

F. Y. P. B. B. SC. (NURSING) : WINTER - 2017

SUBJECT : BIOCHEMISTRY & BIOPHYSICS

Day : Monday
Date : 09/10/2017

Time :
Max. Marks : 15

W-2017-3767

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Put a in the appropriate box.
- 3) Use blue / black pen only.
- 4) Section – I should be completed in **15** minutes.
- 5) Each question carries **ONE** mark.
- 6) Students will not be allotted marks if he/she overwrites strikes or puts white ink on the cross once marked.

Seat No.: _____

Total Marks Obtained: _____

Jr. Signature: _____

Examiners Signature: _____

SECTION – I [Biochemistry]

- 1) An eukaryotic cell differs from prokaryotic cell by presence of _____.
 - a) Nucleus
 - b) Mitochondria
 - c) Nuclear membrane
 - d) Endoplasmic reticulum
- 2) Blood urea level is markedly increased in _____.
 - a) Liver disease
 - b) Renal disease
 - c) Cardiac disease
 - d) Protein intake
- 3) Which of the following enzyme is therapeutically used for the treatment of leukemia?
 - a) Asparaginase
 - b) Amylase
 - c) Aspartate
 - d) Hyalyronidase
- 4) Break down of glucose to pyruvate or lactate is known as _____.
 - a) Glycolysis
 - b) Glycogenesis
 - c) Gluconeogenesis
 - d) Glycogenolysis

P.T.O.

- 5) Glucose tolerance is decreased in _____.
- a) Hyperactivity of adrenal cortex
 - b) Hyperpituitarism
 - c) Diabetes mellitus
 - d) All of these
- 6) The pentose sugar present in DNA is _____.
- a) Ribose
 - b) Deoxyribose
 - c) Arabinose
 - d) None of these
- 7) Which antibody mediated hypersensitivity reactions?
- a) IgG
 - b) IgM
 - c) IgA
 - d) IgE
- 8) Fatty liver may be prevented by the following EXCEPT:
- a) Ethanol
 - b) Choline
 - c) Methionine
 - d) Lecithine

[Biophysics]

- 9) Newton's / kg is unit of _____.
- a) Momentum
 - b) Velocity
 - c) Force
 - d) Acceleration
- 10) Distance and displacement are same only when body perform _____ motion.
- a) Linear
 - b) Circular
 - c) Rotational
 - d) Oscillatory

- 11) The percentage of hemoglobin is monitored by a _____.
- a) Hydrometer
 - b) Barometer
 - c) Pacemaker
 - d) Pulse oximeter
- 12) The force of attraction between two unit point masses separated by a unit distance is numerically equal to _____.
- a) Acceleration due to gravity
 - b) Gravitational potential
 - c) Universal gravitational constant
 - d) Gravitational intensity
- 13) S.I unit of magnetic induction is _____.
- a) Weber
 - b) Weber per meter
 - c) Weber meter
 - d) Tesla
- 14) In human eye, the focal length of the lens is controlled by _____.
- a) The pupil
 - b) Ciliary muscles
 - c) Iris
 - d) Retina
- 15) Thermal radiation are _____.
- a) Mechanical waves
 - b) Electrical wave
 - c) Electromechanical waves
 - d) Electromagnetic waves

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SUBJECT : BIOCHEMISTRY & BIOPHYSICS

Day : Monday
Date : 09/10/2017

Time : 09.00 A.M. TO 12.00 NOON
Max. Marks : 60

W-2017-3767

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagrams **WHEREVER** necessary.
- 4) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION – II
[Biochemistry]

Q.1 Write short notes on **ANY THREE** of the following: **[15]**

- a) Lipoprotein
- b) RNA
- c) Cell membrane
- d) Hyperglycemia

Q.2 Answer **ANY ONE** of the following: **[15]**

- a) Define lipid. Give the biological important lipids and their function.
- b) Describe the process of digestion and absorption of carbohydrate and protein. Add a note on malabsorption syndrome.

SECTION – III
[Biophysics]

Q.3 Attempt **ANY THREE** of the following: **[15]**

- a) What is lever, describe different types of lever.
- b) What is Bernoulli's Principle? Give its application in nursing.
- c) What is hypermetropia? How it can be corrected?
- d) Explain the newton's second law of motion show that $F = ma$.
- e) State Faraday's laws of electromagnetic induction.

Q.4 Answer **ANY ONE** of the following: **[15]**

- a) Explain with neat diagram Vocalization and hearing of sound. Write characteristics of musical sound.
- b) State the law of radioactive disintegration. Explain uses of radioactive substance in nursing.

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