

13th May, 2013

Bio Chemistry - I
Sem III Rev A.T.K.T.

13/5/13

VT-F.H.Exam. Mar.-13-91

Con. 1548-13.

Sem III (Rev.) ATK.T. - B.C. I

DC-2204

(2 Hours)

[Total Marks : 40

N.B. : (1) Question No. 1 is **compulsory**.

(2) Answer any **four** questions of remaining **five** questions.

(3) Answer to the questions should be **grouped** and written **together**.

1. (a) Give the full name of coenzyme and deficiency disease of vitamin B₂. 8
(b) Draw structure of two non-essential amino acids and give its three letter code.
(c) Write structure of 2 purine bases of DNA.
(d) Draw the structure of ADP.
(e) Draw the structure of Linolenic acid.
(f) Draw the structure of sucrose using Haworth projection.
(g) Draw the structure of D-Fructose using Fischer Projection.
(h) Draw the structure of cephaline.

2. (a) Explain in detail biochemical role of vitamin K. 3
(b) Classify lipids on the basis of their chemical structure. 3
(c) Explain the reaction of amino acid with Sanger's reagent. 2

3. (a) Compare glycogen, starch and cellulose in terms of their structure and function. 3
(b) Explain the phenomenon of mutarotation and anomerism. 3
(c) How will you differentiate fats and oils ? 2

4. (a) Explain semiconservative replication of DNA in detail. 3
(b) Describe the biochemical role of Niacine 3
(c) Differentiate between RNA and DNA. 2

5. Justify the statement with proper explanation (any **four**) :- 8
(a) Non-reducing sugar can not form osazone.
(b) During denaturation of protein, primary structure remains unaffected.
(c) α -Tocopherol is used as an antioxidant.
(d) The backbone of nucleic acid structure is 3'-5' phosphodiester bridge.
(e) Retinaldehyde plays an important role in vision.

6. (a) Write a note on α -helical and β -sheets structure of protein. 3
(b) Explain different types of RNA. 3
(c) Draw the structure of following :- 2
(i) 12-Hydroxy 18:1 (Δ 9)
(ii) 14:3 (Δ 7, 10, 13).
