

Seat No. : \_\_\_\_\_

# AB-114

April-2023

B.Sc., Sem.-VI

## CC-307 : Biotechnology (Health Biotechnology)

Time : 2:30 Hours]

[Max. Marks : 70

- Instructions :** (i) Draw figures wherever necessary.  
(ii) Write question number against each answer.

1. Discuss in detail about types, modes of transmission and control of common infectious diseases. 14

**OR**

- (A) Describe the role of epidemiology in prevention, diagnosis and control of disease. 7  
(B) Explain Koch's postulates and discuss its significance in diagnosis of diseases. 7

2. Describe in detail any three molecular diagnostics used in detection of diseases. 14

**OR**

- (A) Write briefly about regenerative medicine in diseases. 7  
(B) Discuss how molecular genetics can help in diagnosis of cancer. 7

3. What is recombinant vaccine ? Discuss viral vector and subunit recombinant vaccines with suitable examples. 14

**OR**

- (A) Define therapeutic protein. Write about uses of Insulin, Erythropoietin and INF. 7  
(B) Describe about enzyme replacement theory. 7

4. Explain structure, genetic system and pathogenesis of Covid-19. 14

**OR**

- (A) Explain in detail pathogenesis and diagnosis of AIDS. 7  
(B) Write a note on biological weapons with examples. 7

5. Answer any **seven** of the following :

**14**

- (1) Define endemic and pandemic and write examples.
  - (2) What are pathogenicity islands ?
  - (3) Name different categories of exotoxins.
  - (4) Write the principle of Western blotting.
  - (5) Name the diseases treated by monoclonal antibodies. (any four diseases)
  - (6) Compare ELISA and RIA techniques.
  - (7) Differentiate DNA and RNA vaccines.
  - (8) What is anticancer drug ? Give example.
  - (9) Expand GCSF and write its function.
  - (10) Name two methods of management of thalassemia.
  - (11) Write two examples of emerging infections.
  - (12) Write about sickle cell anaemia.
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