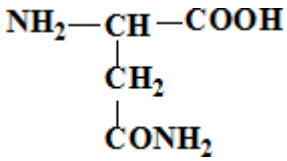
9 Which amino acid contains sulphur?

10 Which biomolecules contain sulphur?

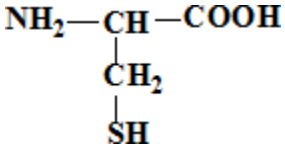
11 Which biomolecules contain the functional group –NH2?

12 Which biomolecules contains phosphorus?

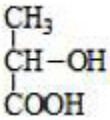
13 Which functional groups are present in asparagine?



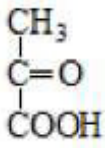
14 Which functional groups are present in cysteine?



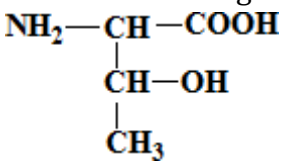
15 Which functional groups are present in lactic acid?



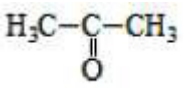
16 Which functional groups are present in pyruvic acid?



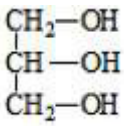
17 Which functional groups are present in threonine?



18 Which is the class of chemical compounds acetone belongs to?

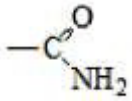


19 Which is the class of chemical compounds glycerol belongs to?

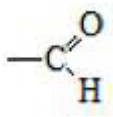


20 Which is the most important organogenic element?

21 Which is the name of the fuctional group



22 Which is the name of the functional group



23 Which is the name of the functional group >C=O?

24 Which is the name of the functional group –COOH?

25 Which is the name of the functional group –NH2?

26 Which is the name of the functional group –OH?

27 Which is the name of the functional group –SH?

28 Which listed bioelement is organogenic?

29 Which statement referring to nitrogen is correct?

30 Which statements are correct for ionic bond?

31 Which statements are correct for van-der-Waals forces?

32 Which statements for hydrogen bond are correct?

33 Select the acidic amino acid:

34 Select the acidic amino acid:

35 Select the acidic amino acids:

36 Select the amino acid that contains imidazol group:

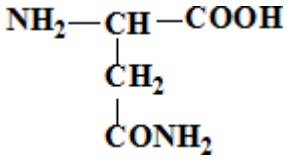
37 Select the amino acid that contains the guanidino functional group:

38 Select the amino acid that contains the hydroxyl functional group:

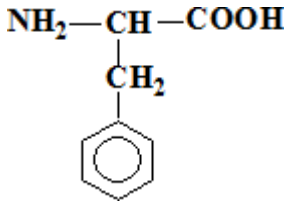
39 Select the amino acid that contains the indol functional group:

40 Select the basic amino acids:

41 Select the correct statement about the chemical compound:



42 Select the correct statement about the chemical compound:



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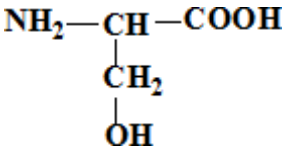

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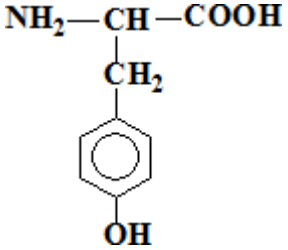

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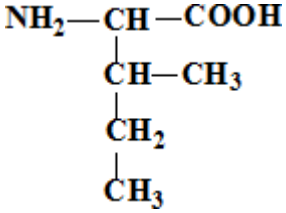
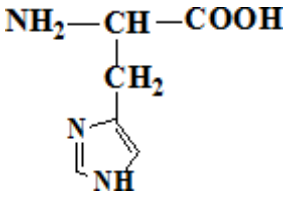


46 Select the correct statements about the chemical compound:



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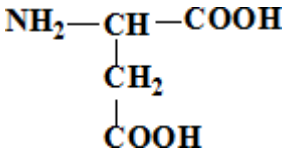

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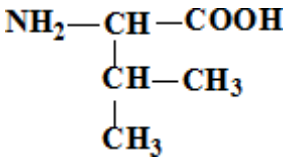

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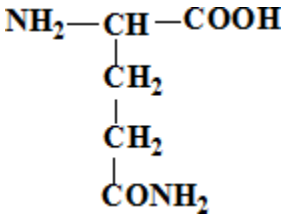

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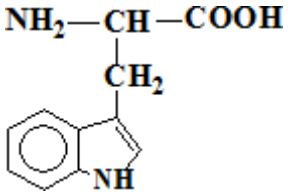

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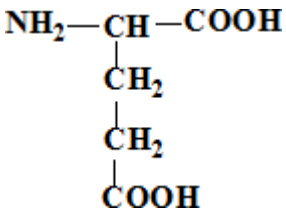

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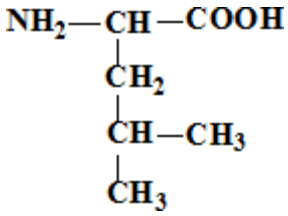

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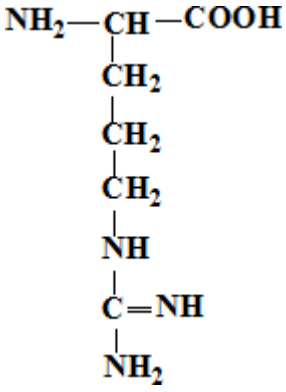

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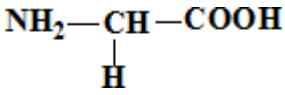

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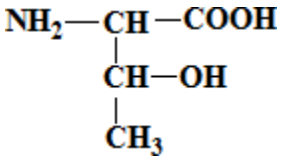
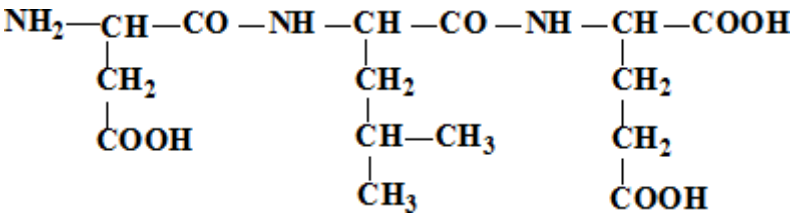
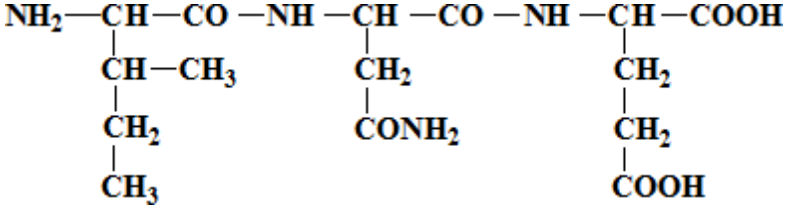


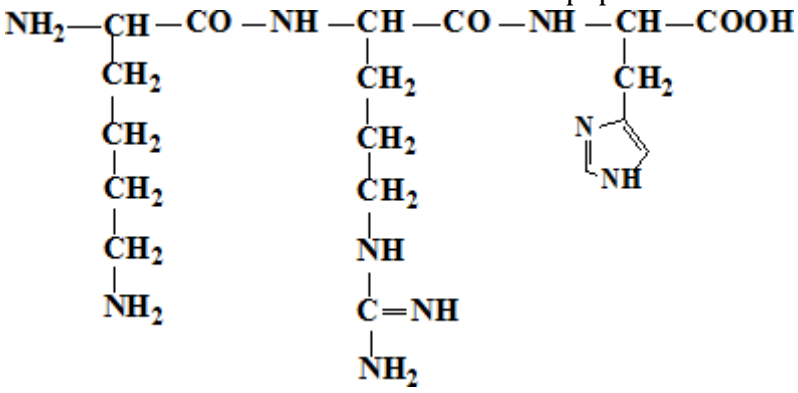
56 Select the correct statements about the tripeptide:



57 Select the correct statements about the tripeptide:



58 Select the correct statements about the tripeptide:



59 Select the cyclic amino acid:

60 Select the cyclic amino acid:

61 Select the essential amino acid:

62 Select the hydrophobic non-polar amino acids:

63 Select the hydroxy amino acid:

64 Select the imino acid:

65 Select the monoaminodicarboxylic amino acid:

66 Select the neutral amino acid:

67 Select the non-essential amino acid:

68 What compound is the structural unit of simple proteins?

69 What compounds contain nitrogen?

70 What type of amino acids is present in proteins?

71 Which amino acid has the isoelectric point in basic media?

72 Which amino acid has the isoelectric point in basic media?

73 Which compounds contain free amino group (NH2)?

74 Which compounds contain free carboxylic groups (-COOH)?

75 Classification of proteins - select the correct statement:

76 Globulins - select the correct statement:

77 Histones- select the correct statements:

78 Peptide bond has the following properties:

79 Protein functions are:

80 Select the correct statement about the tertiary structure of proteins:

81 Select the correct statements about hemoglobin (Hb):

82 Select the correct statements about the primary structure of proteins:

83 Select the correct statements about the secondary structure of protein - β-structure:

84 Select the correct statements about the secondary structure of protein - α-helix:

85 Select the correct statements regarding albumins:

86 Select the correct statements:

87 Select the oligomers:

88 The primary structure of proteins - select the correct statement:

89 The quaternary structure of proteins - select the correct statements:

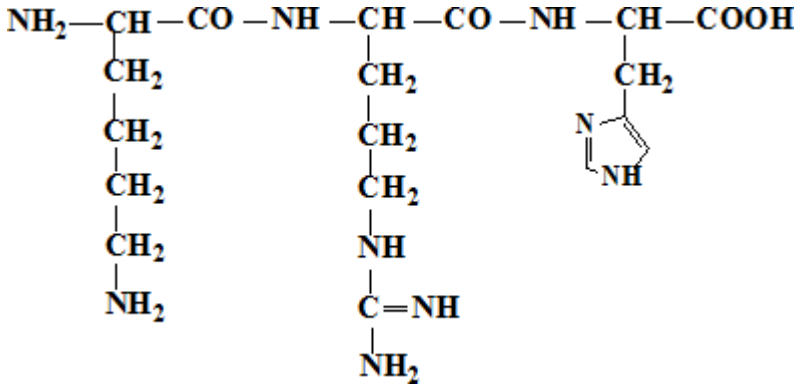
90 The secondary structure of proteins - select the correct statement:

91 The tertiary structure of proteins - select the correct statements:

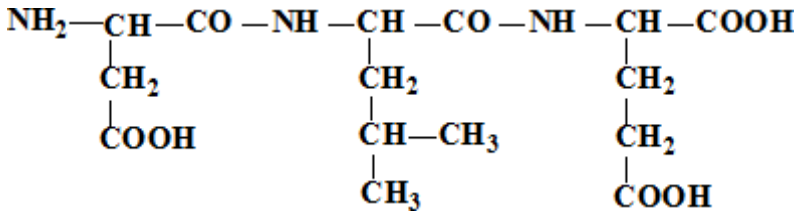
92 Which of the following compounds are calcium-binding proteins?

93 Conditions for protein precipitation are:

94 Determine the isoelectric point (pI) of the following tripeptide:



95 Determine the isoelectric point (pI) of the following tripeptide:



96 Isoelectric point (pI) - select the correct statement:

97 Protein colloidal solutions have the following properties:

98 Protein salting-out is:

99 Protein solubility - select the correct statement:

100 Stability of the protein in a solution is determined by:

101 The total charge of a protein depends on:

102 What functional groups of proteins have acidic properties?

103 What functional groups of proteins have basic properties?

104 What happens during the denaturation of protein molecule?

105 Active center (AC) of an enzyme - select the correct statements:

106 Active center of an enzyme is:

107 Allosteric center - select the correct statement:

108 Differences of enzymes from inorganic catalysts are:

109 Hydrolyses - select the correct statement:

110 International Unite of enzyme activity is the amount of:

111 Isoenzymes - select the correct statements:

112 Isomerases - select the correct statement:

113 Katal is the amount of:

114 Ligases - select the correct statements:

115 Lyases - select the correct statement:

116 NAD+ coenzyme - select the correct statement:

117 NADP+ coenzyme - select the correct statement:

118 NADP+ coenzyme - select the correct statement:

119 Oxido-reductases - properties:

120 Select correct statements regarding the cofactors:

121 Select the chemical process in which is involved vitamin C:

122 Select the correct statement about allosteric enzymes:

123 Select the correct statement about coenzymes - derivatives of vitamin B2:

124 Select the correct statement about the chemical nature of enzymes:

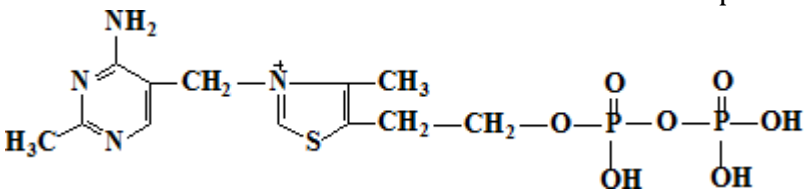
125 Select the correct statements about coenzymes FAD and FMN:

126 Select the correct statements about conjugated enzymes:

127 Select the correct statements about LDH isoenzymes:

128 Select the correct statements about succinate dehydrogenase (SDH) and its activity regulation:

129 Select the correct statements about the chemical compound:



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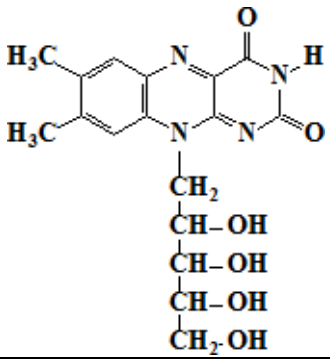

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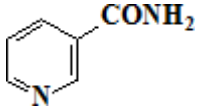
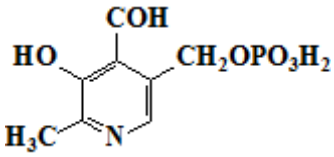


132 Select the correct statements about the chemical structure:



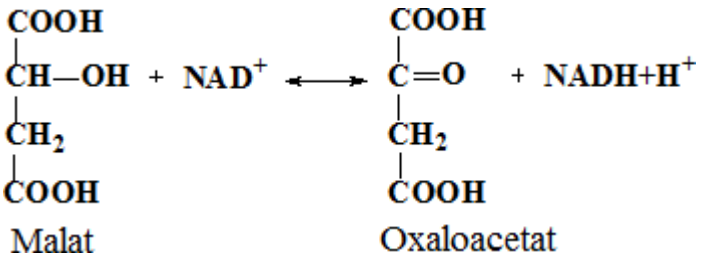
133 Select the correct statements about the cofactors:

134 Select the correct statements about the enzyme classification:

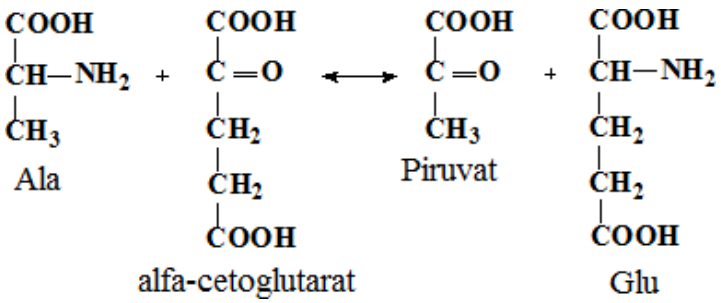
135 Select the correct statements about the enzyme mechanism of action:

136 Select the correct statements about the enzyme mechanism of action:

137 Select the correct statements about the enzyme that catalyzes the chemical reaction:



138 Select the correct statements about the enzyme that catalyzes the chemical reaction:



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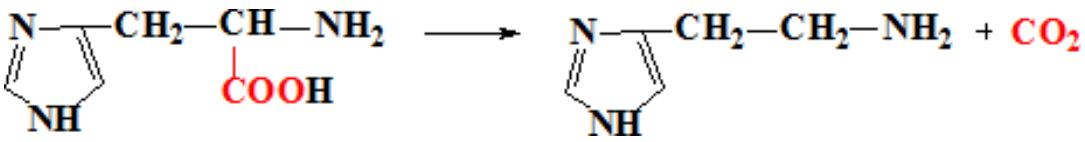

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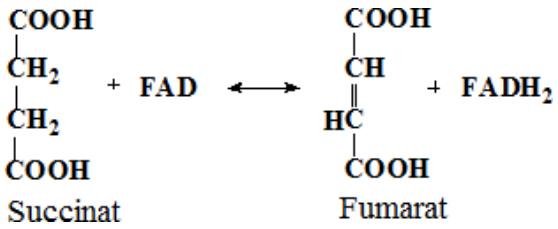

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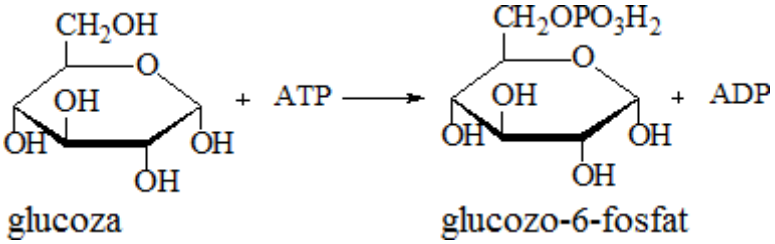

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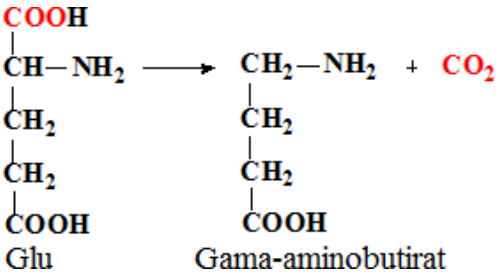

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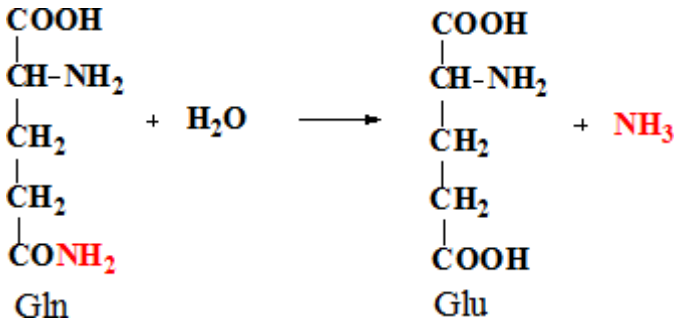

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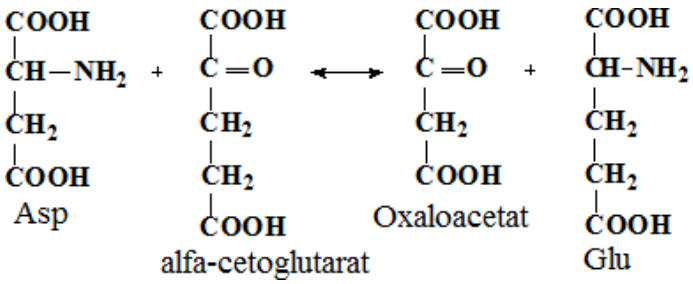

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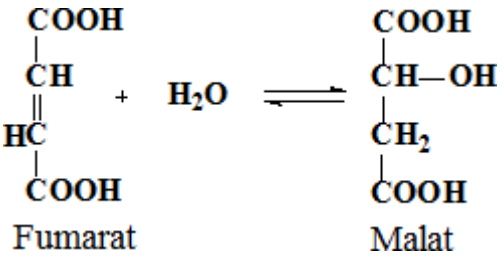
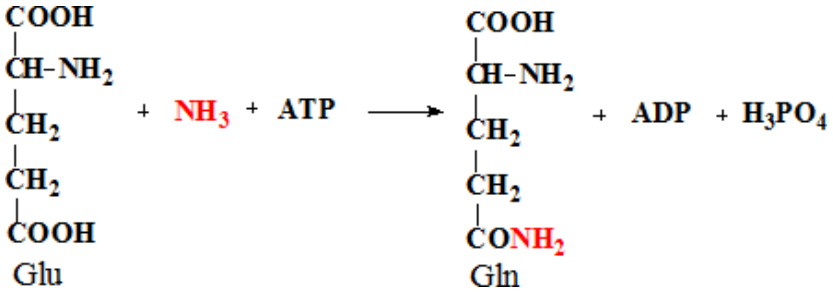


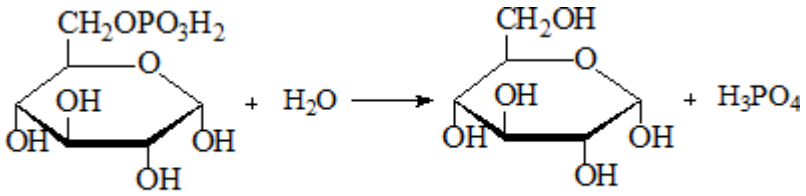
Fumarat Malat

146 Select the correct statements about the enzyme that catalyzes the chemical reaction:



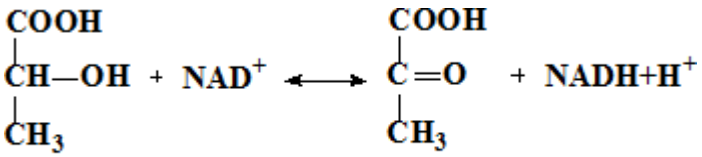
Glu Gln

147 Select the correct statements about the enzyme that catalyzes the chemical reaction:



glucozo-6-fosfat glucoza

148 Select the correct statements about the enzyme that catalyzes the chemical reaction:



Lactat Piruvat

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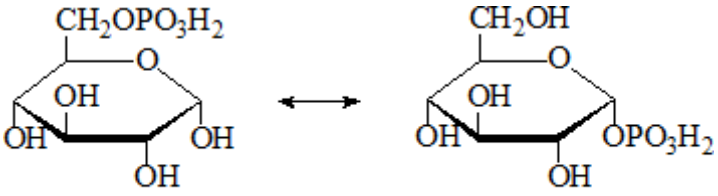
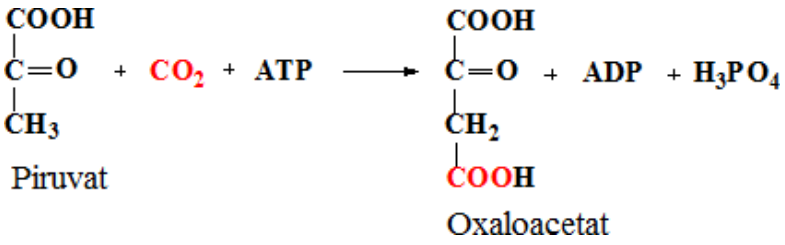


glucozo-6-fosfat glucozo-1-fosfat

150 Select the correct statements about the enzyme that catalyzes the chemical reaction:



151 Select the correct statements about the substrate:

152 Select the statement that characterize enzymes:

153 The common features of enzymes and nonenzymatic catalysts are:

154 The following functional groups can be in the active center of enzymes:

155 The properties that are common for all enzymes:

156 The specific activity of enzyme is the amount of:

157 The specificity of enzymes - select the correct statement:

158 Transferases- select the correct statement:

159 What enzyme has stereochemical specificity?

160 Mechanisms of enzyme activation are:

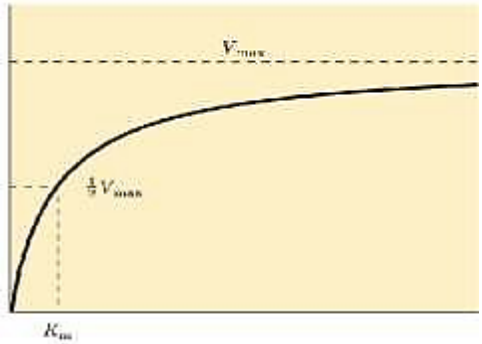
161 Non-competitive inhibition feature is:

162 Select the correct statement about competitive inhibition:

163 Select the correct statement about pepsin and the mechanism of its activity regulation:

164 Select the correct statement about the allosteric inhibition:

165 Select the correct statements about the presented image:



166 The activation of the enzymes is possible by:

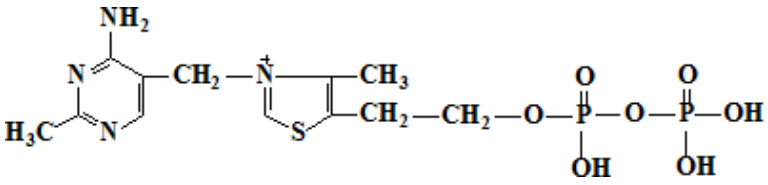
167 The influence of pH on the enzyme activity:

168 The specific inhibition of enzymes is possible by:

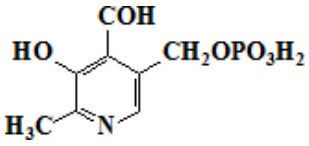
169 Termolability of enzymes - select the correct statements:

170 What is the specific feature of competitive inhibition (CI)?

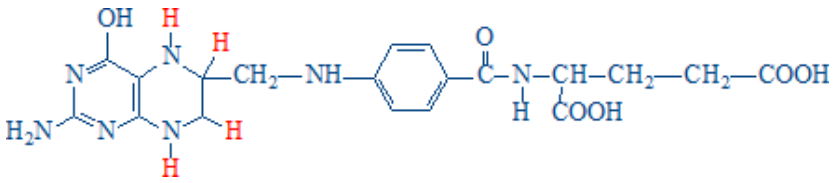
171 Select chemical processes that involves chemical compound:



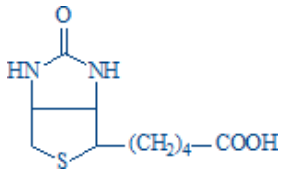
172 Select chemical processes that involves chemical compound:



173 Select the chemical process that involves chemical compound:



174 Select the chemical process that involves chemical compound:



175 Select the chemical process that involves coenzyme A:

176 Select the chemical process that involves vitamin C:

177 Choose the correct statement about mRNA:

178 Choose the correct statement about nucleosome:

179 Choose the correct statement about rRNA:

180 Choose the correct statement about tRNA:

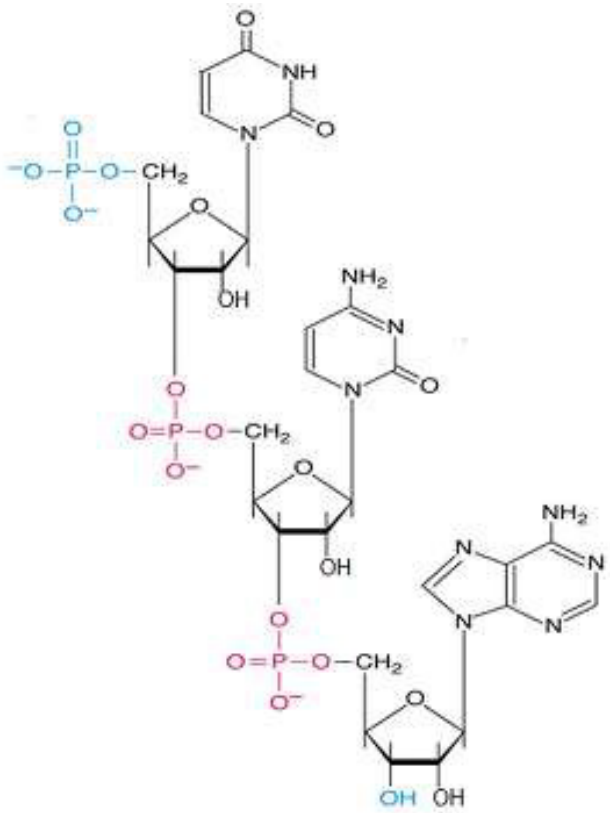
181 Choose the correct statements about DNA nucleotide composition - complementarity laws:

182 Choose the correct statements about RNA:

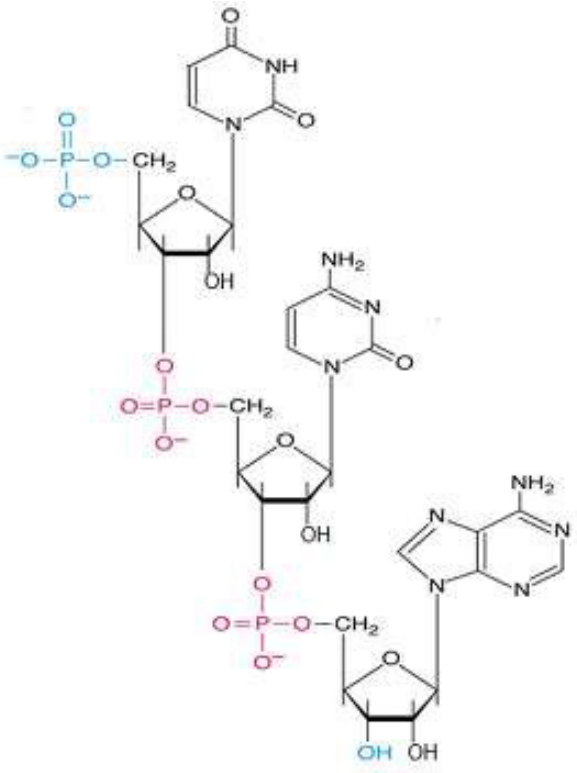
183 Choose the correct statements about the secondary structure of DNA:

184 Choose the correct statements about the secondary structure of DNA:

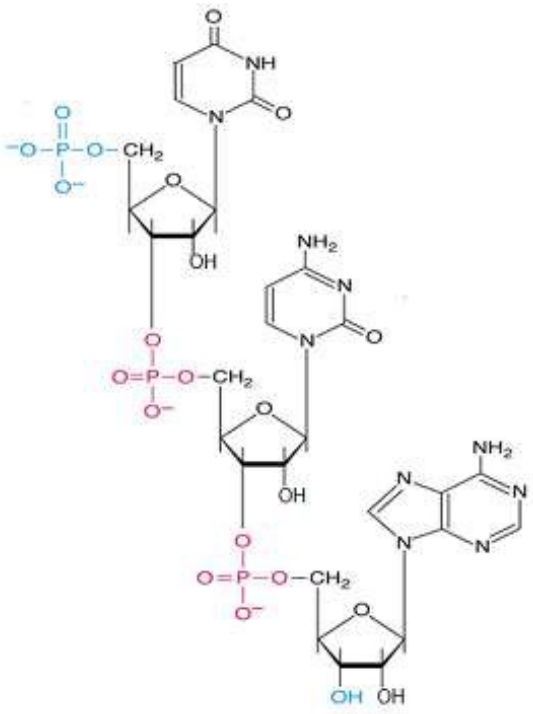
185 Choose the correct statements about the structure shown in the picture:



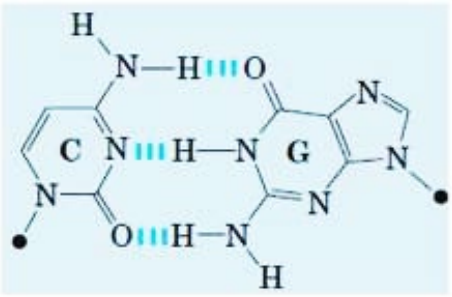
186 Choose the correct statements about the structure shown in the picture:



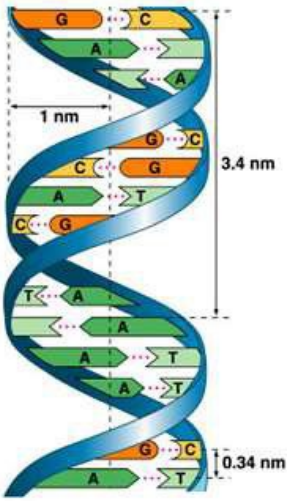
187 Choose the correct statements about the structure shown in the picture:



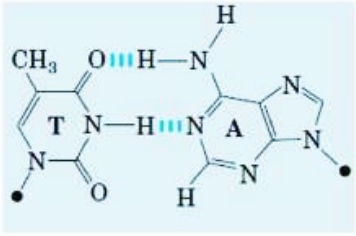
188 Choose the correct statements about the structure shown in the picture:



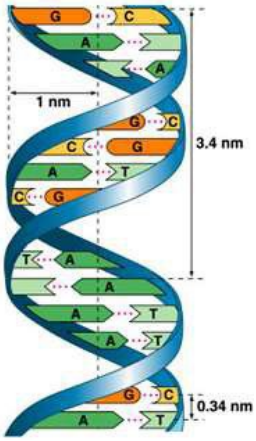
189 Choose the correct statements about the structure shown in the picture:



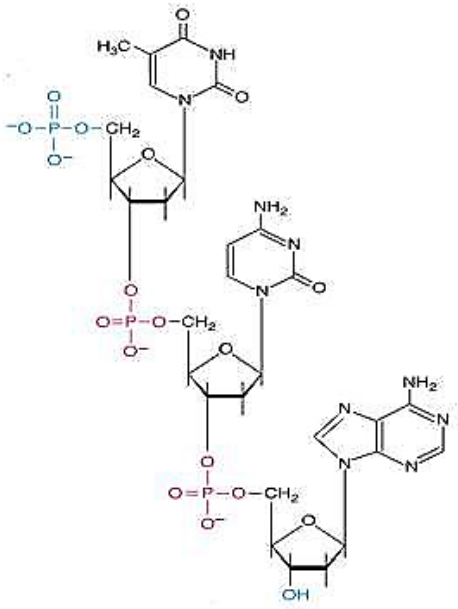
190 Choose the correct statements about the structure shown in the picture:



191 Choose the correct statements about the structure shown in the picture:



192 Choose the correct statements about the structure shown in the picture:

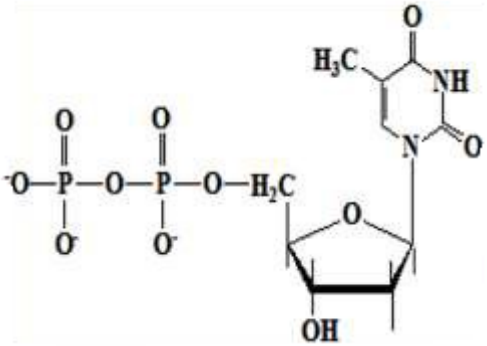


193 Choose the type of chemical bond that is not present in nucleic acids:

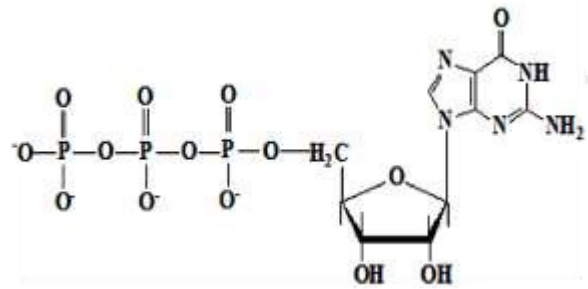
194 Histones - select the correct statements:

195 Select the correct statement about DNA structure:

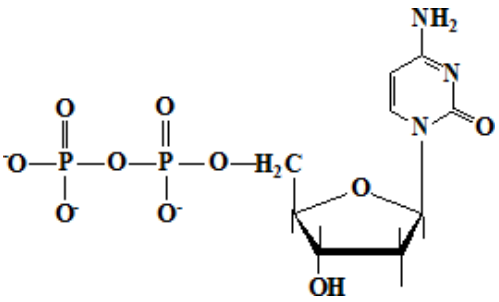
196 Select the correct statement about the chemical structure:



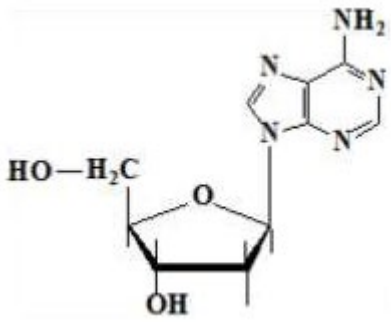
197 Select the correct statement about the chemical structure:



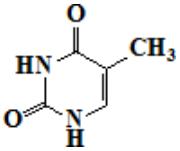
198 Select the correct statement about the chemical structure:



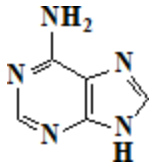
199 Select the correct statement about the chemical structure:



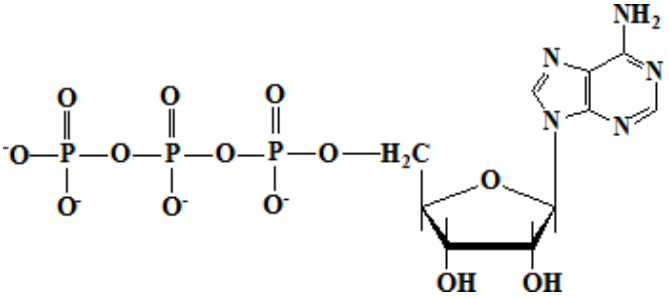
200 Select the correct statement about the chemical structure:



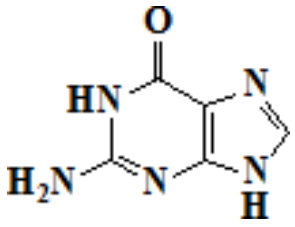
201 Select the correct statements about the chemical structure:



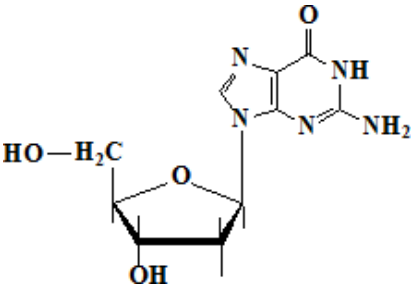
202 Select the correct statements about the chemical structure:



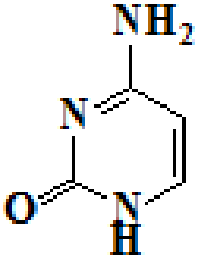
203 Select the correct statements about the chemical structure:



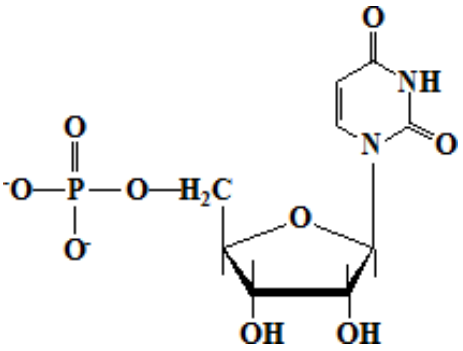
204 Select the correct statements about the chemical structure:



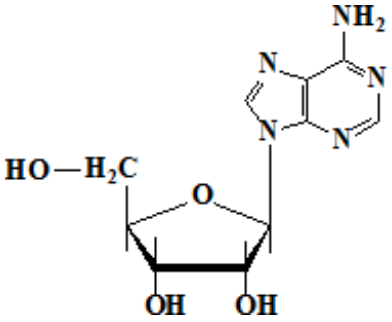
205 Select the correct statements about the chemical structure:



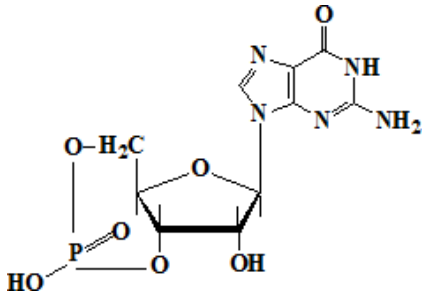
206 Select the correct statements about the chemical structure:



207 Select the correct statements about the chemical structure:



208 Select the correct statements about the chemical structure:



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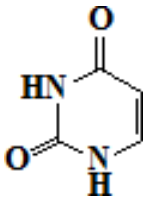
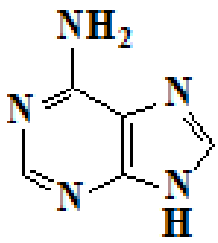
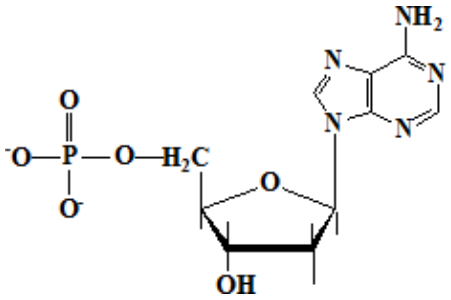


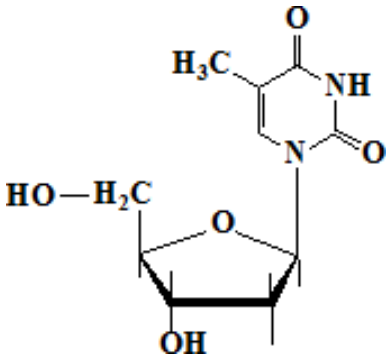
210 Select the correct statements about the chemical structure:



211 Select the correct statements about the chemical structure:



212 Select the correct statements about the chemical structure:



213 Structural components of DNA are:

214 Structural components of RNA are:

215 The major nitrogenous bases in DNA are:

216 The major nitrogenous bases in DNA are:

217 The major nitrogenous bases in RNA are:

218 The secondary structure of DNA:

219 Choose the substrate phosphorylation reaction from the Krebs cycle:

220 Metabolism regulation - select the correct statements:

221 Which of the listed substances are high-energy compounds?

222 Alpha-ketoglutarate dehydrogenase complex - select the correct statements:

223 Anabolism - what statement characterizes it?

224 Anaplerotic reactions - choose the correct statement:

225 ATP hydrolysis types - select the correct reactions:

226 Bioenergetics. What statements characterize it?

227 Biological oxidation:

228 Catabolic and anabolic pathways - choose the correct statements:

229 Catabolism - which statement is characterizing it?

230 Choose the anaplerotic reactions:

231 Choose the coenzyme of the pyruvate dehydrogenase complex:

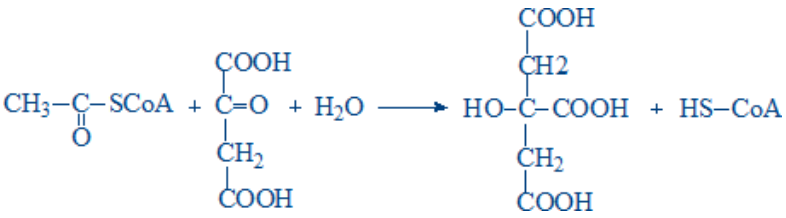
232 Choose the coenzyme that is necessary for normal functioning of the Krebs cycle enzymes:

233 Choose the coenzymes of the pyruvate dehydrogenase complex:

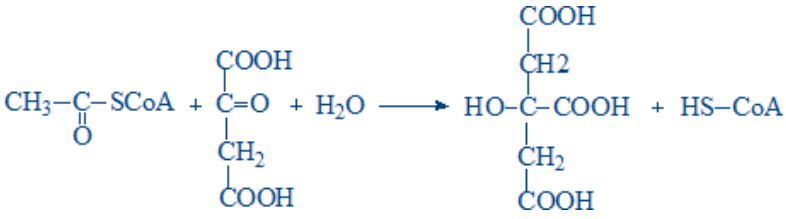
234 Choose the coenzymes that are necessary for normal functioning of the Krebs cycle enzymes:

235 Choose the correct statements about the metabolic pathways:

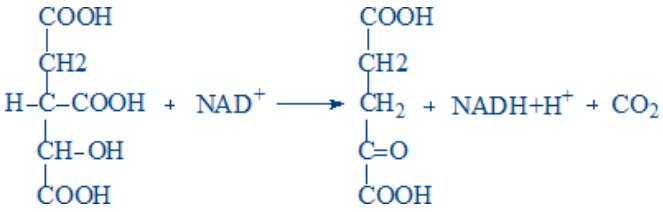
236 Choose the correct statements regarding the reaction:



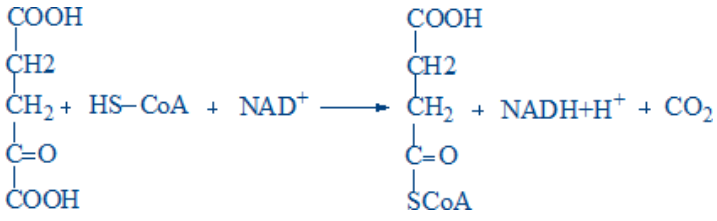
237 Choose the correct statements regarding the reaction:



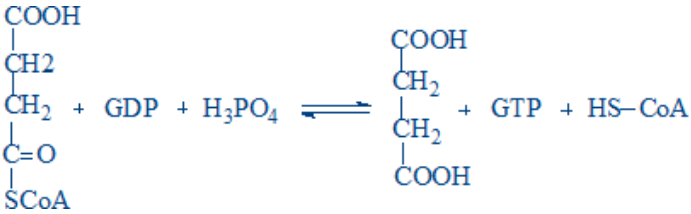
238 Choose the correct statements regarding the reaction:



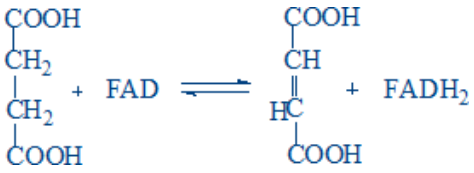
239 Choose the correct statements regarding the reaction:



240 Choose the correct statements regarding the reaction:



241 Choose the correct statements regarding the reaction:



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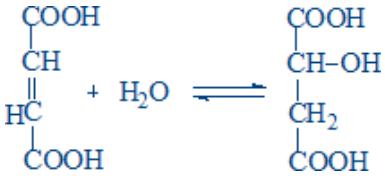
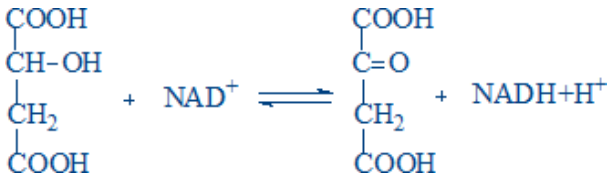
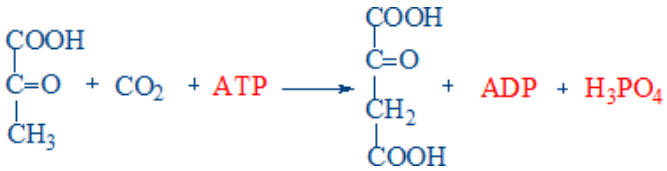


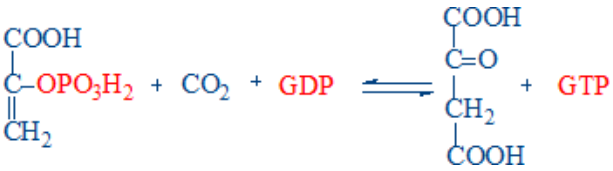
243 Choose the correct statements regarding the reaction:



244 Choose the correct statements regarding the reaction:



245 Choose the correct statements regarding the reaction:



246 Choose the FAD-dependent dehydrogenases (DH):

247 Choose the metabolism functions:

248 Choose the NAD+-dependent dehydrogenases (DH):

249 Choose the NAD+-dependent dehydrogenases (DH):

250 Choose the regulatory enzymes of the Krebs cycle:

251 Choose the substrate phosphorylation reaction from the Krebs cycle:

252 Choose the vitamin that is a structural element of a coenzyme from the pyruvate dehydrogenase complex:

253 Choose the vitamin that is necessary for normal activity of Krebs cycle enzymes:

254 Choose the vitamins that are components of the coenzymes from the pyruvate dehydrogenase complex:

255 Choose the vitamins that are necessary for normal activity of Krebs cycle enzymes:

256 Citrate synthase - select the correct statements:

257 During the hydrolysis of the following compound is released more energy than during the hydrolysis of one high-energy bond of ATP:

258 During the hydrolysis of the following compounds is released more energy than during the hydrolysis of one high-energetic bond of ATP:

259 Energetic state of the cell - select the correct statements:

260 Energy produced during ATP hydrolysis is determined by:

261 Free energy (ΔG) - select the correct statements:

262 Krebs cycle - choose the correct statements:

263 Krebs cycle - select the correct statements:

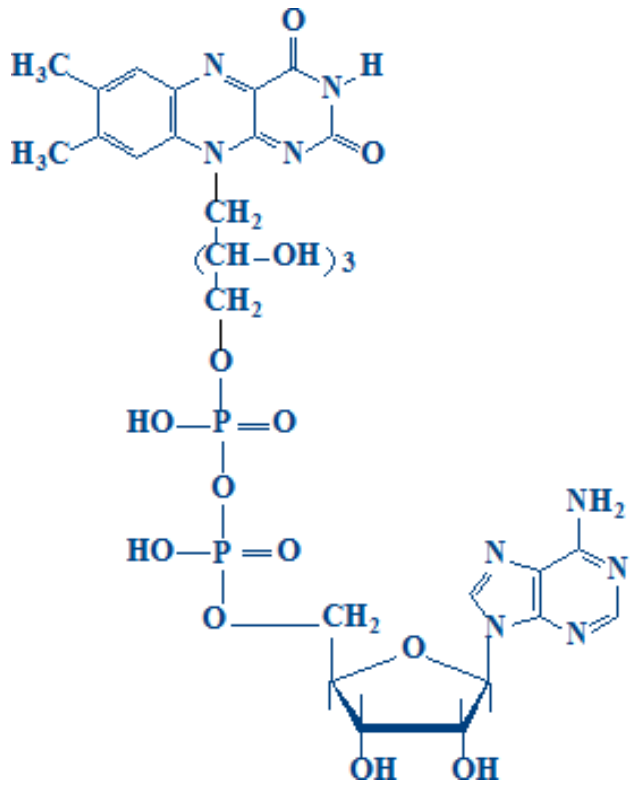
264 Krebs cycle - which statement characterizes the process?

265 Metabolism - which statements are characterizing it?

266 Polyenzymatic complex pyruvate dehydrogenase (PDH) - choose the correct statements:

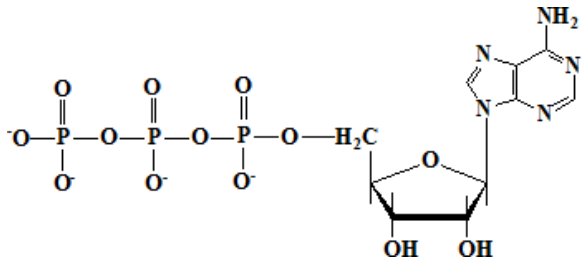
267 Regulation of the PDH complex activity - select the correct statements:

268 Select the correct statement about the chemical compound:

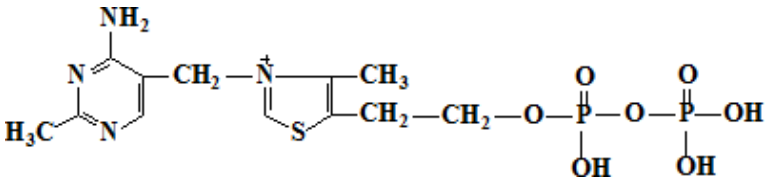


269 Select the correct statements about metabolism:

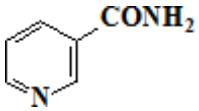
270 Select the correct statements about the chemical compound:



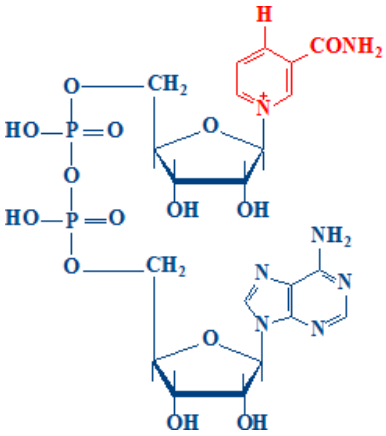
271 Select the correct statements about the chemical compound:



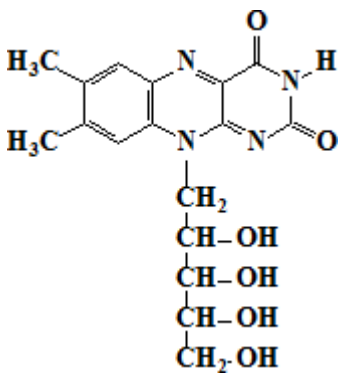
272 Select the correct statements about the chemical compound:



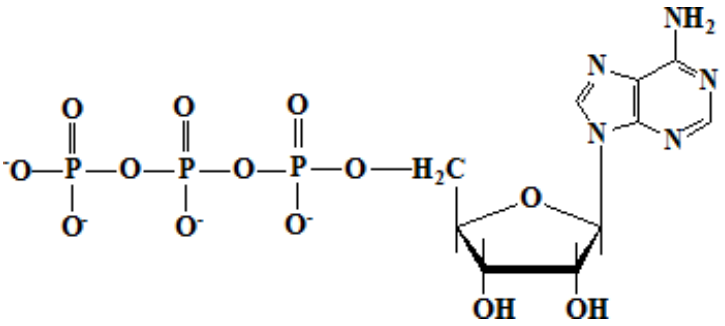
273 Select the correct statements about the chemical compound:



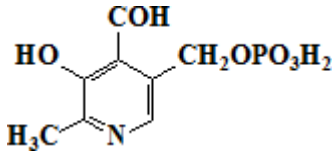
274 Select the correct statements about the chemical compound:



275 Select the correct statements about the chemical compound:



276 Select the correct statements about the chemical structure:



277 Succinate dehydrogenase:

278 The pyruvate dehydrogenase complex (PDHc) - select the correct statements:

279 The reaction of oxidative decarboxylation of pyruvate is the following:

280 The role of the pyruvate dehydrogenase complex (PDHc):

281 The speed of the metabolic processes:

282 Which are the metabolic functions of vitamins?

283 Which are the possible causes of hypovitaminosis?

284 Which of the listed compounds IS NOT a high energy one:

285 ATP synthase - select the correct statements:

286 ATP-synthase - choose the correct statements:

287 Brown adipose tissue:

288 Consumption of the free energy (ΔG) of the electron transporting chain:

289 Cytochromes - select the correct statement:

290 Glycerol-phosphate shuttle system - choose the correct statements:

291 Inhibition of the electron transporting chain (ETC):

292 Oxidative phosphorylation - select the correct statements:

293 Oxido-reduction potential (Eo) of the redox systems of the electron transporting chain (ETC):

294 Oxido-reduction systems of the electron transporting chain:

295 Phosphorylation ratio (P/O) - select the correct statements:

296 Select the ATP synthase inhibitor:

297 Select the correct statement about the electron transporting chain complex II (succinate-CoQ reductase):

298 Select the correct statements about the electron transporting chain complex III (CoQH2-cytochrome c reductase):

299 Select the correct statements about the electron transporting chain complex IV (cytochrome oxidase):

300 Select the correct statements about the electron transporting chain (ETC):

301 Select the correct statements about the electron transporting chain complex I (NADH-CoQ reductase):

302 Select the process that occurs in the inner mitochondrial membrane:

303 Select the processes that occur in the mitochondrial matrix:

304 Select the uncoupler of the oxidative phosphorilation:

305 The end products of the electron transporting chain are:

306 The mechanism of oxidative phosphorylation - select the correct statements:

307 The mechanism of oxidative phosphorylation:

308 The transfer of reducing equivalents through the electron transport chain (ETC) is characterized by the following statements:

309 Uncouplers of the oxidative phosphorilation - select the correct statement:

310 Uncouplers of the oxidative phosphorilation - select the correct statements:

311 Uncoupling of oxidative phosphorylation - choose the correct statements:

312 Choose the carbohydrate that is present in the human body:

313 Choose the carbohydrate that is present in the human body:

314 Choose the correct statement about disaccharidases - enzymes that hydrolyse the disaccharides:

315 Choose the correct statement about disaccharides:

316 Choose the correct statements about homopolysaccharides:

317 Choose the correct statements about the following compound:

318 Choose the correct statements regarding the following compound:

319 Choose the functions of carbohydrates:

320 Choose the polysaccharide that is specific for humans:

321 Digestion of carbohydrates - select the enzymes that are involved and their properties:

322 Disaccharides - which statements are correct regarding their properties?

323 Fructose - select the correct statement:

324 Fructose - select the correct statement:

325 Glucose - select the correct statement:

326 Glucose absorption from the small intestine:

327 Glycogen - select the correct statement:

328 Glycogen - select the correct statement:

329 Glycogen - select the correct statements:

330 Homopolysaccharides - select the correct statements:

331 Lactose - select the correct statement:

332 Lactose - select the correct statement:

336 Lactose - select the correct statement:

337 Lactose intolerance - select the correct statements:

338 Maltose - select the correct statement:

339 Maltose - select the correct statement:

340 Maltose - select the correct statements:

341 Monosaccharides are:

342 Sucrose - select the correct statement:

343 Sucrose - select the correct statement:

344 Sucrose - select the correct statements:

345 The following 2 monosaccharides result in the digestion of sucrose:

346 The following statement about monosaccharides is true:

347 The following statements about monosaccharides are true:

348 The function of carbohydrates is:

349 The function of carbohydrates is:

350 What is the type of glycosidic bond contained in sucrose?

351 What kind of glycosidic bonds enter in the cellulose macromolecule?

352 Which compounds are obtained at acid hydrolysis of lactose?

353 Which compounds are obtained at acid hydrolysis of sucrose?

354 Which compounds are obtained at hydrolysis of lactose?

355 Which compounds are obtained at hydrolysis of lactose?

356 Which compounds are obtained at hydrolysis of sucrose?

357 Which disaccharide is obtained at acid hydrolysis of starch?

358 Which glycosidic bond is part of amylase macromolecule?

359 Which glycosidic bonds are characteristic for amylopectin macromolecule?

360 Which glycosidic bonds are found in amylopectin macromolecule?

361 Which is the D-glucose active metabolic form?

362 Which is the disaccharide unit of amylose?

363 Which is the type of glycosidic bond in the macromolecule of glycogen that creates the branches?

364 Which is the type of the glycosidic bond that connects disaccharide fragments in the hyaluronic acid macromolecule?

366 Which monosaccharide at reduction forms the polyalcohol galactitol?

367 Which monosaccharide is the most spread in nature?

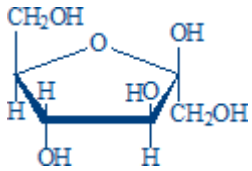
368 Which polysaccharide contains β-D-glucose?

369 Which polysaccharide fractions are part of starch granule?

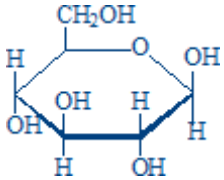
370 Which substances are obtained at acid hydrolysis of sucrose?

371 Which types of glycosidic bonds are present in the macromolecule of glycogen?

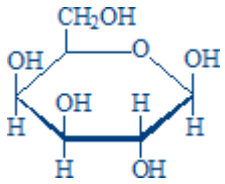
372 Which oligo- or polysaccharide contains the represented compound?



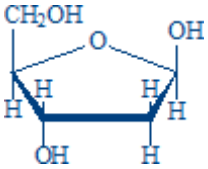
373 Which oligo- or polysaccharide contains the represented compound?



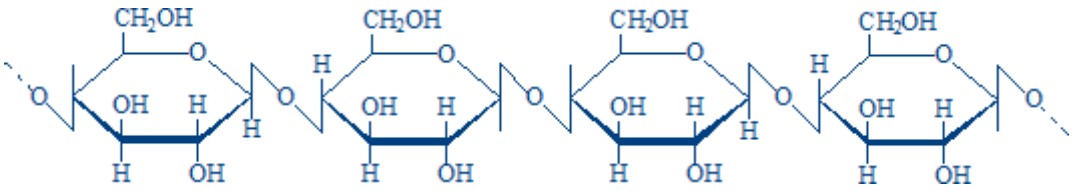
374 Which oligo- or polysaccharide contains the represented compound?



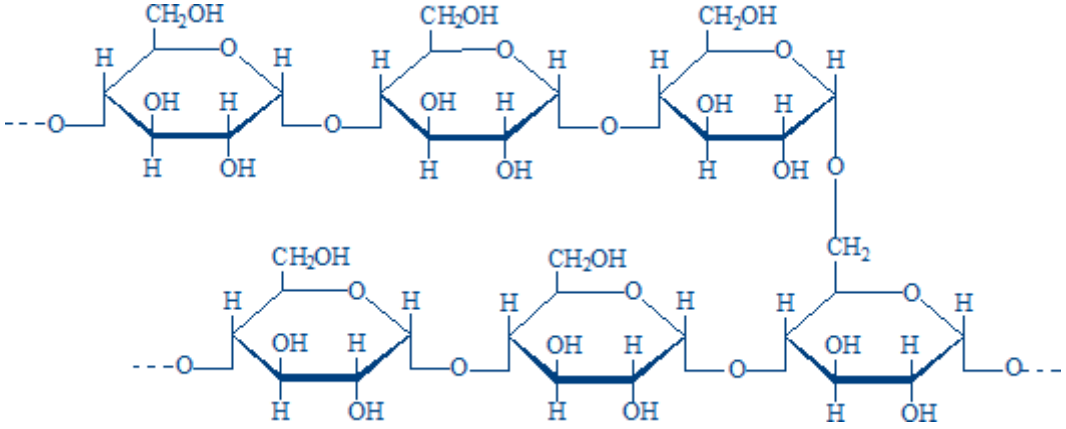
375 Which statement is correct for the following compound?



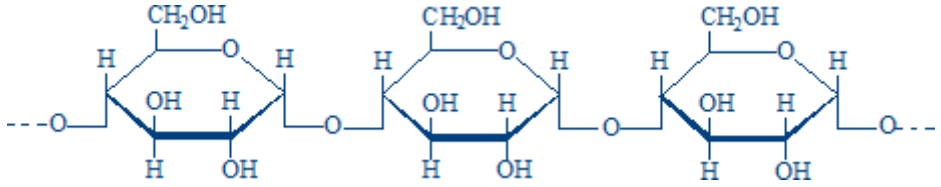
376 Which statement regarding the represented structure is correct?



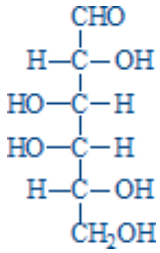
377 Which statement regarding the represented structure is correct?



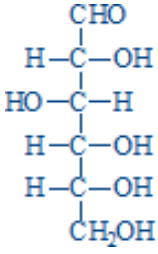
378 Which statement regarding the represented structure is correct?



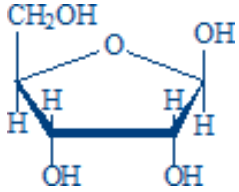
379 Which statements are correct for the following compound?



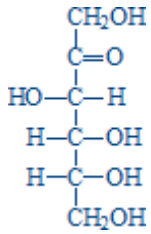
380 Which statements are correct for the following compound?



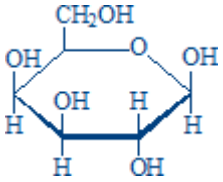
381 Which statements are correct for the following compound?



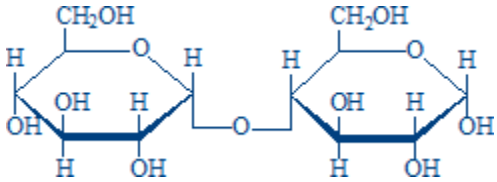
382 Which statements are correct for the following compound?



383 Which statements are correct for the following compound??



384 Which statements regarding the represented structure are correct?



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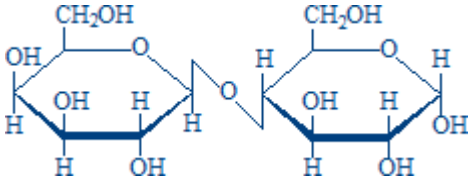
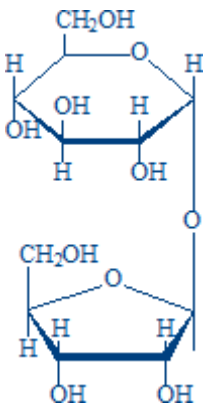


386 Which statements regarding the represented structure are correct?



387 1,6-glycosidic bond formation in glycogen (glycogenogenesis):

388 Breaking down of 1,6-glycosidic bonds of glycogen (glycogenolysis):

389 Choose the enzymes of glycogenogenesis:

390 Choose the enzymes of glycogenolysis:

391 Glucose-6-phosphate obtained from glycogen in skeletal muscles can be:

392 Glucose-6-phosphate obtained from glycogen in the liver can be:

393 Glycogen phosphorylase - select the correct statements:

394 Glycogen synthase - select the correct statements:

395 Glycogenogenesis - choose the correct statements:

396 Glycogenogenesis - select the correct statements about glycogen synthase:

397 Glycogenogenesis - select the reactions of the process:

398 Glycogenolysis - select the correct statements:

399 Glycogenolysis - which reaction is catalyzed by glycogen phosphorylase?

400 Glycogenosis: glycogen storage disease - select the correct statment:

401 Hormonal regulation of glycogenogenesis - choose the correct statements:

402 Hormonal regulation of glycogenolysis - choose the correct statements:

403 The chemical reaction is characterized by the following statements:

404 The transport of reducing equivalents through the inner mitochondrial membrane (shuttle systems):

405 Glycolysis - select the correct statement:

406 Choose the compounds that serve as substrates for gluconeogenesis:

407 Choose the compounds that serve as substrates for gluconeogenesis:

408 Choose the reactions of substrate level phosphorylation:

409 Choose the regulatory enzymes of glycolysis:

410 Common enzymes of glycolysis and gluconeogenesis are the following:

411 For the synthesis of one molecule of glucose are required:

412 Glucokinase - choose the correct statments:

413 Gluconeogenesis - choose the correct statements:

414 Gluconeogenesis - select the correct statements:

415 Gluconeogenesis from alanine - which enzymes are required?

416 Gluconeogenesis from glycerol - which enzymes are required?

417 Gluconeogenesis from lactate requires the presence of the following enzymes:

418 Glucose-6-phosphatase - select the correct statements:

419 Glycolysis - select the correct statements:

420 Glycolysis is activated by:

421 Glycolysis is inhibited by:

422 Hexokinase - select the correct statements:

423 Hormonal regulation of gluconeogenesis:

424 Hormonal regulation of glycolysis - select the correct statement regarding hormone influence:

425 How many ATP molecules are produced from complete oxidation of pyruvate?

426 How many ATP molecules are produced from complete oxidation of lactate?

427 Malate-aspartate shuttle system – which of the following reactions occurs in the cytosol?

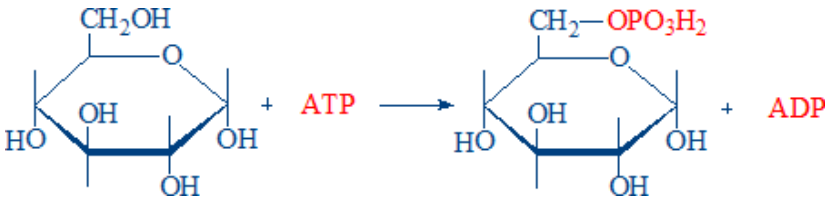
428 Malate-aspartate shuttle system – which of the following reactions occurs in the mitochondria?

429 Pathways of pyruvate usage in human cells are:

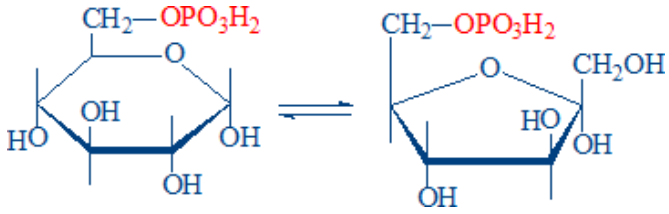
430 Pyruvate carboxylase - select the correct statements:

431 Regulation of phosphofructokinase activity:

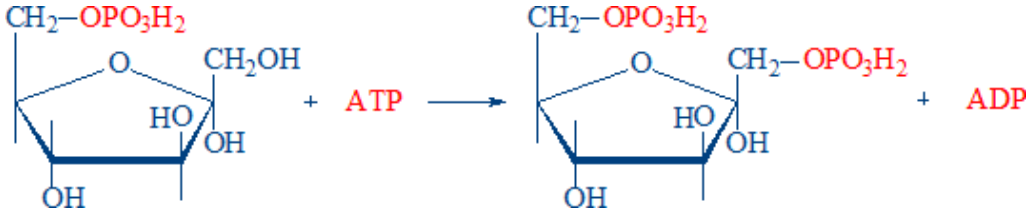
432 Select the correct statement about the following reaction:



433 Select the correct statement about the following reaction:



434 Select the correct statement about the following reaction:



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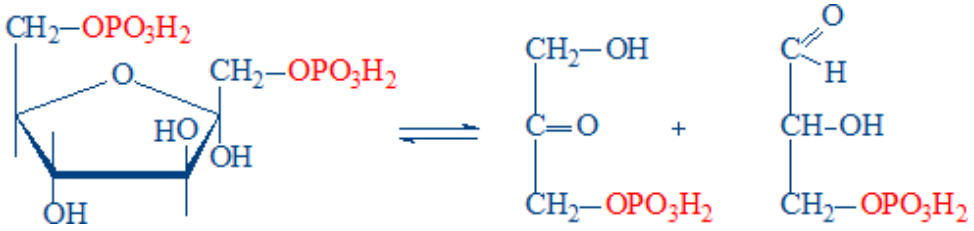

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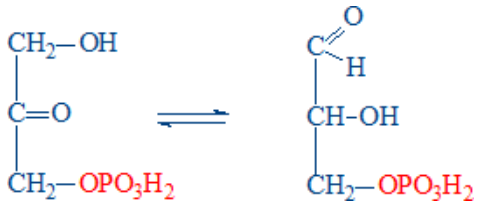

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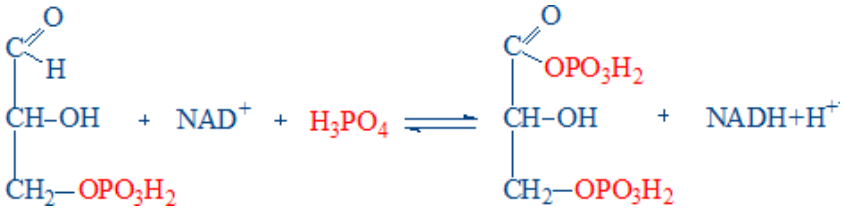

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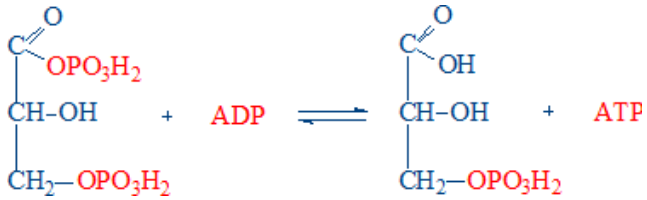

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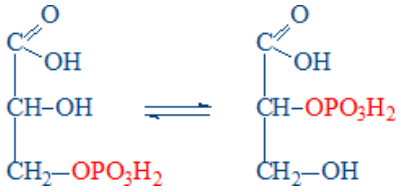
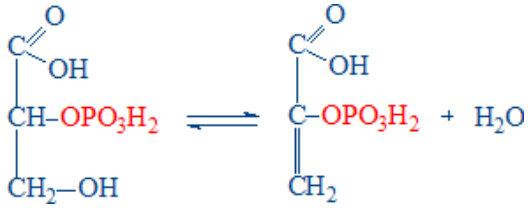
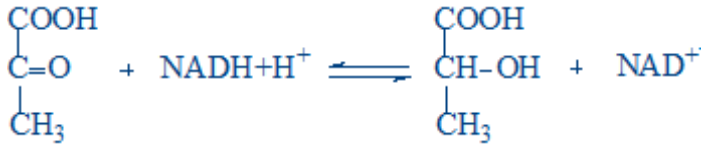


440 Select the correct statements about the following reaction:

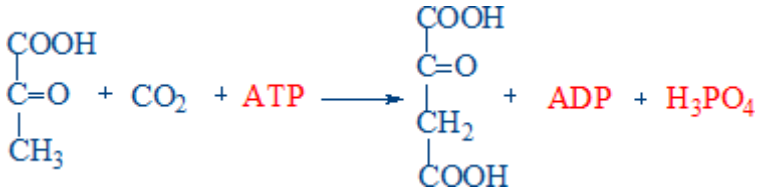


441 Select the correct statements about the following reaction:

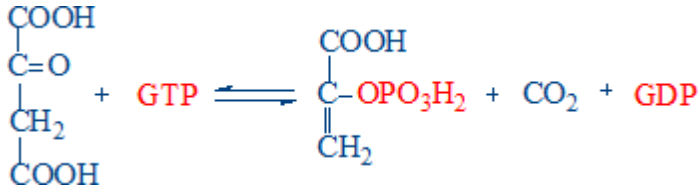
442 Select the correct statements about the following reaction:



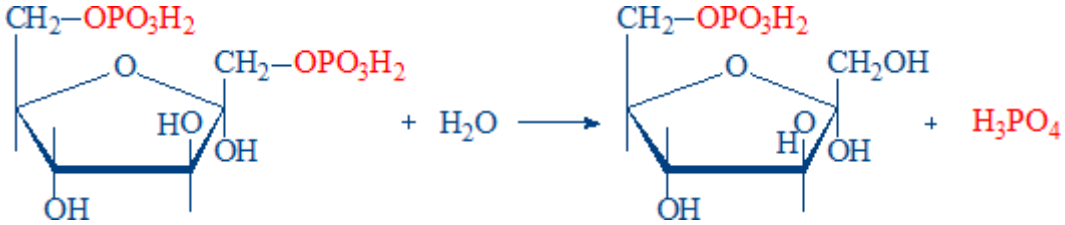
443 Select the correct statements about the following reaction:



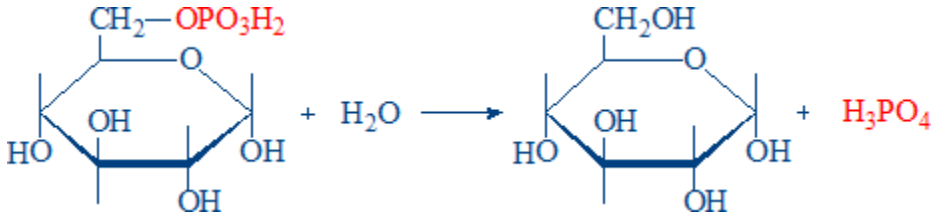
444 Select the correct statements about the following reaction:



445 Select the correct statements about the following reaction:



446 Select the correct statements about the following reaction:



447 The end products of anaerobic glycolysis are:

448 The end products of complete oxidation of glucose are:

449 The overall reaction of anaerobic glycolysis is:

450 What glycolysis enzymes catalyze the reactions in which ATP is synthesized?

451 Which enzymes do not participate in aerobic oxidation of glucose?

452 Select the cellular effects of insulin:

453 Choose the reactions of the oxidative stage of pentose-phosphate pathway:

454 Diseases accompanied by hyperglycemia are:

455 Effect of insulin on lipid metabolism:

456 Effects of insulin on carbohydrate metabolism in the liver:

457 Enzymes necessary for galactose metabolism are:

458 Enzymes required for fructose metabolism in the liver are:

459 Essential fructosuria - select the correct statments:

460 Fructose metabolism in skeletal muscles - select the reactions of the process:

461 Fructose metabolism in the liver - select the reactions of the process:

462 Functions of pentose-phosphate pathway are:

463 Galactosemia - select the correct statements:

464 Hereditary fructose intolerance - select the correct statements:

465 Hereditary galactose intolerance or galactosemia type I:

466 Hormonal regulation of glycemia:

467 Hyperglycemia may be determined by:

468 Hyperglycemia may be determined by:

469 Hypoglycemia can be determined by:

470 Initial compounds for pentose-phosphate pathway are:

471 Insulin determines the following effects:

472 Insulin stimulates the following processes:

473 Metabolism of galactose - select the specific reactions:

474 Pentose-phosphate pathway of glucose oxidation - select the correct statements:

475 Reaction: Glucose-6-phosphate + NADP+ → 6-phosphogluconolactone + NADPH+H+:

476 Reaction: Pyruvate + NADH+H+ ↔ lactate + NAD+

477 Synthesis of insulin - select the correct statments:

478 The end products of the oxidative phase of pentose-phosphate pathway are: