



Note : Answer for all questions

Bacteriology:

(20Pts)

Q1: Choose the correct answers:

(13.5 pts / each 1.5 pts)

- 1- Which of the followings is/are true according to gram-positive bacteria?
 - a- Cell wall comprises of many layers
 - b- The cell wall is thicker than the associated gram-negative bacteria.
 - c- Cell wall comprises of teichoic acids
 - d- All of the above
- 2- Which of this bacteria is resistant to penicillin as it lacks a cell wall
 - a- Spirochetes
 - b- Cyanobacteria
 - c- Mycoplasmas
 - d- All of the above
- 3- Each of the following agents is a recognized cause of diarrhea except
 - a- Clostridium perfringens
 - b- Vibrio cholerae
 - c- Enterococcus faecalis
 - d- Escherichia coli
- 4- The coagulase test is used to differentiate
 - a- Staphylococcus epidermidis from Neisseria meningitidis
 - b- Staphylococcus aureus from Staphylococcus epidermidis
 - c- Streptococcus pyogenes from Staphylococcus aureus
 - d- Streptococcus pyogenes from Enterococcus faecalis
- 5- Which of the following may contain fimbriae
 - a- Gram-positive bacteria
 - b- Gram-negative bacteria
 - c- Both (a) and (b)
 - d- None of these.
- 6- The cell walls of many gram positive bacteria can be easily destroyed by the enzyme known as.
 - a- lipase
 - b- lysozyme
 - c- pectinase
 - d- peroxidase



- 7- The structure responsible for motility of bacteria is - 17
- a- pilli
 - b- flagella
 - c- sheath
 - d- capsules
- 8- All are the general characteristics of enteric bacteria, EXCEPT
- a- Catalase positive
 - b- Non-spore forming
 - c- Grow in media with bile salts
 - d- Nitrate negative
- 9- Enteric bacteria are mainly classified based on their ability to ferment various sugars including lactose. Which of the following bacteria is a non-lactose fermenter
- a- Klebsiella spp
 - b- Salmonella spp
 - c- Enterobacter spp
 - d- Citrobacter spp



Q2: Mention the functions of the cell membrane?

(6.5 pts)

Immunology

(20Pts)

Q3: Choose the correct answers:

(16 pts / each 2 pts)

- 1- All of the following are true with respect to IgM antibodies EXCEPT which one
- a. They fix complement
 - b. They predominate in the primary response to antigen
 - c. They are glycoproteins
 - d. They mediate allergic reaction
- 2- The major role of the complement system is to work in conjunction with
- a. Antibodies to lyse cells via the C8 and C9 components
 - b. The major histocompatibility complex for cell recognition
 - c. Antibodies to opsonize cells
 - d. The T cell receptor for production of lymphokines
 - e. Antibodies to lyse cells via the perforin molecules

- 3- All of the following are true of antigen EXCEPT which one of the following?
- They contain epitopes.
 - They will react with antibodies.
 - They contain antigenic determinants.
 - They can elicit an immune response.
 - They contain paratopes
- 4- All of the following are true with respect to IgE molecules, EXCEPT which one?
- They are the principal immunoglobulin class involved in allergic reactions.
 - They are involved in mediating antiparasitic immune responses.
 - They will cross the placenta and fix complement.
 - They can affect the release of histamine and other chemical mediators.
 - They are the least abundant immunoglobulin in the serum.
- 5- Which of the following immunoglobulins is present normally in plasma at the highest concentration in secondary response?
- IgG
 - IgM
 - IgA
 - IgD
 - IgE
- 6- All of the following are true about antibodies, EXCEPT which one?
- They fix complement.
 - They occur on the surface of B lymphocyte
 - They predominate the primary immune response to antigen.
 - They are glycoproteins.
 - They are molecule with a single, defined amino acid sequence.
- 7- The class of an immunoglobulin
- Is determined by Class I and Class II major histocompatibility complex proteins
 - Is determined by the carbohydrate attached to the light chain is
 - Determined by the antigen
 - Is determined by the heavy chain type
 - Is determined by the J-chain
- 8- Which immunoglobulin is the principal one found in secretions such as milk?
- IgG
 - IgM
 - IgA
 - IgD
 - IgE

9- This class of antibody binds to mast cells and basophils, thus invoking inflammation.

- a. IgA
- b. IgE
- c. IgM
- d. IgG
- e. IgD

Q4: Mark with True (T) and False (F):

(4 pts/each 1pt)

- 1- Tears contain immunoglobulins IgA
- 2- Cell-Mediated (Delayed) Hypersensitivity is cytotoxic
- 3- In Immune Complex Hypersensitivity, the drugs such as penicillin can attach to surface proteins on red blood cells and initiate antibody formation
- 4- Amino acid heteropolymers are less immunogenic than homopolymers

Paraitology

(21Pts)

Q5: Choose the correct answers:

(21 pts/ each 1.5 pts)

- 1- Plasmodium Transmitted by the bite of infected
 - a- Male anopheles
 - b- Female of Edes
 - c- Femal of Anopheles
- 2- Reproduction in Apicomplexa by
 - a- Schizogony
 - b- Binary fission
 - c- Sporogony
- 3- The main feature(s) of symptom with malaria
 - a- Regular
 - b- B- periodic
 - c- Both of them
- 4- Mature Cyst of Giardia has
 - a- 4 nucleus
 - b- 2 nucleus
 - c- 8 nucleus



- 5- Giardia transmitted by
- a- Cyst
 - b- Trophozoite
 - c- Water
- 6- Giardia lamblia lives as active trophozoites in
- a- Large intestine
 - b- Liver
 - c- Duodenum
- 7- Common giardiasis symptoms include
- a- Fatty diarrhea
 - b- Bloody diarrhea
 - c- Jaundice
- 8- Giardia can be classified as..... Parasite
- a- Ciliate
 - b- Flagellate
 - c- Sporozoite
- 9- blood film shoed T. cruzi in
- a- S shape
 - b- C shape
 - c- Amastigote with no flagella
- 10- Sleeping Sickness caused by
- a- Trypanosoma bruci
 - b- Trypanosoma cruzi
 - c- Leismania
- 11- Chagas diseas transmitted by
- a- Bug
 - b- Tse tse fly
 - c- Sand fly
- 12- Giardiasis can be diagnosed by
- a- Blood smear
 - b- X- ray
 - c- Fecal blood smear



- 13- The stage of T. bruci found
- a- Inside RBCs
 - b- Outside RBCs
 - c- In WBCs
- 14- Invasion of T. bruci to CNS causes
- a- Splenomegaly
 - b- Coma
 - c- Anemia

Mycology

(19 Pts)

Q6: Choose the correct answers:

(14 pts/ each 2 pts)

- 1- Fungal cell wall is composed of
- a- chitin
 - b- chitin and cellulose
 - c- hemicellulose
 - d- only cellulose
- 2- The optimal growth temperature for molds is
- a- 37 C°
 - b- 25C°
 - c- 40C°
 - d- 50C°
- 3- One of the common fungal diseases of man is
- a- cholera
 - b- plague
 - c- typhoid
 - d- ring worm
- 4- Sexual reproduction is absent in
- a- phycomycetes
 - b- Ascomycetes
 - c- Basidiomycetes
 - d- Deuteromycetes



- 5- The common method of reproduction in yeast is
- fragmentation
 - fission
 - fusion
 - budding
- 6- Tinea unguium can be infected nail and cause:
- jock itch
 - onychomycosis
 - Athlete's foot
 - Mycetoma
- 7- All of the following are examples of superficial mycoses, except
- Tinea versicolor
 - Tinea nigra
 - Black piedra
 - Tinea pedis

Q7: Mark with true or false and correct the false sentences:- (5 pts/ Each 1pt)

- Many fungi produce poisonous substances called mycotoxins that can cause acute or chronic intoxication and damage
- Candida albicans* produce a family of agglutination –like sequence surface glycoproteins.
- Histoplasma capsulatum* is a monomorphic soil saprophyte that cause histoplasmosis
- Mycoses classified as superficial and cutaneous invading the internal organ
- Trichophytin is a crude antigen preparation that can be used to detect immediate – or-delayed hypersensitivity to dermatophytic antigen



Virology

(20Pts)

Q8: Define the followings:

(8 pts / Each 2pts)

- 1- Defective virus
- 2- Virion
- 3- Envelope
- 4- Capsomeres

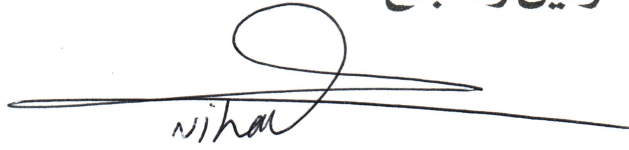
Q9: Discuss briefly the general Steps in Viral replication Cycles?

(6 pts)

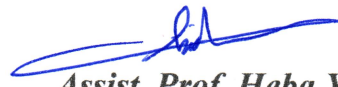
Q10: What are the properties that used as a basis for the classification of viruses?

(6 pts)

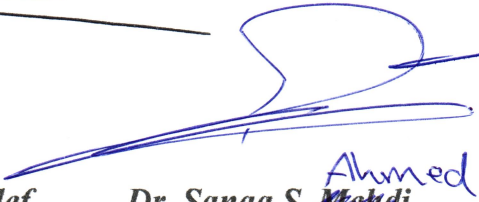
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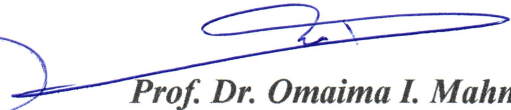
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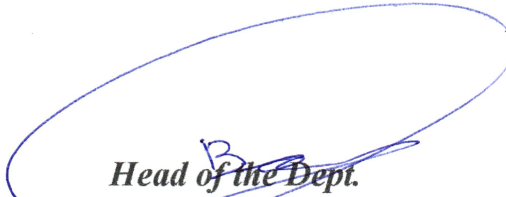
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