



**MONAD UNIVERSITY HAPUR (UP)
(SCHOOL OF AGRICULTURE & APPLIED SCIENCES)
DEPARTMENT OF BIOCHEMISTRY**

Course: B.Sc. Biochemistry

Subject Name: Biomolecules

Semester: V

Sub. Code:

Assignment No: 1

Due date of submission: 10.11.2016

Instruction

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

Q.1.

- (a) What is the biological importance of monosaccharides in living things?
- (b) Why are carbohydrates stored as polysaccharides?

Q.2.

- (a) What are essential fatty acids and what is their importance in health?
- (b) What are the biological significance of lipids?



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Semester: V

Sub. Code:

Assignment No: 2

Due date of submission: 10.11.2016

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Q.1.

- (a) What are essential and non-essential amino acids explain it with structure?
- (b) Explain Ramachandran plot.

Q.2.

- (a) What are different types of DNA molecules their structures and functions?
- (b) What are application and clinical significances of metalloporphyrins?



**MONAD UNIVERSITY HAPUR (UP)
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Course: B.Sc. Biochemistry

Subject Name: Enzymology

Semester: V

Sub. Code:

Assignment No: 1

Due date of submission: 10.11.2016

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Q.1.

- (a) Explain the different classes of enzymes.
- (b) Explain the different model for enzyme substrate interaction.

Q.2.

- (a) Describe enzyme purification methods.
- (b) What are factors affecting enzyme activity.



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Course: B. Sc. Biochemistry

Subject Name: Enzymology

Semester: V

Sub. Code:

Assignment No: 2

Due date of submission: 10.11.2016

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Q.1.

- (a) What is K_m in Michaelis Menten equation?
- (b) What is clinical significance of isoenzyme?

Q.2.

- (a) What are applications of biosensor in medical?
- (b) What are advantage and disadvantage of Enzyme Immobilization?



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Course: B. Sc. Biochemistry

Subject Name: Immunology

Semester: V

Sub. Code:

Assignment No: 2

Due date of submission: 10.11.2016

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Q.1.

- (a) What are structure and function of immunoglobulins G (Ig G)?
- (b) What are advantages of hinge region in immunoglobulins?

Q.2.

- (a) Explain the different class of major histocompatibility complex.
- (b) Explain in detail about complement system



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Sub. Code:

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Q.1.

- (a) Describe briefly mechanism of innate immunity.
- (b) What are the main differences between humoral and cell mediated immune responses?

Q.2

- (a) Explain the role of antigen presenting cells.
- (b) What are difference between antigenicity and immunogenicity?



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Course: B.Sc. Biochemistry

Subject Name: Plant Biochemistry

Semester: V

Sub. Code:

Assignment No: 1

Due date of submission: 10.11.2016

Instruction

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Q.1.

- (a) Explain how photosystem 1 and 2 are connected?
- (b) What is the relationship between the light and dark reactions?

Q.2.

- (a) Explain the calvin cycle step by step.
- (b) What is the difference of C₃ and C₄ plants.



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Subject Name: Plant Biochemistry

Semester: V

Sub. Code:

Assignment No: 2

Due date of submission: 10.11.2016

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Q.1.

- (a) What are differences between symbiotic and nonsymbiotic nitrogen fixation?
- (b) Explain the mechanism of nitrogen fixation by bacteria.

Q.2.

- (a) What are the functions of auxin in plant?
- (b) Explain which plant hormone level increased during fruit ripening.