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**B.PHARM.****THEORY EXAMINATION (SEM-VIII) 2016-17****PHARMACEUTICS-X****Time : 3 Hours****Max. Marks : 100****Note : Be precise in your answer.****SECTION – A****1. Explain the following:****10 x 2 = 20**

- (a) Haptens
- (b) Immunity
- (c) Vaccine
- (d) rDNA
- (e) Antibiotics
- (f) Immobilization
- (g) Mutants
- (h) Tolerance
- (i) Antigen
- (j) Bio-transformation

**SECTION – B****2. Attempt any five parts of the following questions:****5 x 10 = 50**

- (a) Discuss the cellular and humoral immunity.
- (b) Describe monoclonal antibodies and explain their application in pharmacy.
- (c) Give isolation of mutants and factors affecting.
- (d) Give biotransformation process methodology of steroids.
- (e) Discuss immobilization technique of cell.
- (f) Discuss antigen-antibody reaction and their pharmaceutical application
- (g) Classify immunity. Explain cellular immunity.
- (h) Describe screening of soil for production of antibiotics.

**SECTION – C**Discuss biotechnological production and application of any **five**:**5 x 6 = 30**

3. Penicillinase
4. Amylase
5. Insulin
6. Protease
7. Somatotropin
8. Monoclonal antibody