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AH-622 Seat No. _____

Third Year B. Sc. (Sem. VI) Examination

April - 2019

Biotechnology : Paper - XI

CC-I-11 : Fundamentals of Immunology

Time : **3** Hours] [Total Marks : **70**

1 MCQS : (All questions are compulsory) **15**

(1) The characteristics of adaptive immunity includes.
- (A) Immunologic memory.
- (B) Specificity.
- (C) Discriminationof self from nonself molecules.
- (D) All of these.

(2) Immunologic memory is provided by :
- (A) T cell
- (B) B cell
- (C) Phagocyte
- (D) Both (A) and (B)

(3) Humoral immunity is mediated by :
- (A) Macrophage
- (B) B cell
- (C) Phagocyte
- (D) Both (A) and (B)

(4) Any substance that promote phagocytosis of antigen by binding to them are called as.
- (A) Interleukin
- (B) Opsonins
- (C) Cytokine
- (D) Lipoprotein

(5) Antibodies produced against pathogen is.
(A) polyclonal
(B) monoclonal
(C) homoclonal
(D) All with same specificity

(6) Which antibody can cross the placenta and provide passive immunity to the new born ?
(A) IgA
(B) IgG
(C) IgD
(D) IgE

(7) Antigens can be :
(A) Carbohydrate
(B) Proteins
(C) Nucleic acid
(D) All of these

(8) Hybridoma technology was developed by :
(A) Khorana and Nirenberg
(B) Beedle and Tautum
(C) Kohler and Milstein
(D) Khorana and Korenberg

(9) In Hybridoma techonolgy, Hybrid cells are selected in :
(A) HAT medium
(B) MS medium
(C) X-gal medium
(D) LAL medium

(10) Light chain and heavy chain are joined by :
(A) Hydrogen bond
(B) Covalent bond
(C) Ionic bond
(D) Disulphide bond

(11) Agglutination reaction is more sensitive than precipitation for the detection of :
(A) Antibodies
(B) Antigens
(C) Antigen antibody complexes
(D) None of above

(12) Define Hapten.

(13) List out secondary lymphoid organs.

(14) Full form of CD.

(15) Define Freund's complete adjuvant.

2 Give a short note on any five of the following : **25**

(1) Phagocytosis
(2) Properties of antigen.
(3) Epitope.
(4) T cell generation.
(5) Lattice hypothesis
(6) Spleen.
(7) T cell and B cell.

3 Give a detailed note on any three of the following : **30**

(1) Draw basic antibody structure and enlist function of antibody.
(2) Monoclonal antibody.
(3) ELISA.
(4) T-ell generation, activation and differentiation.
(5) Innate and acquired immunity.
