

M.Sc. 3rd Semester Examination, 2015

BMLS AND M

PAPER – BML-301

Full Marks : 40

Time : 2 hours

Answer Q. No. 1 and any three from the rest

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer any ten questions of the following : 1 × 10

(a) A hapten is

(i) An epitope

(ii) An paratope

- (iii) A small chemical grouping which reacts with preformed antibodies
 - (iv) An immunogen react with preformed antibodies as a giant group.
- (b) The a chain of FCCRI
- (i) binds IgE
 - (ii) bind IgG
 - (iii) Contains GPI anchor protein
 - (iv) binds with allergen
- (c) All are mast cells product except
- (i) Histamin
 - (ii) Prostaglandin
 - (iii) Neutral profease
 - (iv) Xanthinc oxidase
- (d) Antibody titer is determined by
- (i) Both abundance and the affinity of the antigen-specific antibodies in an anterum

(3)

- (ii) Lowest dilution of antibody still able to give a positive result in a test system by the sensitivity of read out system
 - (iii) Absolute amount of specific antibody
 - (iv) Affinity of specific antibody
- (e) The affinity of an antibody can be determined by
- (i) The valency of antigen binding
 - (ii) Its ability to neutralized immunogenic toxin
 - (iii) The sedimentation coefficient of the antibody
 - (iv) The amount of antibody bound at various antigen concentration.
- (f) What is hemolysin ?
- (g) Write the full form of TMRITC.
- (h) Write the name of two instances where you will find false positive reaction in RPR test.

(4)

- (i) What is meant by sensitization ?
 - (j) What is zeta potential ?
 - (k) Write the name of a marker antibody of SLE.
 - (l) What is postzone phenomenon ?
 - (m) What is the implication CD4⁺ cell in AIDS patient ?
 - (n) What do you mean by window period of a bacteria ?
 - (o) What is heat inactivation of serum ?
2. (a) What are co-agglutination and haemagglutination ?
- (b) What is zone of equivalence ?
- (c) What is nephelometry ? 4 + 3 + 3
3. (a) What is Kauffmann White classification ?
- (b) How do you interpret the result of WIDAL test ?

(5)

- (c) Why Ouchterlong double diffusion is performed ?
- (d) What is hybridoma technology ? 2 + 2 + 3 + 3
4. (a) Write the principle of FTA-abs double staining method for syphilis detection.
- (b) What is the status of reagin in different stages of syphilis ?
- (c) How do you assess the new case of toxoplasmosis or acquired case of toxoplasmosis in new born baby ?
- (d) Write the name of few parameters in the correct judgement of SLE. 3 + 2 + 3 + 2
5. (a) What do you mean by degenerative RA ? Enumerate any one cause of degenerative RA by showing its mechanism.
- (b) Describe double dimension immuno-electrophoresis with its characteristic feature. (1 + 4) + 5

6. (a) What is arthus reaction ?
- (b) What is the importance of blocking in Western blot technique ?
- (c) How HIV enters the cells and destroy the cell – describe the mechanism along with diagrammatic representation. 2 + 2 + 6
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