

Competition Examination for PhD study Candidate (Biochemistry)

Q1) Write down the chemical structure & the name of:-

- a- The final product(s) of complete oxidation of purine nitrogen base?
- b- The precursor of cholesterol biosynthesis?

Q2) what is (are) the main differences between:-

- a- DNA & RNA?
- b- The secondary structure of the protein & The tertiary structure of the protein?
- c- Maltose & Mannose?
- d- Cholesterol & glycerol?

Q3) Choose the correct answer:-

1- All the following contain glucose except:-

- a- cellulose.    b- lactose.    c- amylose.    d- galactose.

2-The anticodon:-

- a- is present in the mRNA.
- b- is a component of tRNA.
- c- Consists of four nucleotides.
- d- is a part of the gene.

3-The peptide bond is:-

- a- a covalent bond.    b- an ionic bond.    c- non covalent bond.

4-Lactose is :-

- a- a galactosyl-glucose.    b- is a non-reducing sugar.
- c- is present in the honey.    d- is a polysaccharide.

5-Neutral fat is composed of :-

- a- cholesterol + fatty acids.    b- glycerol + phosphatidic acid.
- c- glycerol + fatty acids.    d- sphingosine + fatty acid.

6-DNA refers to:-

- a- dinucleotides.    b- deoxy nucleotide acid.    c- deoxy nucleic acid.

7-The enzyme catalyzes the chemical reaction by:-

- a- increase the initial energy.    b- increase the kinetics energy of reactants.
- b- lower the activation energy of the reaction.

8-The TCA cycle :-

- a- occurs in all living cells.    b- is specific for CHO.
- b- occurs in the cytoplasm.    c- takes place in the mitochondria.