BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – B.Sc.(MLT)-2019/B.Sc.(MLT)-2021
Course Name – Immunopathology
Course Code - BMLT504
(Semester V)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Identify which of the following is a oncofetal Tumor antigen
   a) p53 b) bcl-2
   c) alpha-fetoprotein (AFP) d) Mononuclear Antigen

(ii) Identify Cell Blebbing is a characteristic clinical feature of
   a) Apoptosis b) Necrosis
   c) Phagocytosis d) Metastasis

(iii) Select which organ is considered the primary lymphoid organ where T cells mature?
   a) Spleen b) Thymus
   c) Bone marrow d) Lymph nodes

(iv) Choose the lymphoid organ which is responsible for filtering and trapping pathogens in lymphatic fluid?
   a) Spleen b) Thymus
   c) Tonsils d) Adenoids

(v) Label the main function of the membrane attack complex (MAC)
   a) Promoting inflammation b) Phagocytosis of pathogens
   c) Lysis of target cells d) Antigen presentation

(vi) Myasthenia gravis is an autoimmune disease that's categorized
   a) Type III is IgG mediated b) Type III is IgD mediated
   c) Type II d) Type IV

(vii) Monoclonal antibodies used in clinical transplantation are primarily employed for:
   a) Preventing organ rejection b) Enhancing the immune response
   c) Diagnosing infectious diseases d) Stimulating tissue regeneration

(viii) Rheumatoid arthritis is an .....disease that affects the.....

a) Allergic/cartilage
b) Autoimmune/nerves
c) Autoimmune/joints
d) Immunodeficiency/muscles

(ix) The inflammatory response in allergy is due to the release of _____ by mast cells.

a) Antibodies
b) Antigens
c) Mucus
d) Histamine

(x) Employ Bacillus Calmette Guerin(BCG) is given to prevent

a) Tuberculosis
b) Measles
c) Tetenus
d) Cholera

(xi) Identify the correct term of "Pallor", cardinal sign in Inflammation process

a) Tumor
b) Swelling
c) Redness
d) Pain

(xii) Allergies to sea food and eggs is an example of

a) Type I hypersensitivity
b) Type II hypersensitivity
c) Type III hypersensitivity
d) Type IV hypersensitivity

(xiii) Choose the cytokines from T-helper cell(TH) which activated MHC class molecules

a) IL12
b) IL2
c) TNF-alfa
d) IFN-gamma

(xiv) Choose the Rotavirus is detected by

a) Antigen in stool
b) Antibody in Serum
c) Demonstratation of virus
d) Stool Culture

(xv) What does HLA stand for in the context of HLA typing?

a) Human Leukocyte Antigen
b) Highly Lethal Alleles
c) Histidine Lymphocyte Analysis
d) High-Level Antibodies

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Give example of three immunodeficiency disorders (3)
3. Mention the cardinal sign of Inflammation and its related events. (3)
4. Explain the difference between Type 2 and 3 hypersensitivity (3)
5. Explain the function of Tumor necrosis factor(TNF-alfa) (3)
6. Compare between Allergen and Immunogen (3)

OR

Analyze the significance of cross-matching in Organ Transplantation (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Explain the pathogenesis of SLE and its relation with Type III hypersensitivity. (5)

8. Sketch and explain the steps of Malignant Transformation of Cells (5)

9. Discriminate between the Tumor grading and Tumor Staging (5)
10. Illustrate the pathogenesis of HIV. (5)

11. Explain Direct antiglobulin test (DAT) and write the applications of Cross-match in immunopathology. (5)

12. A 40-year-old woman presents with fever, fatigue, and joint pain. Her hsCRP levels are significantly elevated. How would you differentiate between an infectious cause and an inflammatory disorder based on hsCRP levels and other clinical findings? (5)

OR

A 55-year-old male with a family history of heart disease presents for a routine check-up. His lipid profile is within the normal range, but his hsCRP levels are elevated. How would you interpret these findings in the context of cardiovascular risk? What other factors would you consider, and what recommendations would you provide to the patient? (5)

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