

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019  
(Second Semester)

Branch - **BIOCHEMISTRY**

**ENZYMOLGY**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks (10 x 1 = 10)

- 1 Find the E.C number of Alcohol: NAD oxidoreductase.  
(i) 1.11.1.6 (ii) 1.1.1.1.  
(iii) 2.3.1.6 (iv) 4.1.2.7
  - 2 Which coenzyme transferring the hydrogen?  
(i) CoA (ii) NAD<sup>+</sup>  
(iii) Biotin (iv) TPP
  - 3 What type of enzyme inhibition is shown by the following representation?  
$$E + S \rightleftharpoons ES \xrightarrow{I} P + E$$

I  
5  
ESI

(i) Competitive (ii) non-competitive  
(iii) uncompetitive (iv) irreversible
  - 4 Allosteric site of an enzyme is specific for  
(i) Modulator (ii) Substrate  
(iii) Co-factor (iv) Cyclic Amp
  - 5 Pyruvate dehydrogenase complex is regulated by  
(i) Covalent modification (ii) Allosteric regulation  
(iii) both (i) and (ii) (iv) Feed Back Inhibition
  - 6 How many different subunits present in the normal LDH?  
(i) 2 (ii) 3  
(iii) 4 (iv) 5
- In acid-base catalysis, the protonated form of some amino acids acts as
- (i) Acid catalysts (ii) Base catalysts  
(iii) both (i) and (ii) (iv) None of the above
- 8 One of the following is a clinically diagnostic enzyme.  
(i) LDH (ii) Hexo Kinase  
(iii) Phosphofucto Kinase (iv) Enolase
  - 9 Which enzyme is used in Meat industry?  
(i) amylase (ii) Hexo Kinase  
(iii) Papain (iv) Subtilisin
  - 10 Which immobilized enzyme used in the treatment of whey?  
(i) p-galactosidase (ii)  $\alpha$ -amylase  
(iii) (3-amylase (iv) Gluioamylase

Cont...

**SECTION - B (35 Marks)**

Answer **ALL** Questions

**ALL** Questions Carry **EQUAL** Marks ( 5 x 7 = 35)

- i 1 a Describe the units of enzyme activity.  
OR  
b Discuss the effect on PH temperature on enzyme catalysed reaction.
- 12 a Explain irreversible inhibition.  
OR  
b Describe Feedback inhibition.
- 13 a Write a brief account on acid-base catalysis.  
OR  
b Discuss the multienzyme complex. Give example.
- 14 a How are enzymes useful in clinical diagnostic?  
OR  
b Highlight the importance of isoenzyme alkaline phosphate.
- 15 a Explain the Entrapment method of enzyme immobilization.  
OR  
b Describe the mechanism of action of Abzymes.

**SECTION - C (30 Marks)**

Answer any **THREE** Questions

**ALL** Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Summarise the steps involved in isolation and purification of enzymes.
- 17 Explain the allosteric enzymes with aspartate transcarbamylase as model.
- 18 Discuss the mechanism of action of carboxy peptidase.
- 19 Point out the industrial application of enzymes.
- 20 Enumerate the applications of immobilized enzymes.

Z-Z-Z

END