

Questions

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- 1 During lactic fermentation, pyruvic acid is:**
- A** reduced
 - B** oxidised
 - C** decarboxylated
 - D** phosphorylated
 - E** dephosphorylated
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- 2 Which of the following statements about glycolysis is correct?**
- A** Triose phosphate isomerase catalyses the conversion of dihydroxyacetone phosphate to 1,3-bisphosphoglycerate
 - B** When a molecule of glucose is converted to pyruvate in glycolysis, 2 NAD⁺ are reduced
 - C** Phosphofructokinase catalyses the conversion of fructose 1,6-bisphosphate to dihydroxyacetone phosphate
 - D** When a molecule of glucose is converted to pyruvate in glycolysis, CO₂ is produced
 - E** In the first part, FADH₂ is formed
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- 3 Each acetyl-CoA molecule that enters the Krebs cycle produces:**
- A** 1 NADH, 3 FADH₂, 1 GTP and 2 molecules of CO₂
 - B** 3 NADH, 1 FADH₂, 1 GTP and 3 molecules of CO₂
 - C** 3 NADH, 1 FADH₂, 1 GTP and 2 molecules of CO₂
 - D** 3 NADH, 1 FADH₂, 2 GTP and 3 molecules of CO₂
 - E** 2 NADH, 2 FADH₂, 2 GTP and 2 molecules of CO₂
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- 4 Oxidative phosphorylation is a metabolic pathway:**
- A** through which the amino group resulting from the degradation of amino acids is eliminated
 - B** through which fatty acids are broken down by removing two carbon atoms at a time
 - C** which represents the final stage of the anabolism of amino acids, carbohydrates, and fatty acids
 - D** through which the energy stored in reduced coenzymes is used for the synthesis of ATP
 - E** through which fatty acid synthesis occurs
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- 5 Cytochromes are:**
- A** present in the respiratory chain
 - B** transporters of hydrogen atoms in the respiratory chain
 - C** enzymes that synthesize ATP
 - D** inhibitors of oxidative phosphorylation
 - E** cofactors of glycolysis
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Solutions

Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer
1	A	2	B	3	C	4	D	5	A	6	E	7	E	8	B	9	D	10	D
11	C	12	E	13	C	14	D	15	A	16	C	17	E	18	A	19	B	20	B
21	C	22	C	23	A	24	A	25	E	26	A	27	B	28	D	29	A	30	B
31	C	32	C	33	D	34	D	35	E	36	D	37	A	38	E	39	D	40	A
41	C	42	D	43	A	44	E	45	A	46	B	47	C	48	E	49	B	50	B
51	C	52	B	53	B	54	B	55	A	56	E	57	C	58	E	59	A	60	D
61	C	62	D	63	B	64	E	65	A	66	D	67	C	68	D	69	B	70	E
71	C	72	B	73	C	74	A	75	E	76	E	77	D	78	B	79	E	80	C
81	A	82	D	83	E	84	E	85	C	86	C	87	D	88	C	89	C	90	A
91	D	92	D	93	A	94	E	95	A	96	B	97	B	98	C	99	A	100	D
101	C	102	D	103	B	104	B	105	B	106	D	107	C	108	C	109	D	110	B
111	E	112	C	113	B	114	C	115	C	116	C	117	D	118	D	119	E	120	A
121	A	122	B	123	E	124	B	125	E	126	B	127	B	128	C	129	D	130	C
131	E	132	C	133	E	134	E	135	B	136	E	137	C	138	A	139	A	140	A
141	B	142	C	143	D	144	C	145	E	146	C	147	D	148	E	149	A	150	A
151	A	152	C	153	A	154	D	155	A	156	C	157	B	158	B	159	D	160	E
161	A	162	B	163	C	164	E	165	B	166	D	167	E	168	D	169	A	170	D
171	A	172	E	173	E	174	D	175	A	176	C	177	D	178	B	179	A	180	E
181	E	182	E	183	C	184	A	185	B	186	E	187	C	188	D	189	E	190	B
191	D	192	C	193	A	194	E	195	D	196	C	197	A	198	A	199	A	200	C

Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer	Question	Answer
201	B	202	A	203	D	204	D	205	A	206	D	207	C	208	B	209	B
211	A	212	A	213	C	214	B	215	E	216	E	217	D	218	B	219	C
221	C	222	A	223	A	224	B	225	A	226	B	227	D	228	C	229	E
231	A	232	A	233	D	234	D	235	E	236	A	237	C	238	C	239	A
241	D	242	B	243	A	244	B	245	D	246	B	247	B	248	E	249	E
251	A	252	B	253	A	254	B	255	E	256	B	257	C	258	D	259	D
261	B	262	A	263	E	264	A	265	B	266	C	267	A	268	A	269	A
271	D	272	C	273	D	274	D	275	A	276	A	277	C	278	B	279	B
281	C	282	B	283	E	284	D	285	B	286	A	287	C	288	E	289	B
291	B	292	C	293	D	294	B	295	B	296	C	297	E	298	E	299	B
301	E	302	D	303	A	304	C	305	A	306	E	307	A	308	A	309	C
311	C	312	D	313	E	314	B	315	D	316	B	317	C	318	A	319	A
321	C	322	A	323	E	324	D	325	C	326	A	327	A	328	B	329	C
331	A	332	A	333	C	334	B	335	A	336	B	337	A	338	E	339	A
341	B	342	B	343	A	344	B	345	C	346	A	347	D	348	B	349	E
351	E	352	A	353	A	354	B	355	E	356	A	357	E	358	B	359	A
361	B	362	D	363	E	364	A	365	C	366	C	367	D	368	A	369	C
371	C	372	D	373	A	374	D	375	B	376	C	377	B	378	D	379	B
381	C	382	A	383	A	384	C	385	D	386	C	387	B	388	C	389	B
																390	E

1087 Fill in the blank to complete the proportion.

Step : _____ = brick : house

- A** window
- B** floor
- C** stairs
- D** door
- E** table

1088 If half of the money in a mutual fund was invested in stocks, one fifth in bonds and the remaining \$ 300,000 in cash, what was the total amount of the mutual fund?

- A** \$ 1,000,000
- B** \$ 1,800,000
- C** \$ 2,200,000
- D** \$ 2,600,000
- E** \$ 4,000,000

1089 Anna, Marco, Paolo, and Sofia are sitting at a round table, equally spaced. Anna is seated immediately to the right of Marco, and Paolo is seated opposite Marco. Which of the following statements can be deduced?

- A** Sofia is seated immediately to the left of Marco
- B** Paolo is seated immediately to the left of Anna
- C** Anna is not seated opposite Sofia
- D** Marco is seated immediately to the left of Sofia
- E** None of the other choices is correct

1090 The value of a historic motorbike increased by 30% from 1980 to 1985, but decreased by 20% from 1985 to 1990. What is the ratio between the value of the motorbike in 1990 and the value of the motorbike in 1980?

- A** 90%
- B** 100%
- C** 104%
- D** 110%
- E** 124%

1091 Fill in the blanks to complete the proportion.

_____ : painter = book : _____

- A** Colour, shape
- B** Dish, drink
- C** Computer, printer
- D** Picture, writer
- E** Eyes, mouth

1092 Every day John covers the distance from home to school as follows: $\frac{1}{5}$ of the way on foot; $\frac{2}{3}$ of the way by bus and 8 km by bike. How far is school from John's house?

- A** 90 km
- B** 120 km
- C** 60 km
- D** 30 km
- E** 45 km