

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

# MM-127

March-2019

B.Sc., Sem.-VI

## 307 : Biotechnology (Health Biotechnology)

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Discuss in detail different modes of transmission and control of infectious diseases giving suitable examples. 14

**OR**

- (i) Explain how different cell components contribute to the pathogenicity of pathogen. 7
- (ii) State Koch's Postulate and exceptions therein. How these exceptions are resolved ? 7
- (B) Answer the following : (Any **four**) 4
- (i) What is meaning of lysogenic conversion ?
- (ii) Define Analytical Epidemiology.
- (iii) What are superantigens ?
- (iv) Define ID<sub>50</sub>.
- (v) Give example of Pandemic disease.
- (vi) What is prodromal period of a disease ?

2. (A) Explain how molecular genetics can help in diagnosis of cancer. 14

**OR**

- (i) Explain ELISA technique and its application in disease diagnosis. 7
- (ii) Discuss principle of PCR and its application in diagnosis of diseases. 7
- (B) Answer the following : (Any **four**) 4
- (i) Give full form of RFLP.
- (ii) Give the principle behind DNA fingerprinting.
- (iii) What are DNA probes ?
- (iv) Name two diseases that can be diagnosed using Western blotting.
- (v) Give two applications of HLA typing.
- (vi) Define Bioinformatics.

3. (A) What are therapeutic proteins ? Discuss uses of Stomatostatin, HGH and INF. 14

**OR**

(i) Discuss the use of monoclonal antibodies as a therapeutic agent. 7

(ii) Write a note on recombinant vaccine and their application in control of diseases. 7

(B) Answer the following : (Any **three**) 3

(i) Give example of enzyme deficiency disease.

(ii) What are DNA vaccines ?

(iii) Give the full form of GCSF.

(iv) Haemophilia A is caused by deficiency of which clotting factor ?

(v) Name an anticancer drug.

4. (A) Write a detailed note on Biological weapons including examples. 14

**OR**

(i) Explain in detail pathogenesis and diagnosis of AIDS. 7

(ii) Write a detailed note on Malaria. 7

(B) Answer the following : (Any **three**) 3

(i) List any two emerging infectious diseases.

(ii) What is SCID ?

(iii) Give any two methods for management of thalassemia.

(iv) Name any two autosomal recessive diseases in humans.

(v) Define metastasis.

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