1) Which of the following statements about oxidation-reduction reactions (redox reactions) is(are) true?
   a) when a compound gains electrons it is reduced
   b) when a compound loses electrons it is oxidized
   c) when compound A donates electrons to compound B, then B is reduced
   d) when compound A receives electrons from compound B, then A is oxidized
   e) all of the above are true

2) True or False  Dehydrogenation (removal of a hydrogen atom from a compound) is the usual means of oxidation in living cells. a) true  b) false

3) Which of the following statements about electron carriers is(are) true?
   a) NAD+ is the reduced and NADH is the oxidized form of nicotinamide adenine dinucleotide.
   b) these compounds transfer electrons to the citric acid cycle.
   c) when NAD+ is reduced to NADH it carries two electrons and a proton.
   d) FADH2 is the oxidized form of flavin adenine dinucleotide
   e) none of the above

4) Glycolysis?
   a) requires the presence of oxygen  b) takes place in the mitochondria
   c) is a series of reactions converting glucose into pyruvate  d) produces alcohol in bacteria
   e) none of the above

5) All of the following compounds are metabolites in the glycolytic pathway EXCEPT?
   a) glucose-6-phosphate  b) α-ketoglutarate
   c) glyceraldehyde-3-phosphate  d) phosphoenolpyruvate
   e) choose this answer if all of the above are glycolytic

6) True or False  NADH is the oxidized form of nicotinamide adenine dinucleotide?  a) true  b) false

7) A proton gradient is established in aerobic metabolism?
   a) in fermentation  b) across the mitochondrial membranes
   c) in the cytoplasm only  d) when pyruvate is converted to lactate
   e) choose this answer if all of the above are correct

8) If a molecule that contains phosphate donates it to ADP the process may be called?
   a) substrate level phosphorylation  b) oxidative phosphorylation
   c) photosynthetic phosphorylation  d) impossible