



# BRAINWARE UNIVERSITY

**Term End Examination 2021 - 22**

**Programme – Bachelor of Science in Medical Lab Technology**

**Course Name – Immunology & Bacterial Serology**

**Course Code - BMLT401**

**( Semester IV )**

**Time allotted : 1 Hrs.15 Min.**

**Full Marks : 60**

[The figure in the margin indicates full marks.]

## Group-A

(Multiple Choice Type Question)

1 x 60=60

*Choose the correct alternative from the following :*

- (1) Immunology means
 

a) protect from pathogen	b) eliminate damaged or malignant cells
c) Study of immune systems	d) All of these
- (2) Specific immunities are referred to as
 

a) Adaptive immunity	b) Humoral immunity
c) Cell-mediated immunity	d) All of these
- (3) Immunity that Activates B-lymphocytes is called
 

a) Humoral	b) Cellular
c) All of these	d) None of these
- (4) Immunity that Activates T-lymphocytes is called
 

a) Humoral	b) Cellular
c) All of these	d) None of these
- (5) Primary lymphoid organ is
 

a) Spleen	b) bone marrow
c) GALT	d) MALT
- (6) Physiological barriers for innate immunity
 

a) temperature	b) pH
c) All of these	d) None of these
- (7) The site of B cells maturation in birds
 

a) Erythroid lineage	b) Lymphoid lineage
c) Myeloid lineage	d) Bursa of Fabricius

- (8) Natural killer cells
- |                                |                                |
|--------------------------------|--------------------------------|
| a) Ingest and destroy microbes | b) Ingest and destroy microbes |
| c) Kill virus infected cells   | d) Inhibit viral replication   |
- (9) Interferons
- |                                |                                |
|--------------------------------|--------------------------------|
| a) Ingest and destroy microbes | b) Ingest and destroy microbes |
| c) Kill virus infected cells   | d) Inhibit viral replication   |
- (10) defender against parasites
- |               |               |
|---------------|---------------|
| a) Neutrophil | b) Eosinophil |
| c) Basophil   | d) Macrophage |
- (11) Major effector cell in allergy
- |                    |                |
|--------------------|----------------|
| a) Dendritic cells | b) Monocytes   |
| c) Mast cells      | d) Macrophages |
- (12) Primary portals of entry for pathogens
- |                      |                           |
|----------------------|---------------------------|
| a) Respiratory tract | b) Gastrointestinal tract |
| c) All of these      | d) None of these          |
- (13) Immunity in which antibodies produced elsewhere are given to the individual is called
- |                    |                      |
|--------------------|----------------------|
| a) Active immunity | b) Passive immunity  |
| c) Innate immunity | d) Acquired immunity |
- (14) The immunity is stimulated by initial exposure to specific foreign macromolecules through the use of vaccines to artificially establish a state of immunity, called
- |  |   |
|--|---|
| a) Artificially acquired Active immunity | b) Naturally acquired Active immunity     |
| c) Naturally acquired passive immunity   | d) Artificially acquired passive immunity |
- (15) \_\_\_\_\_Antigen binding site , is a part of an antibody
- |                |            |
|----------------|------------|
| a) Paratope    | b) Epitope |
| c) Multivalent | d) Lattice |
- (16) Formation of Ag-Ab complex, is the mechanism of
- |                       |                  |
|-----------------------|------------------|
| a) Agglutination      | b) Precipitation |
| c) Immunofluorescence | d) Opsonization  |
- (17) ELISA means
- |  |                                      |
|--|--------------------------------------|
| a) enzyme-linked immunosorbent assay   | b) enzyme-locked immunosorbent assay |
| c) enzyme-linked immunosubstrate assay | d) None of these                     |
- (18) Complement system
- |                                 |  |
|---------------------------------|--|
| a) consist of 20 serum proteins | b) serum protein act as biological cascade |
| c) All of these                 | d) None of these                           |
- (19) The most common class of antibody involved in hypersensitivity is
- |        |        |
|--------|--------|
| a) IgD | b) IgG |
| c) IgM | d) IgE |
- (20) Type IV hypersensitivity is also called as
- |                               |                                    |
|-------------------------------|------------------------------------|
| a) immediate hypersensitivity | b) delayed hypersensitivity        |
| c) cytotoxic hypersensitivity | d) immuno complex hypersensitivity |
- (21) Antibody dependent cytotoxicity is associated with
- |                            |                             |
|----------------------------|-----------------------------|
| a) type I hypersensitivity | b) type II hypersensitivity |
|----------------------------|-----------------------------|

- c) type III hypersensitivity  
 (22) In direct ELISA which is detected in sample ?  
 a) Antigen  
 c) All of these
- d) type IV hypersensitivity  
 b) Anti body  
 d) None of these
- (23) In indirect ELISA which is detected in sample ?  
 a) Antigen  
 c) All of these
- b) Anti body  
 d) None of these
- (24) In sandwich ELISA which is detected in sample?  
 a) Antigen  
 c) All of these
- b) Anti body  
 d) None of these
- (25) In COMPETITIVE ELISA which is detected in sample ?  
 a) Antigen  
 c) All of these
- b) Anti body  
 d) None of these
- (26) Proteins are separated in an SDS-PAGE experiment on the basis of their  
 a) positively charged side chains  
 c) negatively charged side chains
- b) molecular weight  
 d) different isoelectric points
- (27) In an SDS-PAGE  
 a) proteins are denatured by the SDS  
 c) smaller proteins migrate more rapidly through the gel
- b) proteins have the same charge-to-mass ratio  
 d) all of these
- (28) In Western blotting  
 a) agarose gel is commonly used  
 c) high resolution gels
- b) polyacrylamide gel is commonly used  
 d) All of these
- (29) Auto antigen  
 a) Antigen present in ones own cell  
 c) all of these
- b) Alters by the action of virus,bacteria or drug as a nonself  
 d) none of these
- (30) Altered or mordified antigen by chemical, physical or microbial agent is called  
 a) hidden antigen  
 c) cross reacting antigen
- b) neo antigen  
 d) immunoregulation
- (31) thyroiditis is a  
 a) localized autoimmune disease  
 c) all of these
- b) organ specific autoimmune disease  
 d) none of these
- (32) Rheumatoid arthritis is a  
 a) organ specific autoimmune disease  
 c) All of these
- b) non-organ specific autoimmune disease  
 d) none of these
- (33) Haemolytic anemia is treated with  
 a) chlorine  
 c) antimitotic drug
- b) vitamin B12  
 d) penicillin
- (34) Hypersensitivity is  
 a) allergy  
 c) All of these
- b) autoimmunity  
 d) None of these

- (35) IgE antibody is associated with
- a) Type I hypersensitivity reaction
  - b) Type II hypersensitivity reaction
  - c) Type III hypersensitivity reaction
  - d) Type IV hypersensitivity reaction
- (36) Skin is affected by
- a) Type I hypersensitivity reaction
  - b) Type II hypersensitivity reaction
  - c) Type III hypersensitivity reaction
  - d) Type IV hypersensitivity reaction
- (37) Diagnostic test for delayed hypersensitivity reaction:
- a) Mantoux test
  - b) patch test
  - c) all of these
  - d) none of these
- (38) Delayed type hypersensitivity is transferred with
- a) monocyte
  - b) organ
  - c) lymphocyte
  - d) T cell
- (39) Tertiary binding test measures
- a) the consequences of immune response in vitro
  - b) the consequences of immune response in vivo
  - c) all of these
  - d) none of these
- (40) Which of the following immunity is obtained during a lifetime?
- a) active immunity
  - b) passive immunity
  - c) acquired immunity
  - d) innate immunity
- (41) How many types of antibodies are there?
- a) five
  - b) three
  - c) two
  - d) four
- (42) Which of the following statements is true about the IgM of humans?
- a) IgM can cross the placenta
  - b) IgM can protect the mucosal surface
  - c) IgM is produced by high-affinity plasma cells
  - d) IgM is primarily restricted in the circulation
- (43) Interferons are
- a) Cytokine barriers
  - b) Physical barriers
  - c) Cellular barriers
  - d) Physiological barriers
- (44) VDRL test is an example of
- a) Tube test
  - b) Ring test
  - c) Slide test
  - d) none of these
- (45) Weil-Felix reaction is based on sharing of antigens between
- a) sheep RBCs and EB virus
  - b) mycoplasma and human O group RBCs
  - c) rickettsial antigens and antigens of certain strains of Proteus
  - d) none of these
- (46) In which of the following case a large lattice is formed?
- a) Antibody is in excess
  - b) Antigens and antibodies are in optimal proportion
  - c) Antigen is in excess
  - d) None of these
- (47) Antibodies are
- a) prostaglandins
  - b) steroids
  - c) lipoproteins
  - d) glycoproteins
- (48) Globulins of the blood plasma are responsible for

- a) defence mechanisms  
c) oxygen transport
- b) blood clotting  
d) osmotic balance
- (49) Which of the following antibodies is predominantly present in tears, saliva and mucous
- a) IgM  
c) IgE
- b) IgG  
d) IgA
- (50) The class of antibodies, which can cross placenta is
- a) IgD  
c) IgG
- b) IgA  
d) IgM
- (51) Antigen binding sites are present in
- a) Fab regions of an antibody  
c) only in the light chain
- b) Fc region of an antibody  
d) only in the heavy chain
- (52) Which of the following technique is used in DNA fingerprinting?
- a) Western blotting  
c) Northern blotting
- b) Southern blotting  
d) Eastern blotting
- (53) Probe is a
- a) protein for detecting a specific DNA molecule
- b) short piece of labelled DNA which are complementary to the nucleic acid strand to be detected
- c) short piece of labelled DNA or RNA which are complementary to the nucleic acid strand to be detected
- d) none of these
- (54) The response to an immunogen is often enhanced if it is administered as a mixture with substances called
- a) Epitope  
c) Adjuvant
- b) Immunogen  
d) Antigen
- (55) The protein involved in antigen-antibody reaction
- a) opsonin  
c) All of these
- b) Lysine  
d) None of these
- (56) The cell that ingest and destroy microbes, and present antigen to helper T-cells
- a) Macrophages  
c) All of these
- b) Dendritic cells  
d) None of these
- (57) What do you mean by "biomarkers"
- a) a biomarker is a "biological marker pen that marks particular organ for diagnosis"
- b) a biomarker is "a characteristic that is objectively measured and evaluated as an indicator of normal biological processes"
- c) It is a marker that is eco friendly that used in cancer diagnosis.
- d) It's a biological process of marking a particular body parts.
- (58) Full form of CRP is
- a) C-reactive Protein  
c) Cornea Reaction Protein
- b) Cervix Receiving Protein  
d) C-Reaction Protein
- (59) CRP Elevation Factors.
- a) Smoking, Obesity, Diabetic  
c) Obesity, Hardwork, Jogging
- b) Sleeping, Cycling, Food intake.  
d) All of these
- (60) In 'C Reactive Protein', the letter 'C' is short for?

- a) Cellular
- b) Cytoplasmic
- c) Capsular polysaccharide of pneumococcus
- d) Concanavalin A