

This question paper contains **3** printed pages]

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S. No. of Question Paper : **1945**

Unique Paper Code : **2493010011**

Name of the Paper : **Molecular Basis of Non-communicable Human Disease**

Name of the Course : **B.Sc. (Hons.) Biochemistry (NEP/CBCS-LOCF)**

Semester : **VI**

Duration : **2 Hours**

Maximum Marks : **60**

(Write your Roll No. on the top immediately on receipt of this question paper.)

There are 6 questions.

Attempt *four* questions in all.

Question No. **1** is compulsory.

All questions carry equal marks.

1. (a) Write full forms of the following (any *five*) :

(i) COPD

(ii) ARDS

(iii) PKU

(iv) DVT

(v) IBS

(vi) CFTR

P.T.O.

- (b) State True/False for the given statements :
- (i) PCOS is an example of multifactorial disorder.
 - (ii) Emphysema is an acute ovarian disorder.
 - (iii) Atherosclerosis involves deposition of lipids in myocardium
 - (iv) Misfolded proteins are degraded by the proteasome system.
 - (v) Cystic Fibrosis is caused by mutation in CFTR gene.
- (c) Compare and contrast anorexia nervosa and bulimia nervosa. 5,5,5
2. (a) Write a short note on molecular basis of cancer and explain the molecular approaches to treat cervical cancer and preventive vaccines.
- (b) Explain the causes and molecular basis of COPD and emphysema.
- (c) Discuss the pathophysiology and risk factors associated with PCOS. 5,5,5
3. (a) Discuss the causes and consequences of Atherosclerosis.
- (b) Differentiate between Anorexia nervosa and Bulimia.
- (c) Discuss the biochemistry behind IBS and the role of diet in this condition. 5,5,5

4. (a) Write down the etiology and the molecular basis behind Thalassemia.
- (b) How does a proteasome system play role in the removal of misfolded proteins ? Explain with diagram.
- (c) Discuss the molecular basis of Alzheimer's disease. 5,5,5
5. Write short notes on the following (any *five*) :
- (a) Ischemic heart disease
- (b) Emphysema
- (c) Alkaptonuria
- (d) Glomerulonephritis
- (e) Long QT syndrome
- (f) Maple syrup urine disease. 3×5
6. (a) What do you understand by metabolic syndrome ?
- (b) How metabolic syndrome is linked to hypothyroidism and hypertension ?
- (c) Explain the role of diet, stress and environmental factors on metabolic disorders. 5,5,5