ZàÎÂà-3. ¥Âkà¢t §ý Îààoà §ýL ¡àuÂà âwâÂàªuâwâo mnà ¡wÎààx½à âwâo §ýà w½àÂà §ýLâk¥ ñ

Describe the Ion Exhange and Adsorption method for the purification of enzymes.

OR

¥Âkà¢t §ý ¡½àsâÊ âÂàoàÊ½à §ýL â§ýÂÑã Àà âwâouà §ýà w½àÂà §ýLâk¥ ñ

Explain any two methods for the determination of molecular weight of enzyme.

ZàÎÂà-4. ¥Âkà¢tà¹§ý ¡âsâ§ýuà §ýL ªààm §ýà Zàsààwm §ýÊÂà wàv t©u §ýàÊ§ýà §ýà w½àÂà §ýLâk¥ ñ

Explain the main factors which effected the speed of enzymatic reactions.

OR

tà¢§ýâvy-tÂ¹Âà ytâ§ýÊ½à §ýL Íu¼qâÙà §ýLâk¥ mnà ¡wtÀÂà §ýL £qÐnâm mnà ¡ÂàqÐnâm t mnà §ý tÂà §ýà ªààÄý õâÊà ytIà¢¥ ñ

Derive Michaelis-Menton equation and explain the value of and

by graph in presence and absence of Inhibitors.

ZàÎÂà-5. ¥Âkà¢t âÂàÎjvÂà y ¡àq ¨uà ytIm Ñ ? ¥Âkà¢t âÂàÎjvÂà §ýL wàÑ§ý ràÂu§ýàÊã mnà §ýày roÂà âwâo §ýà w½àÂà §ýLâk¥ ñ

What do you understand by enzyme immobilisation. Explain carrier binding and cross linking method for immobilisation. Explain carrier binding and cross linking method for immobilisation of enzyme.

OR

¥Âkà¢t âÂàÎjvÂà §ýà ¨uà £öÎu Ñ ? ¥Âkà¢t âÂàÎjvÂà §ý vàs mnà Ñààà §ýà w½àÂà §ýLâk¥ ñ

What is the aim of enzyme immobilisation. Explain the advantages and disadvantages of enzyme Immobilisation.

----x----

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Roll No......................

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Total No. of Printed Pages : 04

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Annual Examination - 2017

B.Sc.-II

BIOCHEMISTRY

Paper - I

ENZYMOLOGY

Max.Marks : 50

Time : 3 Hrs. **Min Marks : 17**

¹ãq ß h½»'¡' t Ày ¡âmvi£ÙàÊã ZàÎÂà Ñ, âkÂÑ Ñv §ýÊÂàà ¡âÂàwàu Ñ ñ h½»'r' t vi£ÙàÊã ZàÎÂà h½»'y' t Àã i £ÙàÊãu ZàÎÂà Ñ ñ h½»'¡' §ýà yry qÑv Ñv §ýÊ ñ

Note : Section 'A' is objective type, containing 10 questions, is compulsory. Section 'B' consists of short answer type questions and Section 'C' consists of long answer type questions. Section 'A' has to be solved first.

h½»-'¡'(Section-'A')

âÂàÈÂààâ§ým ¡âm vi£ÙàÊãu ZàÎÂàà §ý £ÙàÊ ¥§ý uà Àà qâQýuà t Àà ñ

(Answer the following very short-answer-type questions in one or two lines.) **(1x10=10)**

ZàÎÂà-1. ¥Âkà¢t §ýà .... sàªà ¥qà¥Âkà¢t §ýÑvàmà Ñ ñ

Apoenzyme refers to the .... part of enzyme.

ZàÎÂà-2. ¥Âkà¢t yrÐ¹¹ ¡½à y âky Ðnààà qÊ k»mà Ñ .... §ýÑvàmà Ñ ñ

The place at which substrate bind with enzyme is known as ....

ZàÎÂà-3. ¥Âkà¢t yâ§ýumà §ýL *SI* ¢§ýà¢ .... Ñ ñ

SI unit of enzyme activity is ....

ZàÎÂà-4. v¨¹¹ +

L Lactate + NAD^+

ZàÎÂà-5. ¡à¨yã»ààÊ»¨¹k ¥Âkà¢t .... ¡âsâ§ýuà §ýà £¾ZààÊm §ýÊm Ñ ñ

Oxidoreductase enzymes catalyse .... reactions.

ZàÎÂà-6. ZàâmÐqoJ ¡wtÀÂà t §ýà tÂà .... Ñmà Ñ ñ

In competetive inhibition, the value of is ....

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ZàÎÂà-7. âÂàÈÂààvâhm ¡âsâ§ýuà t¦ ¥Âkà¢t §ýà Âààt âvâh¥ ñ

Write the name of enzyme in the following reaction.

$$C_{12}H_{22}O_{11} + H_2O \rightarrow C_6H_{12}O_6 + C_6H_{12}O_6$$

ZàÎÂà-8. »¦uÊã £ùàªà t¦ .... ¥Âkà¢t §ýà £quàªà Ñàmà Ñ ñ

.... enzyme is used is dairy industries.

ZàÎÂà-9. ¡àùààªà§ý ¥Âkà¢t ¡âo§ýmÊ .... y¦ ZààÂm Ñàm¦ Ñ ñ

Most of the industrial enzymes are obtained from ....

ZàÎÂà-10. Ð¹àj¦ y¦ ªv§ýàk §ý £¼qàÀÂà t¦ ZàuQý ¥Âkà¢t §ý Âààt âvâh¥ ñ

Write the name of enzyme used in the production of glucose from strach.

h½»¦-'r' (Section-'B')

âÂàÈÂààâ§ým vi¦ £ùàÊãu ZàÎÂàà¦ §ý £ùàÊ 150-200 ÎàÆÀ-yâtà t¦ À¦ ñ

(Answer the following short-answer type questions with word limit 150-200) (3x5=15)

ZàÎÂà-1. ¥Âkà¢t mnà £¼ZàÊ§ý t¦ ¡mÊ ytIà¢¥ ñ

Explain difference between enzyme and catalyst.

OR

¥Âkà¢t t¦ kà¢tk mnà kà¢tkÂà Ûýq §ýà w½àÂà §ýLâk¥ ñ

Explain the Zymase and Zymogen form of enzyme.

ZàÎÂà-2. qàuÚw¹¦ y¦ ¥nÂààv §ý qâÊwmÂà t¦ §ýàÂà yà §ýà-¥Âkà¢t âvÀm Ñ ? qâÊwmÂà §ýà yÕàq t¦ w½àÂà §ýLâk¥ ñ

Which co-enzymes are involved during the conversion of pyruvate to ethanol. Explain the conversion briefly.

OR

PLP (§ýà-¥Âkà¢t) §ýL yÊjÂàà mnà â§ýÂÑã Àà¦ kw Êàyàuâàâ§ý ¡âsâ§ýuà §ýà w½àÂà §ýLâk¥ ñ

Explain the structure and any two biochemical reactions of PLP (co-enzyme)

ZàÎÂà-3. ¥Âkà¢t §ýL Îà÷mà §ýà £öÎu mnà Îà÷mà §ýL §ý¹uàkÂàà¡à¦ §ýà yÕàq t¦ w½àÂà §ýLâk¥ ñ

Explain the main objective of purification of enzyme and give purification strategies in short.

OR

¥Âkà¢t §ý t©u dààmà¦ mnà âwªàvÂà §ýL ¥§ý âwâo §ýà w½àÂà §ýLâk¥ ñ

Explain the main sources and one method for isolation of enzymes.

ZàÎÂà-4. âqªà qàªà ¡âsâ§ýuà §ýà £ÀàÑÊ½à yâÑm ytIà¢¥ ñ

Explain Ping-Pong mechanism with examples.

OR

¥Âkà¢t ¡wÊàò§ý qÊ yâÕàm â¹ÃÂq½àã âvâh¥ ñ

Write short notes on enzyme inhibition.

ZàÎÂà-5. »¦¨y¹âÂà y¦ ªv§ýàk §ý £¼qàÀÂà §ýà w½àÂà §ýLâk¥ ñ

Discuss the production of glucose from Dextran.

OR

¥Âkà¢t §ý âjâ§ý¼yâu £quàªà §ýà w½àÂà §ýLâk¥ ñ

Explain the medical uses of enzymes.

h½»¦-'y' (Section-'C')

âÂàÈÂààâ§ým Ààì¦ £ùàÊãu ZàÎÂàà¦ §ý £ùàÊ 300-350 ÎàÆÀ-yâtà t¦ À¦ ñ

(Answer the following long-answer type questions with word limit 300-350) (5x5=25)

ZàÎÂà-1. Êàyàuâàâ§ý Zààmâ§ýuà §ý ¡àoàÊ qÊ ¥Âkà¢t §ýà wªàJ§ýÊ½à £ÀàÑÊ½à yâÑm ytIà¢¥ ñ

Explain the classification of enzyme with examples on the basis of chemical reactions.

OR

¥Âkà¢t ¡àtàqÂà ¨uà Ñ ? ¥Âkà¢t ¡àtàqÂà §ýà tàqÂà §ýL â§ýÂÑã Àà¦ âwâouà¦ §ýà w½àÂà §ýLâk¥ ñ

What is enzyme assys? Describe any two methods for measuring enzyme assay.

ZàÎÂà-2. FMN mnà FAD §ýL yÊjÂàà mnà kw Êàyàuâàâ§ý ¡âsâ§ýuà¡à¦ §ýà w½àÂà §ýLâk¥ ñ

Explain the structure and biochemical reactions of FMN and FAD.

OR

§ýàrà¨yãqÃ¹à¢»¦k ¥Âkà¢t §ý §ýàu §ýL §ýàuâwâo ytIà¢¥ ñ

Describe the mechanism of action of Carboxypeptidases.