

B.Sc.(N) [Post Basic (1st Year)]

BF/2011/07

Biochemistry & Biophysics

[New Scheme-w.e.f. 2007 admission]

M.M. : 75

Time : 3 Hours.

Note: Attempt all questions.

USE SEPARATE ANSWER SHEETS FOR EACH SECTION.

SECTION-A (Biochemistry)

[38 marks]

1. (a) What is glycogenesis. [1]
- (b) Differentiate between Hyperglycemia and Hypoglycemia. [3]
- (c) What are fatty acids and classify them. [6]

OR

1. (a) What are Ketone bodies. [1]
- (b) What amino acids are called essential amino acids. [3]
- (c) What are the steps involved in urea formation in our body. [6]
2. (a) What do you mean by peptide, polypeptide and proteins. [1]
- (b) What are the metabolic functions of insulin. [3]
- (c) What is the mechanism of action of enzyme. [6]

3. **Write in brief (Any TWO) :** [2x3=6]

- (a) Describe the structure of different immunoglobulins.
- (b) State the absorption of Carbohydrate.
- (c) What is the difference between Fats and Oil.

4. **Write Short Notes on any FOUR of the following :** [4x3=12]

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|--------------------------|----------------------|
| (a) Monopolysaccharides. | (b) Atherosclerosis. |
| (c) Fatty Liver. | (d) Hyperglycaemia. |
| (e) Hypothyroidism. | |

SECTION-B (Biophysics)

[37 marks]

1. (a) Define short sightedness. [3]
- (b) Write down the indication of X-rays in medicine. [4]
- (c) What are the effects of gravitational forces on human body. [3]

OR

1. (a) What is Osmotic Pressure. [3]
- (b) Explain the fundamentals and derived units. [4]
- (c) Noise Pollution and its prevention. [3]
2. (a) What are the principles of machines. [3]
- (b) What is heat and its measurement. [4]
- (c) Define Arterial blood pressure. [3]

3. **Define the following (Any TWO) :** [2x2½=5]

- (a) Define law of reflection.
- (b) What are the instruments used for detection of ionizing radiation.
- (c) What are the uses of ultrasound.
- (d) Define electrolytes.

4. **Write short notes on any FOUR :** [4x3=12]

- | | |
|--------------------|----------------------------|
| (a) Colour Vision. | (b) Pace Maker. |
| (c) EEG. | (d) Nature of Electricity. |
| (e) Frequency. | |