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**BNS-102**

**POST BASIC BACHELOR OF SCIENCE  
(NURSING)  
(B.Sc. NURSING)**

**Term-End Examination**

**June, 2024**

**BNS-102 : APPLIED SCIENCE-  
BIOCHEMISTRY-PART A-18 MARKS**

*Time : 3 Hours*

*Maximum Marks : 70*

**Note :** (i) Answer all the *six* questions.

(ii) Each question carries 3 marks.

(iii) Choice is internal

1. State whether in the following statements true or false :  $6 \times \frac{1}{2} = 3$

(i) Physical or mechanical mixing of two or more substances require lot of energy.

(ii) A chemical reaction is required to separate elements from a compound.

(iii) A mixture can have different proportions of its constituents.

(iv) Evaporation of water from lakes or sea is a chemical change because it disappears in air.

(v) Making bread from wheat dough is a chemical change.

(vi) Powdering of glass marbles is a physical change.

2. (a) Differentiate 'Hard' and 'Soft' water. 1

(b) Enlist four factors which influence solubility of a substance to form solution. 2

3. (a) Mention three functions of lipids.  $1\frac{1}{2}$

(b) Define disaccharide. Give one example.  $1\frac{1}{2}$

4. (a) Explain 'Denaturation' of a protein.  $1\frac{1}{2}$

(b) Enlist any *three* factors which affect enzyme activity.  $(1\frac{1}{2} + 1\frac{1}{2} = 3)$

*Or*

Explain the types of enzymes.

(c) Name the diagnostic enzyme one each for heart disease and liver disease. 2+3

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5. (a) Differentiate between intracellular extracellular and interstitial fluids. 1½
- (b) Explain “agglutination” taking type A blood as the example. 1½

*Or*

- (a) What is cerebrospinal fluid ? How is it formed ? 1+1
- (b) Name the two biochemical parameters whose concentrations. 2+1
6. Explain any *six* of the following : 6×½=3

- (a) Edema
- (b) Atherosclerosis
- (c) Antibodies
- (d) Holoenzyme
- (e) Saponification
- (f) Osmosis
- (g) Electrolyte
- (h) pH

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**BNS-102–B**

**POST BASIC B.SC. NURSING  
B.Sc. (M) (PB)**

**Term-End Examination**

**June, 2024**

**BNS-102–B : APPLIED SCIENCE  
(BIOPHYSICS)**

*Time : 3 Hours*

*Maximum Marks : 17*

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**Note :** Attempt all questions.

1. What are the measures taken to minimize random error in the following situations :
- (a) Reading the volume of liquid in an injection syringe. 1×2=2
- (b) Measuring weight using weighing machine.
2. Define Gravitational force. Give *two* examples from nursing in which gravitational force is used. 1+2=3
3. (a) List any *two* body functions that depend on fluid pressure. 1

**P.T.O.**

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- (b) Give *two* examples from nursing in which principle of air pressure is applicable.                      2
4. Differentiate between radiation and evaporation with examples from nursing.                      2+1=3
5. Given below are the statements. Write true or False :                      1×6=6
- (i) Stethoscope is used for Auscultation.  
(True/False)
- (ii) Most of the heat from body is lost through urine.  
(True/False)
- (iii) Radio isotopes are never used for therapeutic purpose.  
(True/False)
- (iv) Temperature measures the thermal state of body.  
(True/False)
- (v) The external ear works like an amplifier.  
(True/False)
- (vi) Diffillation is a short electric shock imported to chest to normalise irregular heart beat.  
(True/False)

**P.T.O.**

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**POST BASIC B.Sc. NURSING B.Sc. (N) (PB)**

**Term-End Examination**

**June, 2024**

**BNS-102 : APPLIED SCIENCES PART-C**

*Time : 45 minutes*

*Maximum Marks : 18*

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**Note :** Attempt all questions. Follow the word limit for an answer as given below :

- (i) 10 marks within **1000** words only.
- (ii) 5 marks within **500** words only.
- (iii) 3 marks within **200** words only.
- (iv) 2 marks within **50** words only.
1. Discuss the factors which influence growth of bacteria.                      5
2. Write in 2-3 lines about the following :
- (a) Endotoxins and Exotoxins
- (b) Innate immunity and Adaptive immunity system.
- (c) Faculative Parasite and Obligatory parasite.

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(d) Bacteriocidal and bacteriostatic agent

4×2=8

3. Fill in the blanks :

- (a) A cancer formed from connective tissue is known .....
- (b) Slight eruption of the skin is called .....
- (c) Bacteria which takes up bright red colour after staining is called as ..... baillus.
- (d) Gonorrhoea is caused by ..... bacteria.
- (e) Chikungunya is caused by ..... mosquito.

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**POST BASIC B.Sc. NURSING B.Sc. (N) (PB)**

**Term-End Examination**

**June, 2024**

**BNS-102 : APPLIED SCIENCES PART-D**

*Time : 45 minutes*

*Maximum Marks : 17*

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**Note :** Attempt all questions. Attempt all questions in one place.

- 1. (a) Define the terms Micronutrients and Macronutrients. 2
- (b) Explain the functions of Proteins and Fats. 4
- 2. Describe the use of Recommended Dietary intakes in planning balanced diets. 6
- 3. (a) List of the methods of assessing nutritional status of an individual. 2+3=5
- (b) Explain the method of conducting dietary survey.

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**P.T.O.**