

Microbiology



May 2000

ANSWER THE FOLLOWING QUESTIONS:

I- Discuss the following points:

- 1- C.F.T principle and its application in diagnosis.
- 2- Restriction enzymes and their action on DNA.
- 3- Differences between immediate and delayed hypersensitivity.
- 4- Recognition of viral growth in cell culture.

II- Write short notes on:

- 1- What are the differences between the O and H antigens of the enterobacteriaceae.
- 2- What are the differences between V. cholera and V. El Tor.
- 3- Give reasons why active immunization against influenza is problematic.
- 4- Give reasons why Mycoplasma is not susceptible to penicillin.
- 5- Oncogenic viruses: enumerate and explain the laboratory methods used for diagnosis and identification of one.

III -Explain how can you deal with the following cases to reach proper diagnosis and to recommend treatment and /or control:

- 1- A suspected case of trachoma infection.
- 2- A suspected case of gas gangrene.
- 3- A suspected case of staph food poisoning.
- 4- A suspected case of tuberculous infection of the kidney.
- 5- A suspected case of rubella in early pregnancy.

September 2000

ANSWER THE FOLLOWING QUESTIONS:

I -Discuss the following points:

- 1- Alternative pathway of complement activation.
- 2- Plasmids, types and function.
- 3- Antiviral chemotherapy.
- 4- Replication of influenza virus.

II -Write short notes on:

- 1- Skin tests and their uses in diagnosis.
- 2- Antigenic variation in Salmonella.
- 3- General characters of Mycoplasma.

III -Explain how can you deal with the following cases to reach proper diagnosis and to recommend treatment and /or control:

- 1- A suspected case of thrush.
- 2- A suspected case of diphtheria carrier.
- 3- A suspected case of malta fever.
- 4- A suspected case of epidemic meningitis.

January 2001

Answer the following questions:

- 1) Mechanisms of action of antimicrobial drugs.
- 2) Mechanism for gene transfer.
- 3) Virulence factors of bacteria.
- 4) Differences between type I and type III hypersensitivity.
- 5) Mechanisms of autoimmunity with giving example.
- 6) Differences between typical and atypical mycobacteria.

June 2001

I- Compare and contrast the following:

- 1- Salk and sabin vaccine.
- 2- L form bacteria & Mycoplasma.
- 3- Street & fixed rabies virusis.
- 4- Classical and alternative pathways of complement.

II- Write short notes on:

- 1- Replication of DNA viruses.
- 2- Diagnosis of meningococcal carrier.
- 3- Antigenic variations of salmonella.
- 4- Define mutation and its types.

III- Explain how can you deal with the following cases to reach proper diagnosis and to recommend treatment and /or control:

- 1- A suspected case of mycotic infection under the nail.
- 2- A suspected case of pulmonary tuberculosis.
- 3- A suspected case of chronic gonorrhea.
- 4- A suspected case of whooping cough.
- 5- A suspected case of Rubella infection in pregnant lady.

September 2001

ANSWER THE FOLLOWING QUESTIONS:

I -Compare and contrast the following:

- 1- B and T lymphocytes.
- 2- Transduction and conjugation.
- 3- Staph and Salmonella food poisoning.
- 4- Typical and atypical mycobacteria.
- 5- Septic and aseptic meningitis.
- 6- Hepatitis A and B.

II- Comment shortly on:

- 1- Vaccination against rubella is contraindicated during pregnancy.
- 2- Blood culture can not be used for diagnosis of all fevers.
- 3- Tuberculin test may give false negative results.
- 4- Widal test needs proper interpretation.
- 5- Treatment with antibiotics may lead to complications.

III- What are the causative agents, laboratory methods used for diagnosis and prophylaxis for the following:

- 1- A case of undulant fever.
- 2- A case of cholera.
- 3- A case of epidemic cerebrospinal meningitis.
- 4- A case of Diphtheria.
- 5- A case of AIDS

January 2002

Discuss:

- 1) Bacterial transformation.
- 2) Growth curve of bacteria.
- 3) Complication of chemotherapy.

- 4) Type III hypersensitivity(Immune complex syndrome).
- 5) Diagnosis of a suspected case of epidemic cerebrospinal meningitis.

May 2002

I - Discuss:

- 1- DNA structure.
- 2- Classical pathway of complement activation.
- 3- Differences between staphylococci and salmonella food poisoning.
- 4- Diagnosis of oral candidiasis (thrush).

II - What are the causative agents. Mode of infection and the laboratory methods used for diagnosis of the followings:

- 1- A case of Enteric fever after the second week.
- 2- A case of Tetanus.
- 3- Primary case of cholera.

III - Write short notes on:

- 1- Serodiagnosis of syphilis
- 2- Diagnosis of AIDS (HIVinfection).
- 3- Poliomyelitis vaccines.
- 4- Vaccination against T.B.
- 5- Diagnosis of pneumonia due to Klebsiella pneumonia.

September 2002

I - Discuss:

- 1) Bacterial Capsules.
- 2) Bacterial Plasmids.
- 3) Type I Hypersensitivity.

II - What are the causative agents, methods of infection, diagnosis and control of the following diseases:

- 1) Rheumatic Fever.
- 2) Epidemic Cerebrospinal Meningitis.
- 3) Enteric Fever during the First Week.
- 4) Undulant Fever.
- 5) Whooping Cough.
- 6) Gas Gangrene.
- 7) Rabies.

January 2003

Answer the following questions:

- 1) How are metabolic by- products used as a diagnosis tools in the identification of microorganisms.**
- 2) What is the medical significance of:**
 - a- Organisms that form endospores.
 - b- LPS layer of Gram- negative cell wall.
 - c- Plasmids.
 - d- Capsules.

- 3) What are monoclonal antibodies, principles of their production, diagnostic and therapeutic uses.
- 4) Write an account on tumour associated antigens and mechanism of tumour immunity.
- 5) Only lysogenized strains of *C.diphtheriae* are pathogenic. Why and what are the lab. Methods used for diagnosis of diphtherial carrier.
- 6) Enumerate the virulence factors of *Streptococcus pyogenes* and the role of each factor in disease production.

June 2003

ANSWER THE FOLLOWING QUESTIONS::

- I- Compare and contrast between each of the following:
 - 1- Conjugation and transformation.
 - 2- Autoimmunity and immunodeficiency
 - 3- Replication of DNA and RNA viruses.
 - 4- Septic and aseptic meningitis.
- II- Comment on each of the following statements:
 - 1- IgE is essential for the development of type I hypersensitivity.
 - 2- Not all types of *E.coli* can induce gastroenteritis.
 - 3- Only certain types of staphylococci can produce food- poisoning.
 - 4- Duplicate blood culture is recommended for diagnosis of brucella. infection.
 - 5- Vaccination against rubella is contraindicated during pregnancy.
 - 6- Direct microscopic examination is of significant diagnostic value of some diseases.
 - 7- *C1. Tetani* cannot be isolated from the patient blood.
 - 8- Eradication of rodents help in prevention of some diseases.
- III- Explain how you deal with the following cases to reach proper diagnosis, then indicate the methods of controlling:
 - 1- A suspected case of cholera in a non- endemic area.
 - 2- A suspected case of typhoid fever in a second week.
 - 3- A suspected case of gas gangrene.
 - 4- A suspected case of syphilis in a second stage.
 - 5- A suspected case of hepatitis after blood transfusion.
 - 6- A suspected case of thrush.

August 2003

ANSWER THE FOLLOWING QUESTIONS:

- I- Write an account on each of the following:
 - 1- Inclusion bodies and their value in diagnosis with giving examples.
 - 2- Differences between staphylococcus and salmonella food poisoning.
 - 3- Graft rejection, types and mechanisms.
 - 4- Complications associated with antibiotic treatment.
 - 5- Virulence factors of bacteria.
 - 6- Antigenic variations in salmonella.

II- Explain how you deal with the following cases to reach diagnosis and to recommend treatment and /or control:-

- 1- A suspected case of purperal fever.
- 2- A suspected case of epidemic cerebrospinal meningitis.
- 3- A suspected case of infantile diarrhea.
- 4- A suspected case of poliomyelitis.
- 5- A suspected case of malta fever.
- 6- A suspected case of tetanus.
- 7- A suspected case of urinary tract infection.
- 8- A suspected case of ringworm.

January 2004

Answer the following questions:

- 1) Contrast conjugation and transduction.
- 2) Give an account on intradermal tests and their value in diagnosis of some diseases.
- 3) How can meningococci and gonococci be distinguished in the clinical laboratory and what are the virulence factors of both types.
- 4) What is the nature of the antigen in the vaccines against each of the following organisms:
 - a- Streptococcus pneumoniae b- Neisseriae meningitidis
 - c- Corynebacterium diphtheriae d- Mycobacterium tuberculosis.
- 5) (Bacillus anthracis is one of the biological weapons)

Discuss this statement: mention mode of transmission, Virulence pathogenesis, Lab. diagnosis, Control and prophylaxis of diseases caused by this organis.

June 2004

ANSWER THE FOLLOWING QUESTIONS:

I- Give a short account on each of the following:

- 1) Non- specific serological tests of common uses in Lab. Diagnosis.
- 2) Microbial toxins and their medical importance.
- 3) General properties of picorna viruses and disease produced by each member.
- 4) Toxic types and infective types of food poisoning.
- 5) Dimorphic fungi.

II- What is the causative organism and mode of infection of following:

- | | |
|--------------------|------------------------|
| 1) Enteric fever | 6) Malignant pustule |
| 2) Weil's disease | 7) puerperal sepsis |
| 3) Scarlet fever | 8) Glandular fever |
| 4) Epidemic typhus | 9) Traveler's diarrhea |
| 5) Whooping cough | 10) lyme disease. |

III -Explain how can you deal with the following cases to reach diagnosis and to recommend treatment and /or control:

- 1) A suspected case of tuberculous meningitis.
- 2) A suspected case of non- gonococcal urithritis.
- 3) A suspected case of infantile diarrhea.
- 4) A suspected case of diphtherial carrier.
- 5) A suspected case of malta fever.

September 2004

ANSWER THE FOLLOWING QUESTIONS:

I- Give an account on:

- 1- Types of plasmids and their medical importance.
- 2- Mechanisms of action antimicrobial agents.
- 3- Clinical applications and uses of monoclonal antibodies.
- 4- Classification of genus streptococci.
- 5- What are the virulence factors of the following organisms?
a- Vibrio cholera b- Cl.Tatani
c- N.meningitidis d- B. anthracis
e- Strept. Pneumoniae f- C. diphtheriae.

II- Compare and contrast between the following:

- 1- Salmonella and staphylococcal food- poisoning.
- 2- Specific and non specific immunity.
- 3- Septic and aseptic meningitis.
- 4- Living and killed vaccines.
- 5- Replication of DNA and RNA viruses.

III- Discuss, methods of Lab. Diagnosis, prophylaxis and control measurements of the following diseases.

- 1- Pulmonary tuberculosis.
- 2- Epidemic cerebrospinal meningitis.
- 3- Enteric fever.
- 4- Rabies.
- 5- Ringworm.

January 2005

Answer the following questions:

- 1) Mention the stages of bacterial pathogenesis and virulence factors.
- 2) Give an account on combination of antibiotics, advantages and uses.
- 3) Discuss the tumour associated antigens and mechanism of tumor immunity.
- 4) What are the causative agents and symptoms of each of the following:
a- Toxic shock syndrome b- Hemolytic uremic syndrome.
c- Reiter's syndrome. d- Guillain- Barre syndrome.
- 5) What is the type of specimen and important diagnostic tests used for diagnosis of each of the following:
a- Acute lobar pneumonia b- Infective endocarditis
c- Diphtherial carrier d- Typhoid carrier

June 2005

ANSWER THE FOLLOWING QUESTIONS:

I- Give a short account on each of the following:

- 1- Methods of gene transfer in bacteria.
 - 2- Classification and mechanism of graft rejection.
 - 3- Detection of virus cultivation in cell culture.
 - 4- Superficial mycosis and their methods of identification.
 - 5- Organisms most common in nosocomial infections, their sources and mode of transmission.
- II- For each of the following diseases, enumerate the causative organisms, then discuss methods of diagnosis of one organism from group
- 1- Meningitis.
 - 2- Gastroenteritis.
 - 3- Bacterial food- poisoning.
 - 4- Sexually transmitted diseases.
 - 5- Diseases transmitted after blood transfusion.
- III- Comment on each of the following statements:
- 1- Influenza virus vaccines are not fully effective.
 - 2- Chlamydia belongs to bacteria not to viruses.
 - 3- Sabin vaccine is widely used more than salk vaccine.
 - 4- Only lysogenized strains of C.diphtheriae are pathogenic.
 - 5- Ps. aeruginosa is not a member of Fam. enterobacteriaceae.
 - 6- Blood culture is the most reliable test for diagnosis of puerperal sepsis.
 - 7- Inclusion bodies are of diagnostic value in some viral diseases.
 - 8- In some diseases, isolation of the causative organisms are not possible.
 - 9- IgE is essential for development of type I hypersensitivity.
 - 10-Multidrug therapy is recommended in treatment of tuberculosis.

August 2005

ANSWER THE FOLLOWING QUESTIONS::

I- Write an account on each of the following:

- 1- Type I and type II hypersensitivity.
 - 2- Graft rejection: types and mechanisms.
 - 3- Virulence factors of bacteria with giving examples.
 - 4- Transformation and transduction.
 - 5- Complications associated with antibiotic treatments.
- II- For each of the following group of microorganisms, mention the general characters and methods of classification.
- 6- Picorna viruses.
 - 7- Mycobacterium.
 - 8- Streptococci.
 - 9- Salmonella.
 - 10- Dermatophytes.

- III- Enumerate the causative organisms of the following diseases and methods of Lab. Diagnosis of one organism for each disease.
- 11- Bacterial food- poisoning.
12- Urinary tract infection.
13- Pneumonia.
14- Meningitis.
15- Hepatitis
-

January 2006

Answer the following questions:

- 1) How are metabolic by-products used as a diagnostic tool in the identification of microorganisms?
 - 2) What is the basis of selective ability of the following drugs to affect bacteria but not human cells:
a- Penicillin b- Cephalosporins c- Aminoglycosides
d- Tetracyclines e- Erythromycin f- Chloramphenicol
g- Sulphonamides h- Rifampin.
 - 3) Describe how (a) Antibodies and (b) Cellular immunity specific for a certain antigen arise.
 - 4) What are the virulence factors produced by Staph. aureus and what is their postulated mode of action.
 - 5) What are the medically important Mycobacteria, How can you differentiate them from each other.
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May 2006

ANSWER THE FOLLOWING QUESTIONS:

Give a short account on each of the following:

- 1- How is plasmid - mediated resistance transmitted from one bacterium to another?
- 2- What are the suggested mechanisms for autoimmune diseases?
- 3- Name the target cell for each of the following viruses:
* Poliovirus * Rotavirus * EBV * HIV
- 4- What are the functions of CD4-positive T cells and CD8-positive T cells.
- 5- General characters of Fam. Enterobacteriaceae.

For each of the following items just enumerate:

- 1- Three new rapid techniques for detection of Mycobacteria in clinical samples.
- 2- Four different agents that cause Jaundice.
- 3- Five organisms causing food- poisoning.
- 4- Five diseases caused by Strept. pyogenes.
- 5- Five diseases acquired from animals.

What are the type of specimen, mode of transmission and important diagnostic tests used for diagnosis of the following diseases?

- Acute lobar pneumonia
- Cryptococcal meningitis
- Gas gangrene
- Legionnaires
- Diphtheria
- Infective endocarditis
- Relapsing fever
- Epidemic typhus
- Botulism
- HSV II

Compare and contrast each of the following:

- 1- Structure of the cell wall of gram-negative bacteria.
- 2- Mechanisms of action of antibacterial and antifungal agents.
- 3- Tuberculous and meningococcal meningitis.
- 4- Hepatitis B and hepatitis C virus infection.
- 5- Living and killed vaccines.

Discuss each of the following items:

- 1- A patient has received an I.M injection of antitetanic serum, few minutes later a severe reaction occurred that lead to the death of the patient.
What is the reaction? - describe the mechanism of the reaction
- 2- What pathogens are the most frequent cause of nosocomial infections? Describe the different ways they gain entry into the body.

August 2006

ANSWER THE FOLLOWING QUESTIONS:

Give a short account on each of the following:

- 1- Non-specific serological tests of common use in Lab. diagnosis.
- 2- Opportunistic fungal infections: Causes and Lab. diagnosis.
- 3- Definition and etiology of autoimmune diseases.
- 4- Definition of:
a) Plasmid b) Carrier c) Blocking Abs.
- 5- Antimicrobial agents against:
a) Candidiasis b) Legionnaires c) Influenza d) Typhoid.

Compare and contrast each of the following:

- 1- Toxic type and infective type of food-poisoning.
- 2- Type I and type II hypersensitivity.
- 3- Moist and dry heat sterilization.
- 4- Conjugation and transformation.
- 5- Septic and aseptic meningitis.

Give reasons (s) for each of the following:

- 1- False negative results may be obtained in Brucella agglutination test.
- 2- Bacillus anthracis can be chosen as a weapon of bioterrorism.
- 3- Loss of certain antigen may be associated with loss of virulence.
- 4- Living attenuated vaccine is superior than inactivated vaccine.
- 5- L-forms of bacteria are resistant to B-lactam antibiotics.
- 6- Not all types of Streptococci can produce Scarlet fever.
- 7- Diphtheria organism can not be isolated from blood.
- 8- Carriers are more dangerous than cases.
- 9- Epidemic typhus not a Zoonotic disease.
- 10- You have measles only once.

Explain how you deal with the following cases to reach diagnosis and to recommend treatment and /or control:

- 1- A suspected case of cholera in non-endemic area.
- 2- A suspected case of pulmonary tuberculosis.

- 3- A suspected case of Gas-gangrene.
- 4- A suspected case of Hepatitis B.
- 5- A suspected case of gonorrhea.

June 2007

Answer the following questions:

I - Give an account on each of the following:

- 1- Type III hypersensitivity reaction, mechanism of tissue damage and some examples.
- 2- Killing mechanism of cytotoxic T lymphocytes.
- 3- Food- poisoning organisms: compare between toxic and infective type.
- 4- Enumerate bacterial causes of milk-borne diseases & Lab diagnosis of one them.
- 5- Virulence factors of:
- N.meningitidis - Cl.perfringens - C.diphtheriae.

- 6- Discuss antiviral drugs, mechanism of action and give examples.
- 7- What are the target cells of:

EBV, HIV, Papilloma virus, Parvo B-19: Which of these viruses transmitted sexually.

- 8- Enumerate three viruses that cause skin eruptions.

Discuss the vaccine used against one of them.

II- for each of the following diseases, mention the causative organism, mode of transmission and Lab diagnosis.

- 9- Subacute bacterial endocarditis.

- 10-Lymphogranuloma venereum.

- 11-Acute glomerulonephritis.

- 12-Lyme disease.

- 13-Ring worm.

14- Read the following clinical case, and then answer the following question.

A 50 years old tourist development intense diarrhea 24 hours after leaving India, the stools are thin and watery, containing flakes of mucous, no pus or blood cells. Stool culture revealed rapid growth at the surface of alkaline peptone water.

- What your probable diagnosis?
- What are the confirmatory tests required to reach your diagnosis?
- What are the virulent factors of this organism?
- What are the treatments of this case?

15- Diagnosis of chancer is done by direct smear.

- Name the organism, the stain and type of microscope used.
- Mention TWO other diseases which can be diagnosed by direct smear using different staining methods.
- Describe the morphological findings that help in diagnosis of the previous three diseases.

16- Give reason (s) for each of the following:

- Phagocytosis is an important defense mechanism against extracellular but not intracellular bacteria.
 - Shigella dysenterie type I cause the severest form of bacillary dysentery.
 - B. anthracis is considered a chosen weapon for bioterrorism.
 - False negative results may be obtained in serodiagnosis of undulant fever.
 - Development of active prophylaxis against influenza virus is a problem.
 - PS. aeruginosa is not a member of Fam. enterobacteriaceae.
 - Eradication of rodents help in prevention of some diseases.

- Sabin vaccine is widely used more than salk vaccine.
- Mycoplasma does not have a defined shape.
- Chlamydia belongs to bacteria not to virus.

September 2007

ANSWER THE FOLLOWING QUESTIONS:

Describe in brief each of the following:

- 1- Indications and results of combined antimicrobial treatment.
- 2- Principle of tuberculin test and its interpretation.
- 3- Prophylaxis against cerebrospinal meningitis.
- 4- Differences between Chlamydia and viruses.
- 5- Classification of fungi.

Name the causative organisms, mode of infection and Lab. diagnosis of:

- 6- Malignant pustule.
- 7- Typhoid fever.
- 8- Malta fever.
- 9- Scarlet fever.
- 10- Syphilis.

What is the main virulence factor(s) responsible for the pathogenesis of?

- 11- Cholera
- 12- Diphtheria.
- 13- Botulism.
- 14- Tetanus.
- 15- Haemolytic uraemic syndrome.

Discuss each of the following:

- 16- What is the importance of Rh typing (blood grouping) before marriage?
- 17- What is serum sickness? How does it differ from Arthus reaction?
- 18- How do helper T cells activate B cells to produce antibodies?
- 19- How do cytotoxic T lymphocytes causes tumor lysis?
- 20- What is monoclonal antibodies and their uses?

Give an account on each of the following:

- 21- Enumerate viruses, which infect skin and describe the mode of infection and characteristic of the skin Latino.
- 22- Mechanisms of cell transformation and viruses implicated in human cancer.
- 23- Compare between live and killed viral vaccine with examples.
- 24- Criteria used for classification of viruses.
- 25- Methods of transmission and prevention of:
Hepatitis B virus- Poliomyelitis - HIV

May 2008

I- Answer the following questions:

- (1) Systemic infections may be initiated in the G.I.T. :
 - a- Enumerate 6 of these diseases (bacterial & viral).
 - b- For each disease, describe the causative organism, and its pathogenesis.
 - C- Lab. methods for diagnosis of one viral & one bacterial disease.
- (2) Both rubella virus and cytomegalovirus (CMV) are implicated as causes of congenital malformations.
 - a- Which one of these two viral infections poses a more serious problem? Explain

why?

b- What laboratory tests indicate that the newborn is congenitally infected?

c- What are the other modes of transmission of CMV?

(3) A 3- year old child development Haemophilus influenza meningitis.

a- Describe methods of isolation and identification of this organism.

b- What is the most likely type responsible for this meningitis, and then mention other diseases caused by this organism.

c- What are the methods used for typing of this organism.

(4) A 20- year- old male living in a rural area was brought to the hospital

complaining of muscle spasm; lock jaw (Trismus) & difficulty to open his mouth. His father stated that he was exposed to deep wound injury one week earlier.

a- What is the most probable causative organism?

b- Describe the pathogenesis of this organism?

c- Prevention and control of this disease.

II- Give an account on each of the following:

(5) Compare between toxin induced food- poisoning caused by staph. aureus & Cl.botulinum.

(6) Heterophil antibodies and their uses in diagnosis of some bacterial and viral diseases.

(7) O 157: H7 strain of E.coli: its pathogenesis, complications and Lab. Diagnosis.

(8) Discuss the causes of fungal meningitis, diagnosis and treatment of one cause.

(9) How do helper T cells activate B cells to produce antibodies?

(10) Control measures of hospital acquired urinary tract infections.

(11) Types of grafts and mechanism of graft rejection.

III-Give reason (s) for each of the following:

a- Blood culture is the most reliable test for the diagnosis of puerperal sepsis.

b- IgE type of antibodies is essential for the development of type I hypersensitivity.

c- Direct microscopic examination is of significant diagnostic value of some diseases.

d- Meningococcal vaccine does not include group B capsular polysaccharide.

e- Shigella dysentrie type I cause the severest form of bacillary dysentry.

f- Duplicate blood culture is recommended for diagnosis of Brucella infection.

g- Loss of certain antigen may be associated with loss of virulence.

h- Streptococcus is not usually isolated from a case of rheumatic fever.

i- Only lysogenized strain of C. diphtheriae are pathogenic.

j- Sulphonamides are bacteriostatic agents.

August 2008

Answer the following questions:

Give an account on each of the following:

1- Non-specific serological tests of common uses in Lab.diagnosis.

2- Opportunistic fungal infections: causes and Lab.diagnosi.

3- Toxic type and infective type of food-poisoning.

4- Lab. Methods of a suspected case of rheumatic fever.

5- Lab. Methods for diagnosis of hepatitis B virus infection.

6- Lab. Methods for diagnosis of pulmonary tuberculosis.

7- Virulence factors of:

- Strep.pyogenes - Cl.perfringens - C.diphtheriae - B.anthraxis.

- 8-** Definition of:
 - Plasmid - Superantigen - Blocking Abs - Carrier.
- 9-** Type II hypersensitivity, mechanism and examples.
- 10-** Recombinant vaccines, methods of production and examples.

11- Give reason (s) for each of the following:

- a) False negative results may be obtained in Brucella agglutination test.
- b) In some bacteria, loss of certain antigen is associated with loss of virulence.
- c) Living attenuated vaccines are superior than inactivated vaccines.
- d) Diphtheria organism cannot be isolated from patient blood.
- e) Moist heat is more effective against bacteria than dry heat.
- f) Only, certain types of streptococci can produce scarlet fever.
- g) L- form bacteria are resistant to B-lactam antibiotics.
- h) Repeated attacks of influenza during winter.
- i) Complication of antimicrobial therapy.
- j) You get measles only once.

11- Mention the causative organism(s) and mode of transmission of each of the following diseases:

- | | |
|--------------------------------------|--------------------|
| a- Epidemic cerebrospinal meningitis | b- Gas gangrene |
| c- Ophthalmia neonatorum | d- Enteric fever |
| e- Spongiform encephalopathy | f- Purperal sepsis |
| g- Malignant pustules | h- Whooping cough |
| i- Chancroid | j- Q fever |

Discuss each of the following items:

- 12-** A patient has received an I.M. injection of antitetanic serum, few minutes later a severe reaction occurred that lead to the death of the patient.
- 13-** What pathogens are the most frequent case of nosocomial infection? Describe the different ways they gain entry into the body.

January 200

ANSWER THE FOLLOWING QUESTIONS:

- 1- Sero diagnosis of syphilis.
- 2- Antigenic structure of salmonella and its relation to virulence.
- 3- How to diagnose urinary tuberculosis.
- 4- Diagnosis of suspected case of & whooping cough.

June 2009

Answer the following questions:

**I- Mention in table the etiological agent and mode in infection of
the following diseases:**

- a-** Malignant pustule.
- b-** Botulism.
- c-** German measles.
- d-** Bacillary dysentery.
- e-** Syphilis.
- f-** Relapsing fever.

II- Write an account on:

- a-** Tumor associated antigens and mechanisms of tumor immunity.
- b-** Differentiate between atopy and contact dermatitis.
- c-** Prophylaxis against:
 - 1-** Poliomyelitis.
 - 2-** Diphtheria.
 - 3-** Tuberculosis.
 - 4-** Pneumococcal pneumonia.
- d-** Purpose of:
 - 1-** Capsule.
 - 2-** Plasmid.
 - 3-** Outer membrane of gram negative bacteria.
- c-** Diseases caused by E.coli then discuss pathogenesis for one.
- f-** Viral pathogenesis

IV- Read the following case then answers the following questions:-

A 30 year – old man goes to the emergency room because of fever and anorexia for the past 3 days. He appears jaundiced. His liver is enlarged and tender. A Lab test shows abnormal liver function tests. The results of his hepatitis serologic tests as following; HAV IgM negative, HAV IgG positive and HBc Ig M positive.

- a)** What is your accurate diagnosis?
- b)** What is the most likely etiologic agent of this illness?
- c)** What are the other confirmatory tests used for Lab diagnosis?
- d)** What is the vaccine used as prophylaxis?
- e)** What is the prognosis for this patient?
- f)** What are the possible complications?



Parasitology



June 2000

All questions are to be answered and illustrated:

- (1) A dog fondler with a history like symptoms in the liver and high eosinophilia.
Mention the possible identity of this parasite and the methods of diagnosis and control.
- (2) Mention the parasite(s) that may induce swellings of the following:
 - a- The posterior cervical lymph gland.
 - b- The eye and conjunctiva.
 - c- The skin over the bony prominences.
 - d- The skin and subcutaneous tissue which the swelling is temporary and painless.
 - e- The skin between the toes which swelling is pea size. Discuss the symptoms of the parasite in item. (a).
- (3) Lungs are the target of some parasitic infections. Name FOUR of these parasites. Describe the life cycle of ONE nematode that migrate through the lung and its larvae are recovered in the sputum.
- (4) Give reason of the following observation:
- (5) Stools should be examined as fresh as possible in ancylostomiasis.
 - a- Diagnosis of bancroftian filariasis by blood smears taken at night.
 - b- Itching in scabies is mainly at night.
 - c- No extra intestinal stages in balantidiasis.
 - d- Diphyllobothrium latum have no gravid segment.
- (6) Compare between:
 - a- Schistosoma haematobium and S.mansoni adult male.
 - b- Swimmer's and ground itch.
 - c- Definitive and reservoir hosts.
 - d- Cysticercous and cysticercoid.

September 2000

All questions are to be answered and illustrated:

- 1) A fisherman complained of abdominal discomfort with colicky pains, chronic intermittent diarrhoea, nausea and esinophilia.
 - a- What is the possible causative parasitic fluke?
 - b- How did you reach your diagnosis?
 - c- Mention the infective stage.
 - d- Name the first and the second intermediate host.
 - e- Describe the larva stage.
- 2) Give the medical importance of the following:
 - a- Salmon fish.
 - b- Chrysops.
 - c- Lymnaea truncatula.
 - d- Ornithodoros moubata.
- 3) Lymph glands are the target of some parasitic infections.
Enumerate THREE of these parasites. Describe the life cycle of an arthropod-borne lymphatic nematode.
- 4) Compare between the intestinal flagellates on the following basis:

- a- Morphology.
 - b- Habitat.
 - c- Infective stage.
 - d- Mode of infection.
 - e- Pathogenesis.
- 5) Non- blood sucking flies are medically important. Explain briefly with examples.
-

May 2001

Answer the following questions; illustrate your answer with diagrams whenever possible:

Discuss briefly the following:

- (1) Host of parasite specially, Routes of exit of parasitic infection and Significant of each.
 - (2) Penetration glands of trematode larvae and its importance.
 - (3) Sparganum proliferum and sparganum mansoni (basic differences)..
 - (4) Unilocular and alveolar hydatid cyst (basic differences).
 - (5) Cercocystic and cryptocystic cysticercoid (differentiate between them with giving examples).
 - (6) Cerebral cysticercosis.
 - (7) Disseminated strongyloidiasis with special reference to methods of infection; pathogenesis and diagnosis.
 - (8) Amicrofilaraemic filariasis with special reference to possible cause and methods of infection.
 - (9) Differential diagnosis of parasitic cystic mass in the liver.
 - (10) Relapse (true and false) in malaria.
 - (11) A case of abortion might be due to protozoan (case and how you can reach proper diagnosis).
 - (12) A case of sexually transmitted parasitic disease. (Mention the possible causes, main clinical signs and laboratory diagnosis).
 - (13) A case of thrombocytopenia might be due to protozoan cause (Mention cause and laboratory diagnosis).
 - (14) Mode of disease transmission by arthropods with giving examples.
-

September 2001

Answer the following questions, illustrate your answer with diagrams whenever possible:

- (I) which of the following statements is true or false; comment shortly on each of the:
- 1- Erratic parasites means abnormal habitat.
 - 2- Flame cells occur in trematode parasites only.
 - 3- Halzoon occur as a result of ingestion of raw vegetables and infected liver with stages of fasciola.
 - 4- Adult Schistosoma worms is termed Apharyngeal trematodes.
 - 5- Cercaria of Schistosoma is provided with 7 pairs of penetration glands but in Heterophyes cercaria with only 5 pairs.
 - 6- All cestode eggs is infective as soon as it is laid.

- 7- Hydatid and Coenurus cyst infections occur as a result of ingestion of food contaminated with dog and cat faeces.
- 8- Filariasis is not transmitted by blood transfusion.
- 9- Larva migrans is only due to nematode larvae.
- 10- Strongyloidiasis is a dangerous human infection.
- 11- Entamoeba histolytica inhabits the colon.
- 12- Trypanosoma lewisi infect rodents only and transmitted by rat flea.
- 13- Espundia is a disease caused by a species of haemoflagellates.
- 14- In positive toxoplasma dye test the cytoplasm of the parasites is unstained.
- 15- plasmodium vivax cause benign tertian malaria while P.falciparum cause malignant tertian.
- 16- The infective stage of all species of Trichomonas is the trophozoite.
- 17- Xenodiagnosis-is used only in diagnosis of some Trypanosoma infection.
- 18- Dientamoeba fragilis is associated with cestode infection in man.
- 19- Amoebic dysentery is dangerous than balantidial dysentery.
- 20- pigs is reservoir host of Iodamoeba butschlii.

(II) A case of myiasis; how can you reach proper diagnosis; your suggestions for control.

(III) Write an account on Anopheles mosquitoes of Egypt: its medical importance.

(IV) Enumerate soil mediated helminthes infections; draw a diagrams for the infective stage of each.

June 2002

Answer the following questions, illustrate your answer with diagrams whenever possible:

- (1) Mention 2 zoonotic nematodes belonging to Trichuridae; describe main mode of infection; main pathological effect; diagnosis of each.
- (2) Define predator; prey and reservoir hosts; mention main reservoir host of the following parasites: Entamoeba histolytica. Leishmania/ Trypanosoma cruzi/ Trypanosoma rhodesiense- Fasciolopsis buski / Iodamoeba butschlii- Wucheraria bancrofti.
- (3) Compare between the developmental stages of intestinal and lung flukes; that infect man; how the morphological structure is adapted for complete its life cycle Mention geographical distribution of each.
- (4) Explain hepatic shift in bilharziasis. How can you examine water of a canal for Schistosoma infection? Discuss geographical distribution of different species in Egypt and the factors affecting it.
- (5) Discuss the role of rodents in transmitting cestodes and protozoan parasites to man.
- (6) A case of sucking baby presented with insect infestation describe the possible causative agent diagnosis and treatment.
- (7) Mention protozoan causes of dysentery .Discuss the laboratory diagnosis of one causing hepatosplenomegaly.
- (8) Mention the possible parasites cause of black water fever; what are the related parasite which may be confused with it; state methods of infection; diagnosis and differential diagnosis of each.
- (9) Give the basic difference between:
Adult Aedes and culex. Nematocera-Brachycera. Water flea- Dog flea. Tunga penetrans- Xenopsylla. Egg of Fasciola- Diphyllobothrium. Dermal- traumatic dermal myiasis.
- (10) Write an account on Cryptosporidium infection in man with special reference to diagnosis and treatment.

September 2002

Answer the following questions, illustrate your answer with diagrams whenever possible:

- (1) Mention 2 zoonotic cestodes belonging to pseudophyllidea; describe the main methods of infection; Pathological and methods of diagnosis.
- (2) Explain shortly with giving examples host parasite specificity.
- (3) State the different characters of shistosomatidae. Describe the role of marine water in transmission of some shistosomtid infection to man.
- (4) Differentiate between species of Hymenolepis that may infect man as regard morphology; biology; pathological effects and control.
- (5) A case of sexually transmitted parasitic infection; Mention 3 important parasites as a possible cause; laboratory diagnosis of each.
- (6) Sternal puncture are used as means of diagnosis in protozoan diseases . Describe differential diagnosis of 3 protozoan diagnosed by this method.
- (7) Explain filarial periodicity with giving examples.
- (8) Write an account on arthropode born rickettsial diseases.
- (9) A case of primary amoebic meningioencephalitis; Discuss methods of infection; diagnosis and differential diagnosis.
- 10) A case of a baby 12 years old presented with Ancylostoma duodenale infection; how can you estimate the number of worms in his intestines.

May 2003

Answer the following questions, illustrate your answer with diagrams whenever possible:

1- Mention the difference between the following:

- a- Obligatory and facultative parasites (**Define and give one example**).
- b- Aspirated fluid from amoebic abscess and hydatid fluid.
- c- The diagnostic stages of **Two** intestinal protzoa causing diarrhea.
- d- Acanthamoeba and Naegleria.
- e- Pseudocysts of Toxoplasma gondii and Trypanosoma crusi.
- f- Migration of larvae of Ascaris lumbricoides and Trichuris trichura.

2- Describe stages of parasites that might be recovered in a urine sample.

- 3- Enumerate helminthes causing anaemia; in each case mention type and mechanism of anaemia . Mention methods of infection and laboratory diagnosis for each.
- 4- Mention 4 zoonotic trematodes which require 2 intermediate hosts to complete their life cycle; compare between the larval stages; final habitat and infective stages.
- 5- Define Apicomplexa; briefly describe basic characters and differences between major classes.
- 6- A case of milk like urine associated with orchitis; hydrocoele and eosinophilia; mention possible parasitic causes; diagnosis and control.
- 7- Write an account on: Blocked fleas- Intestinal myiasis.
- 8- Differentiate between black fever and blackwater fever with special reference to laboratory diagnosis of each.
- 9- Write account on medical importance of class Arachnida.

August 2003

Answer the following questions, illustrate your answer with diagrams whenever possible:

- : (1) Stages of development of Entamoeba histolytica, laboratory diagnosis and control.
 - (2) Erythrocytic stages of different species of Plasmodium that may infect man.
 - (3) Rickettsial diseases transmitted by Arthropods, mechanism of transmitted by each of them.
 - (4) Nematocera and Brachycera (basic difference and diseases transmitted by each group).
 - (5) Family Trypanosomatidae (Evolution and medical importance).
 - (6) Larval stages of Pseudophyllidae and its medical importance.
 - (7) Snails that act as intermediate hosts for Schistosomiasis in Egypt.
 - (8) Different types of Ascaris eggs detected in stool sample and significance of death of each.
 - (9) Sheathed and non- sheathed microfilaria, how can you differentiate them from one another?
-

May 2004

Answer the following questions, illustrate your answer with diagrams whenever possible:

- 1) Define and classify; Monoxenous; Heteroxenous and opportunistic parasites with giving example for each.
 - 2) Mention 2 zoonotic trematodes transmitted by members of phylum Arthropoda; describe the morphological features of adult and larva stages; laboratory diagnosis; geographical distribution and reservoir host of each.
 - 3) A case of a vegetarian man 30 years old suffering from intestinal disorders; hunger pain and weakness; stool examination demonstrates segmented worms in chain of 2-3 segments; blood examination showed 30% eosinophilia: What is the possible parasitic cause; explain method of infection; infective stage and differential diagnosis.
 - 4) Mention 2 intestinal nematodes which might cause electrolyte imbalance; describe the developmental stages: mode of infection and laboratory diagnosis of each.
 - 5) Discuss Xenodiagnosis in parasitic disease.
 - 6) Mention 2 protozoan parasites in which cultural methods are useful in laboratory diagnosis; in each case describe mode of infection; infective stage; main clinical signs and other laboratory methods of diagnosis.
 - 7) Write an account on Arthropods as an etiologic agent of disease.
 - 8) Discuss briefly effects of different species of human Plasmodium on erythrocytes and their significance.
-

June 2004

Answer the following questions, illustrate your answer with diagrams whenever possible:

1-Discuss briefly the laboratory diagnosis of:

- | | |
|----------------------------------|-------------------------------|
| A- Extra- intestinal amoebiasis. | B- Lymphatic filariasis. |
| C- Congenital toxoplasmosis. | D- Intestinal schistosomiasis |
| E- Chronic chagas disease. | |

2- Give one important parasite causing the following manifestations.

Describe the diagnostic stage and mode of infection of each parasite mentioned:

- | | |
|---------------------------|-------------------------|
| A- Megaloblastic anaemia. | B- Terminal haematuria. |
|---------------------------|-------------------------|

- C- Corneal ulcer.
- E- Electrolyte imbalance.

D- Mucocutaneous lesions.

3- A female living in West Africa noticed a localized cutaneous lesion on her arm. She complained of anorexia; headache and repeated attacks of recurrent fever. On examination; Lymph nodes were felt in the posterior triangle of her neck. There was also enlargement of spleen.

- A- What is the diagnosis of such a case?
 - B- Mode of infection.
 - C- Laboratory diagnosis.
 - D- Control and prevention.
- 4- Give a brief account on each of the following:
- A- Rickettsial disease transmitted by arthropods.
 - B- Cultural methods and animal inoculation as a means of diagnosis in parasitic infections.
 - C- Cestode stages that may be found in human stools.
 - D- Reservoir host (Define with giving examples).
- 5- Differentiate between:
- A- Semispecific and specific myiasis. Define and give one example for each.
 - B- Types of Oesophagus in nematodes.
 - C- Tunga penetrans and xenopsylla cheopis.
 - D- Sarcoptes and Demodex.
- 6- Discuss briefly:
- A- Brachycera of medical importance.
 - B- Pre and exo-erythrocytic stages in malaria and its significance.
 - C- Different types of cercaria in trematodes.

August 2004

Answer the following questions, illustrate your answer with diagrams whenever possible:

Discuss briefly the following:

- 1- Metamorphosis of arthropods with giving examples.
- 2- Difference between *Fasciola gigantica* and *Fasciola hepatica*.
- 3- Routes of exit of parasitic infection.
- 4- Life cycle and pathogenesis of a trematode occasionally produce bloody diarrhea.
- 5- Stages of pathogenesis of *Ascaris lumbricoides*.
- 6- Guinea worm.
- 7- Different types of *Trichomonas* species.
- 8- Chronic form of chagas with special reference to laboratory diagnosis.
- 9- Human infection with piroplasmida.
- 10-Mechanism of transmission of Rickettsial diseases by arthropods.

August 2005

Answer the following questions; illustrate your answer with diagrams whenever possible. Discuss briefly the following:

- 1- Two important trematodes which might infect respiratory tract, describe life cycle of one of them.
 - 2- Tissue cestodes with special reference to laboratory diagnosis.
 - 3- Diagnostic stages of intestinal nematodes.
 - 4- Arthropod vectors of tissue nematodes.
 - 5- Laboratory diagnosis of kala-azar.
 - 6- Rickettsial diseases transmitted by arthropods.
 - 7- Relapse in malaria.
 - 8- Congenital and acquired toxoplasmosis.
 - 9- Mites of medical importance.
-

January 2006

Choose the best answer or answers:

1- Fasciola infection in human is considered:

- | | |
|------------------------|------------------------|
| a) Incidental parasite | b) Accidental parasite |
| c) Ectopic parasite | d) None-of the above. |

2- Association of man with cattle can transmit:

- | | |
|-------------|---------------------|
| a) Fasciola | b) Heterphyes |
| c) Babesia | d) Taenia saginata. |

3- Blood transfusion transmit:

- | | |
|---------------|-----------------------|
| a) Filaria | b) Malaria |
| c) Leishmania | d) All of the above |
| e) B &C | f) None of the above. |

4- Sexual intercourse transmit:

- | | |
|------------------------|---------------------------|
| a) Phthirus pubis | b) Enteribus vermicularis |
| c) Wucheraia bancrofti | d) Both A,B. |
| e) All of the above | f) None of the above. |

5- Contamination of soil with excreta of cats transmit:

- | | |
|----------------------------|---------------------------|
| a) Toxoplasma | b) Visceral larva migrans |
| c) Cutaneous larva migrans | d) All of the above. |

6- Trichinilla spiralis is considered:

- | | |
|------------------------|-----------------------|
| a) Monoxeious parasite | b) Heteroxenous |
| c) Auto heteroxenous | d) None of the above. |

7- Connatal transmission occur:

- a) During normal labour b) In abortion
c) Through injured placenta d) During labour through injured placenta.
- 8- The following parasite is host specific:
a) Toenia saginata b) Toenia solium
c) Wucheraria bancrofti d) All of the above
- 9- Human infection with larva stage of *Diphyllobothrium mansoni*:
a) Definitive host b) intermediate host
c) Prey host d) paratenic host.
- 10- Human infection with *Toxoplasma* in man is considered:
a) Final host b) intermediate host
c) Prey host d) predator host.
- 11- Cuticle of adult *fasciola* is covered with:
a) Scales b) Tubercles
c) Spines d) Fine spines
- 12-Oral and ventral suckers are nearly equal in:
a) *Fasciola gigantica* b) *Fasciola hepatica*
c) *Dicrocoelium dendriticum* d) All of the above.
- 13- In *Heterophyes heterophyes* eggs hatch in:
a) Fresh water b) Salt water
c) Brakish water d) None of the above.
- 14- Number of flame cells in *fasciola miracidium* are:
a) One pair b) Two pairs
c) 5 pairs d) Unlimited number.
- 15- *Dicrocoelium dendriticum* infection in man is termed:
a) Erratic parasite b) Incidental parasite
c) Accidental parasite d) None of the above.
- 16- Water is essential in the life cycle of the following trematodes except:
a) *Fasciola* b) *Dicrocoelium*
c) *Heterophyes* d) *Fasciolopsis*.
- 17- The following eggs contain immature embryo except:
a) *Heterophyes heterophyes* b) *Fasciolopsis buski*
c) *Paragonimus westermani* d) Both A,C.
- 18-The only sinistral snail of the following snails is:
a) *Melania laberculata* b) *Pirenella conica*
c) *Vivipara unicolor* e) *Lanistes boltini*.

19- Reservoir host of *paragonimus westermani* is:

- a) cattle
- b) Sheep
- c) Camels
- d) Tigers
- e) **All of the above.**

20- Katayama syndrome occurs in infection with:

- a) *Schistosoma haematobium*
- b) *S.mansoni*
- c) *S.japonicum*
- d) Avian schistosoma
- e) **Both C &D.**

21- Helminthes causing pernicious anaemia are:

- a) *Ancylostoma duodenale*
- b) *Trichuris trichura*
- c) *Diphyllobothrium latum*
- d) Both B&C.

22- Stages of development of *Diphyllobothrium Latum* occur in:

- a) Fresh water
- b) Brackish water
- c) Salt water
- d) All of the above.

23- The only cestode without gravid segments is:

- a) *Multiceps*
- b) *Echinococcus*
- c) *Hymenolepis*
- d) *Diphyllobothrium*.

24- The group of helminthes without alimentary tract is:

- a) Trematodes
- b) Cestodes
- c) Nematodes
- d) None of the above.

25- Intermediate host of *Dipylidium caninum*:

- a) Dog glea
- b) Cat flea
- c) Human flea
- d) Dog louse
- e) **All of the above.**

26- The only operculated cestode egg is:

- a) *Hymenolepis nana*
- b) *H.diminuta*
- c) *Echinococcus granulosus*
- d) None of the above.

27- Cucumber-seed shape gravid segments occur in:

- a) *Multiceps multiceps*
- b) *Echinococcus granulosus*
- c) *Dipylidium caninum*
- d) *Taenia saginata*.

Answer the following questions, illustrate your answer with diagrams whenever possible:

- 1- (a) Define and classify symbiosis with giving example for each
(b) Differentiate between larval stages of hepatic, intestinal and lung flukes that might infect man in Africa.

2- (a) Compare between solid and cystic larval stages of cestodes with giving examples.
(b) Describe main morphological characters, clinical signs, infective and diagnostic stages,, control of dwarf tape worm of man

3- (a) Mention 2 nematodes in which biopsy examination is the main method of diagnosis in each case describe infective stage, mode of infection and pathological effects.
(b) Mention 3 protozoan parasites might be diagnosed by sternal puncture examination in each case describe infective stage, diagnostic stage and mode of infection.

4- Mention the parasitic stage responsible for the following condition:

a- Bathers itch	b- Chigger's dermatitis
c- Amoebic liver abscess	
d- primary amoebic meningcchioencephalitis	
e- Megalo esophagus.	f- Creeping eruptions.
g- Verminous pneumonitis.	h- Scabies
i-Chyluria	j- Appendicitis.

5- A splenectomized farmer since 3 years ago in a car accident was presented to tropic diseases clinic with fever, dark brown urine peripheral blood revealed paired organisms inside R.B.Cs.

a- What is the causative parasite.
b- How did he get the infection, mention the infective stage.
, mention differential c- What is the parasite might confuse with or the causative agent diagnosis.

6- Discuss briefly the following:

a- Medical importance of larvae of higher diptera.
b- True and false relapse in malaria.
c- Biological transmission of diseases by arthropods.

September 2006

Answer the following questions, illustrate your answer with diagrams whenever possible:

Discuss briefly the following:

- | |
|--|
| 1) Routes of exit of parasites, its importance. |
| 2) Definition, basis of classification of order Diptera, parasites transmitted by different species belonging to this group, mode of transmission. |
| 3) Tick borne diseases. |
| 4) Species of Trichuridae of medical importance (Morphology of adult and developmental stages, mode of infection and pathological effects). |
| 5) Non dipterous blood sucking insects, their medical importance |
| 6) Larva migrans with special reference to laboratory diagnosis. |
| 7) Tissues cestodes with special reference to laboratory diagnosis. |
| 8) Developmental stages, mode of infection pathological effects, laboratory diagnosis of one termatode and one cestode transmitted by fish. |
| 9) Erythrocytic stages of different species of human plasmodium. |
-

January 2007

Choose the only correct answer for the following questions:

- 1- Amoebic ulcers are more common in:
a) Caecum b) Rectum c) Flexures d) Pelvic colon.
- 2- Blood trnsfusion transmit:
a) Malaria b) Leishmania c) Entamaba d) All of the above
- 3- Toxoplasma gondii trophozoite is:
a) 6 x 2 microns.
b) Cresentic shape, one pole more pointed than the other.
c) Vesicular central nucleus.
d) All of the above.
- 4- Trypanosoma forms of trypanosoma cruzi are found in:
a) Heart muscle. B) Blood. c)Liver cells. d) Lymphnodes
- 5- phlebotomas transmits:
a) Bartonellosis.

- b) Leishmaniasis.
 - c) Papatasii fever.
 - d) All of the above.
- 6- Protozoa transmitted by musca is:
- a) Entamoeba histolytica cyst.
 - b) Giardia lamblia cyst.
 - c) Toxoplasma gondii.
 - d) All of the above.
- 7- Complication of amoebic dysentery is:
- a) Amoeboma.
 - b) Intestinal perforation and peritonitis.
 - c) Extra intestinal lesions.
 - d) All of the above.
- 8- phthirus pubis habitat is:
- a) Pubic hair.
 - b) Axilla and moustache hair.
 - c) Eye lashes.
 - d) All of the above.
- 9- Lymphadenopathy is not found in:
- a) Kala-azar.
 - b) Toxoplasmosis.
 - c) Giardiasis.
 - d) African trypanosomiasis.
- 10- Amaeba usually inhabit:
- a) Small intestine.
 - b) Large intestine.
 - c) Both (A) and (B).
- 11- Xenodiagnosis is used for:
- a) Acute sleeping sickness.
 - b) Chronic sleeping sickness.
 - c) Chaga's disease.
 - d) All of the above
- 12- Leishmanial dysentery in Kala-azar is due to:
- a) Hypoalbuminaemia.
 - b) Bleeding from the mucous membrane.
 - c) Ulceration of the small and large intestine.
 - e) All of the above.
- 13-In malaria, all the following is true except:

- a) Human is the intermediate host.
- b) Mosquito is the intermediate host.
- c) Mosquito is the definitive host.
- d) None of the above.

14- The diagnostic stage of entamoeba histolytica is:

- a) The trophozoite stage.
- b) The cyst stage.
- c) Both (A) & (B).
- d) None of the above.

15- Primary amoebic meningoencephalitis caused by:

- a) Naegleria fowleri.
- b) Acanthamaeba species.
- c) Entamaeba histolytic.
- d) Both (A) & (B).

16- Patient with acute amebic dysentery differs from chronic on in:

- a) The stages pass with the stool.
- b) Symptoms.
- c) Transmission of the infection.
- d) All of the above.

17- Stomoxys calcitrans transmits:

- a) Malaria and trypanosomes mechanically.
- b) Poliomyelitis.
- c) Anthrax bacilli.
- d) All of the above.

18-Sporogony occurs in:

- a) Human R.B.CS.
- b) Human live tissue.
- c) Female anopheles mosquito
- d) All of the above.

19-The infective stage of entamoeba histolytica is:

- a) Immature cyst.
- b) Mature quadric nucleated cyst.
- c) The trophozoite.
- d) The precyst.

20-Thrombocytopenia occurs by:

- a) Black fever.
- b) Black water fever.
- c) Babesiosis
- d) All of the above.

21- Itching in scabies increased at night because:

- a) Secondary bacterial infection.
- b) Water at night stimulate the activity.
- c) Tunnel runs parallel to the surface.
- d) All of the above.

22- Charcot-leyden crystals is:

- a) Present in anaerobic dysentery.
- b) Degenerative products of eosinophils.
- c) Present in disease where there is extensive tissue destruction.
- d) All of the above.

23- Diarrhoea in man is mainly caused by:

- a) Giardiasis. B) Isosporiasis. C) Cryptosporidiosis. D) All of the above

24- Sarcoptes scabiei prevail in:

- a) Poverty. B) Bad hygienic conditions. C) Over crowding. D) All of the above.

25- Promastigotes is detected in:

- a) Body cavity of sand fly.
- b) Salivary gland of sand fly.
- c) Buccal cavity of sand fly.
- d) All of the above.

26- Infection with scabies through:

- a) Ingestion of eggs.
- b) Sexual intercourse.
- c) Close contact.
- d) All of the above.

27-Schizogony in malaria takes place by:

- a) Blood. B) The liver cells. C) Female anopheles mosquito. D) Both (A) & (B).

28-Acanthamoeba may cause:

- a) Chronic meningoencephalitis.
- b) Granulomatous lesions of the skin and internal organs.
- c) Blindness due to keratitis and corneal ulcers.
- d) All of the above.

29-Cryptosporidium is:

- a) Coccidian parasite.
- b) Opportunistic parasite.
- c) Cyst forming parasite.
- d) All of the above.

30-Extra - intestinal amoebiasis is:

- a) Lung and brain abscess.
- b) Cutaneous amoebiasis.
- c) Amoebic liver abscess.
- d) All of the above.

31-Reproduction in protozoa done by:

- a) Simple binary fission.
- b) Multiple fission (schizogony).
- c) Formation of gametes (Gametogony).
- d) All of the above.

32-Tapir nose is caused by:

- a) Leishmania tropica.
- b) Leishmania donovani.
- c) Leishmania braziliense.
- d) Leishmania mexicana.

33-Chrysops is a vector of:

- a) Wuchereria bancrofti.
- b) Loa loa.
- c) Onchocerca volvulus.
- d) Mansonella ozzardi.

34-Complication of amoebic dysentery is:

- a) Amoeboma.
- b) Intestinal perforation and peritonitis.
- c) Extra - intestinal lesions.
- d) All of the above.

45-Anaemia in malaria is due to:

- a) Iron deficiency.
- b) Release of toxins.
- c) Haemolysis of R.B.C.S.
- d) Bone marrow suppression.

36-Relapse in malaria does not occur in:

- a) Plasmodium vivax.
- b) Plasmodium ovale.
- c) Plasmodium falciparum.
- d) None of the above.

37-Medically important arthropods those are:

- a) Irritate tissue by poison and secretion.
- b) Invade tissue causing serious damage.
- c) Transmit pathogens of diseases.
- d) All of the above.

38-Adult culex differs from adult Aedes in:

- a) Colour. B) Silver marking. C) Maxillary palps. D) Both (A) & (B).

39-The most important symptoms of scabies is:

- a) Papules. B) Itching. C) Fever. D) Insomnia.

40-Musea domestica cause:

- a) Specific.
- b) Semispecific myiasis.
- c) Accidental myiasis.
- d) None of the above.

May 2007

All questions to be attempted, Draw whenever possible:

- 1- Enumerate the pathogenic protozoan transmitted by flies (give the infection stages and methods of diagnosis of each parasites).
- 2- Discuss clinical and laboratory diagnosis of trichinosis.
- 3- Mention with full description, five of the parasites causing diarrhea.
- 4- Describe the parasitic disease caused by Mosquitoes.
- 5- Give a full account on the development of Nematodes.
- 6- Schistosomiasis was one of the parasitic diseases of Egyptian peoples. Describe the acute and chronic forms with special reference to the diagnosis.
- 7- Name the infective stage and mode of infection of two parasitic diseases transmitted to man by each of the following:
 - a) Fleas.
 - b) Cyclops
 - c) Snails.

August 2007

All questions are to be answered, draw whenever possible:

Discuss briefly the following:

- 1- Tissue cestode.
 - 2- Larva migrans.
 - 3- Parasites causing dysentery.
 - 4- Specific myiasis.
 - 5- Medical importance of mosquitoes.
 - 6- Diagnosis of fascioliasis.
 - 7- Ascaris eggs.
 - 8- Parasutes causing anaemia.
 - 9- Differentiate between taenia solium and taenia gravid segments.
 - 10- Bancroftian filariasis.
 - 11- Clinical manifestation of acanthamaeba infection.
 - 12- Medical importance of human lice.
-

June 2008

All questions to be answered draw whenever possible:

- 1- (a) A 25 years old patient, from urban area was irritable due to passage of white segments about 2cm long with and without defecation. He also complained of loss of weight and hunger pains.

*** Mention the causative parasite.**

*** Mention its mode of infection and complications.**

*** Draw full labeled life cycle**

- (b) Mechanical and Biological transmission of parasitic diseases by Arthropods (Give an example in each).

- 2- (a) A 45 years old man complained of vomiting, diarrhea, acute gastroenteritis with dehydration, slight fever then sudden death within 24 hours.

*** What is your possible diagnosis?**

*** Name definition hosts and the habitat of the parasite.**

*** What is the probable source of infection?**

- (b) A thin blood films showed different stages of protozoal stages inside red blood corpuscles. What is the most possibly infecting this patient, Mention the arthropod vectors and modes of infection. Main sysmptoms and methods of diagnosis.

- 3- (a) A 12 years old girl was presented to Dermatologist, suffering from sever nocturnal itching at the neck, groin, lower abdomen and elbow. Examination revealed multiple elevated red tracks with small popular lesions.

Name the disease, causative organism, type of development. Mention two other insects causing skin diseases associated with pruritis.

- (b) Mention 3 Helminths that infect man. In each one mention the infective stage, main symptoms and diagnosis.

- 4- (a) Enumerate 3 blood sucking flies, and mention their medical importance, draw the mouth parts of one of them.

(b) Define autoinfection; draw the life cycle of one parasite.

- 5- (a) Define specific and semi specific myiasis. Enumerate their causative

Parasite, differentiating between them and how can you control and prevent.

(b) Write short answer on:

(1) Sparganosis, (2) Swimmer's itch give the causative parasite, mode of infection, clinical picture of each.

September 2008

All questions to be answered draw whenever possible:

Give short account on:

- 1- Different stages of parasite found in urine.
- 2- Loeffler's syndrome.
- 3- Parasites associated with fever.
- 4- Parasites in peripheral blood.
- 5- Parasites found in the muscle.
- 6- Xenodiagnosis.
- 7- Parasites of the skin and subcutaneous tissue.
- 8- Sexually transmitted parasites.
- 9- Exoerythrocytic schizont

May, 2009

All questions to be answered draw whenever possible:

1- How the arthropods affect the health of man.

2- A female aged 38 years old complained of eye antibiotics with no response. She was then referred to the central eye hospital. Trophozoites and cysts of a parasite were seen in corneal scrapings. She received proper treatment and was cured.

a- What is the possible parasitic cause?

b- What is the mode of infection in this case?

c- How can you confirm your diagnosis?

3- A 12 years old female child, attended the outpatient clinic of the pediatric hospital, accompanied by her mother complaining of nocturnal enuresis, dysuria itching in the perianal region and vulva, restlessness and insomnia. The mother told the doctor that her child had a previous stool analysis, after the advice of a nurse, but the result of this stool analysis was negative for parasites. The doctor described another method of diagnosis, which showed eggs under the microscope.

a- What is the parasitic infection that may cause the mentioned complaints?

b- Why was the stool analysis negative in spite of infection?

c- What is the other method described by the doctor, which helped in the diagnosis of the case?

d- What is the reason of: nocturnal enuresis, dysuria and itching in the perianal region and vulva?

e- Mention the precautions that should be taken to prevent re-infection.

4- Give short answer on the immunodiagnosis of parasitic infections.

5- Diagnosis of acute fashidiasis, Hydatidosis and trichinosis.

6- Three parasites associated with fever, give the host, habitats, infective stages, clinical pictures and possible diagnosis for each.

7- Give full account on one protozoan and one arthropode which sexually transmitted to human being.

8- Give a short note on:

a- Follicular mange.

b- Cysticercosis.

c- Elephantiasis.

Pharmacology



May 2000

Write a brief pharmacological account of each of the

Following items:

- 1- Selective B₂ adrenergic agonists.
 - 2- High ceiling diuretics.
 - 3- Calcium channel blockers.
 - 4- Drug treatment of hyperthyroidism.
 - 5- Classification of antibacterial agents according to the mechanism of action.
-

August 2000

Write a brief pharmacological account of each of the following items:

- 1- Pathways of drug biotransformation.
 - adrenergic blockers.
 - 2- Non-selective B
 - 3- Preanesthetic medication.
 - 4- H₂-Histamine receptor antagonists.
 - 5- Levodopa in Parkinsonism.
 - 6- Actions of morphine on CNS.
 - 7- Oral anticoagulants.
 - 8- Trimethoprim-sulfamethoxazole.
 - 9- First line or primary drugs used in the chemotherapy of tuberculosis.
 - 10- Types of available insulin preparations and their adverse effects.
-

May 2001

Write a brief pharmacological account of each of the following items:

- 1- Justification for therapeutic drug monitoring.
- 2- Treatment of acute intoxication by organophosphorus anti-CHG agents.
- 3- Benzodiazepines: Mechanism of action and treatment of acute toxicity.
- 4- Precautions with morphine therapy.
- 5- Cardiac effects and therapeutic uses of digitalis.
- 6- Proton pump inhibitors.
- 7- Adverse effects and contraindications of oral contraceptives.
- 8- Classification of B-lactam antibiotics.

August 2001

Write a brief pharmacological account of each of the following items:

- 1- Drug antagonism.
 - 2- Selective - adrenergic agonists
 - 3- Neuromuscular blockers.
 - 4- Therapeutic uses and adverse effects of ACE inhibitors.
 - 5- Pharmacological properties of aspirin.
 - 6- Thiazide diuretics.
 - 7- Drug therapy of diarrhea.
 - 8- Antimetabolite cytotoxic drugs.
 - 9- Mechanism of action, pharmacokinetics and adverse effects of aminoglycoside antibiotics.
 - 10- Therapeutic uses and contraindications of glucocorticoids.
-

May 2002

Write a brief pharmacological account of each of the following:

- 1- Factors determining drug dosage.
 - 2- Cardiovascular effects and therapeutic uses of epinephrine.
 - 3- H₂-receptor antagonists.
 - 4- Pharmacological effects and toxicity of levodopa in Parkinsonism.
 - 5- Adverse effects and therapeutic uses of thiazide diuretics.
 - 6- Drugs promoting GIT motility (prokinetic drugs)
 - 7- Mechanism of action and therapeutic uses of macrolide antibiotics.
 - 8- Oral hypoglycemic drugs.
-

August 2002

ANSWER THE FOLLOWING:

- 1- Factors influencing drug biotransformation.
- 2- Pharmacological actions and therapeutic uses of antimuscarinic drugs.
- 3-Benzodiazepines: members, mechanism of action and the main actions.
- 4- pharmacodynamics and side effects of Salicylates.
- 5- Mechanism of action, therapeutic uses and side effects of Nitrates.
- 6- High ceiling diuretics: members, mechanism of action and side effects.
- 7- Mechanism of action, side effects of oral anticoagulants.
- 8- B-lactam antibiotics: classification with examples and main side effects.
- 9- Mechanism of action and adverse effects of methotrexate and 6-mercaptopurine.
- 10- Therapeutic uses, contraindications and precautions of glucocorticoids.

May 2003

Write a brief pharmacological account of each of the following:

- 1- Factors influencing drug biotransformation.
 - 2- Pharmacological actions of atropine on CNS and smooth muscles.
 - 3- Therapeutic uses of B-adrenergic blockers.
 - 4- Therapeutic uses and adverse effect of -receptor antagonists. ₂ H
 - 5- Mechanism of action and therapeutic uses of benzodiazepines.
 - 6- Pharmacological effects and toxicity of levodopa.
 - 7- Therapeutic uses and adverse effects of loop diuretics.
 - 8- Antiinflammatory drugs in the therapy of bronchial asthma.
 - 9- Antimetabolite cytotoxic drugs.
 - 10- Mechanism of action, indications and adverse effects of clomiphene citrate.
-

September 2003

ANSWER THE FOLLOWING ITEMS:

- 1- Factors influencing drug absorption.
- 2- B-lactam antibiotics: classification with examples and main side effects.
- 3- Phenytoin (DPH): mechanism of action, therapeutic uses and toxicity.
- 4- Thiazide diuretics: members, mechanism of action and main side effects.
- 5- Proton pump inhibitors: examples, mechanism of action and therapeutic uses.
- 6- Oral contraceptives: types, adverse effects and drug interactions.
- 7- Paracetamol: pharmacokinetics, uses and main side effects.
- 8- Drugs used as first line of treatment of tuberculosis: members, mechanism of action, pharmacokinetics and side effects of one of them.

- 9- Calcium channel blockers: members, uses and contraindications.
- 10- Selective B ₂ -adrenergic agonists; members, therapeutic uses and side effects.

Answer sheet

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For each of the following; MCQ select the appropriate answer as indicated for each one:

Please put your selection in the right box

1-Concerning epinephrine all the following statements are true Except:

- a) Epinephrine is not effective in anaphylactic.
- b) Epinephrine reduces intraocular pressure in patients with wide angle glaucoma.
- c) S.C. injection of epinephrine causes an increase in systolic blood pressure.
- d) Epinephrine has powerful bronchodilator action.

2- Drug administration always carries a certain risk because (one false):

- a) Drugs are insufficiently selective.
- b) Patients are different in their response to drugs.
- c) Full knowledge about drugs and diseases is broadly available.
- d) Drugs can exhibit widespread physiological function.

3- Iatrogenic diseases (one false):

- a) Are mainly caused by physician's faults
- b) Can provide negligible, acceptable or unacceptable risks to the patient.
- c) Can be caused by habitual and indiscriminate prescribing of drugs.
- d) None of the above is true.

4-The following groups of drugs are currently the most commonly used in treatment of hypertension (one false):

- a) Angiotensin receptor antagonists.

- b) ACE inhibitors.
- c) K-sparing diuretics.
- d) Selective beta adrenergic receptor blockers.

5- In the management of hypertensive emergencies (one false):

- a) The initial goal should be the rapid excessive lowering of blood pressure.
- b) I. V infusion of sodium nitroprusside is the initial treatment of choice.
- c) Sodium nitroprusside and ACE inhibitors should be avoided in pregnancy.
- d) I.V beta adrenergic blockers or nitroglycerin are preferred in presence of associating myocardial ischemia.

1- Atenolol (One True):

- a) Is non-selective beta adrenergic receptor blockers.
- b) Is less liable to produce bronchospasm and hypoglycemia than propranolol.
- c) Should be always avoided in patients with bronchial asthma.
- d) Is the drug of choice in treatment of severe hypertension.

2- The unpredictable (unexpected) adverse drug effects may include the following,
Except:

- a) CNS depression (sedation) of antihistaminics or nausea and vomiting in digitalis therapy.
- b) May be in the form of drug allergy or idiosyncrasy.
- c) May be teratogenic, carcinogenic effects or behavioral changes.
- d) May be in the form of drug dependence, abuse, habituation and addiction.

3- Select the ONE FALSE statement:

- a) Therapeutic index is the ratio of LD₅₀/ED₅₀ in animals and humans.
- b) Partial agonists have intrinsic activities more than zero and less than unity (one).
- c) Combining of an inverse agonist with the receptors can trigger a response.
- d) Structure- activity relationship is the most important in drug receptor interactions.

4- Regarding CNS- active agents, the following is Correct, Except:

- a) They may act by inhibition of enhancement of excitation.
- b) May decrease excitatory amino acid transmission or central cholinergic activity.
- c) All are selective in action.
- d) May induce apoptosis.

5- The following are Correct, regarding anxiolytic agents, Except:

- a) They may induce sleep, tolerance and dependence.
- b) They may block GABA actions, like benzodiazepines.
- C) They may act on noradrenergic systems causing receptor down- regulation.
- d) They may include benzodiazepines, antihistamines or autonomic agents.

1- One of the following are among the common toxic effect of local anesthetics:

- a) Hypertension.
- b) Excitement.
- c) Paradoxically excessive sweating.
- d) Blurred vision.

2- The following are volatile liquids used as general anesthetics Except:

- a) Enflurane.
- b) Isoflurane.
- c) Nitrous oxide.
- d) Halothane.

3- Neostigmine is the drug of choice in the treatment of curare intoxication due to the following causes Except:

- a) Directly stimulating the nicotinic receptor sites on the motor end plate of the skeletal muscles.
- b) Reversible anti-cholinesterase.
- c) Not affect C.N.S.

d) Is a tertiary amine which is well absorbed after oral or parenter administration?

4- The following are action of atropine on the eye Except:

- a) Cycloplegia.
- b) Active mydriasis.
- c) Increase intraocular pressure.
- d) Loss of light reflex.

5- All of the following statements about pharmacological actions of muscarinic antagonists on the stomach are False Except that it:

- a) Decreases gastric motility as well as secretion and constricts sphincters.
- b) Decreases gastric motility, as well as secretion and dilates sphincters.
- c) Decreases gastric motility, increase secretion and dilates sphincters.
- d) Decreases gastric motility, increases secretion and constricts sphincters.

1- Chlorothiazide can be useful in treatment of all the following Except:

- a) Hypertension.
- b) Congestive heart failure.
- c) Prevention of renal calcium stones.
- d) Hypokalemia.

2- Quinidine has the following pharmacological effects Except:

- a) Block activated Na channel.
- b) Atropine like action.
- c) Adrenergic blocking effect.
- d) Positive inotropic effect.

3- Only One of the following is characteristic side effect of diopyramide:

- a) Central nervous system depression.
- b) Cinchonism.
- c) Atropine like side effects.
- d) Systemic lupus erythematosus.

4- Contraindications of choline esters include all of the following Except:

- a) Peptic ulcer.
- b) Bronchial asthma.
- c) Angina.
- d) Hypothyroidism.

5- The following drugs are antimuscarinics used in the case of parkinsonism

Except:

- a) Benztropine.
- b) Pirenzepine.
- c) Trihexiphenidyl.
- d) Procyclidine.

1- Which of the following statements about organic nitrates is True?

- a) Increased the preload and afterload.
- b) Increased the synthesis of cyclic GMP.
- c) Decreased the heart rate at high doses.
- d) Decreased the coronary blood flow at low doses.

2- The following drugs can be used in management of prinzmetals angina Except:

- a) Nicardipine.
- b) Propranolol.
- c) Isosorbide mononitrate.
- d) Nitroglycerin ointment.

3- Which of the following statements about pravastatin is *False*?

- a) It may induce hepatotoxicity.
- b) It stimulates the synthesis of cholesterol in liver.
- c) It is potent competitive inhibitors of HMG-COA.
- d) It increases HDL cholesterol level by 5-10 %

4- One of the following mechanisms are not involved in the action of furosemide:

- a) Increase renal blood flow without increase in glomerular filtration rate
- b) Stimulation of Na-K-2 chloride cotransport mechanism.
- c) Increase excretion of calcium and magnesium.
- d) Inhibition of carbonic anhydrase enzyme.

6- Osmotic diuretics are useful for treating one of the following diseases.

- a) Hypercalcemia.
- b) Congestive heart failure.
- c) Pulmonary edema.
- d) Acute renal failure.

1- Which one of the following statements is *False*:

- a) The arterial baroreceptors are sensitized by digoxin.
- b) Hyperkalemia potentiates A- V block induced by digoxin.
- c) For mild cases of CHF, digoxin is used orally by slow non-loading method, if necessary.
- d) Amrinone can be used orally in treatment of heart failure.

2- All of the following statements are *True Except*:

- a) The half-life of digoxin is decreased in patients with impaired renal function.
- b) Digoxin prolongs the refractory period of A- V bundle.
- c) Digoxin should be used in cases of CHF associated with atrial fibrillation.
- d) Digitalis therapy is contraindicated in patients with ventricular tachycardia.

3- Therapeutic drug monitoring has proved useful in the following conditions

Except:

- a) Drugs with low therapeutic index.
- b) In presence of organ diseases as hepatic or renal disease.
- c) Drugs that have high percent of active metabolites.
- d) In multiple drug therapy with possible drug interaction.

4- All of the following statements about the volume of distribution (V_d) of

drugs in the body are *True Except*:

- a) It relates the plasma concentration to the amount of drug in the body.
- b) It can be changed due to disease.
- c) It is determined by the degree of binding to plasma protein and tissue protein.
- d) It can be changed due to change of weight.

5- The following routes of administration avoid completely the first pass metabolism *Except*:

- a) Sublingual administration.
- b) Rectal administration.
- c) Intravenous administration.
- d) Inhalation administration.

7- Regarding Alzheimer's Dementia, the following is *Correct Except*:

- a) May be due to the loss of cholinergic neurons.
- b) May be affected by sex, genetic and family history, or head trauma.
- c) Is accompanied by an increase of the level of cholinergic transmission in the basal forebrain.

- d) Cholinesterase inhibitors may be of value in its control.
- 2- All the following statements are True Except:
- ACE inhibitors cause fetal hypotension and renal failure when used during second and third trimester of pregnancy.
 - Diphenhydramine is ineffective in treatment of vestibular disturbances.
 - Prolonged use of methysergide induces retroperitoneal fibrosis.
 - The duration of action of granisetron is longer than that of ondansetron.
- 3- All the following statements are True Except:
- Clozapine produces potent effects on the extrapyramidal system.
 - Sumatriptan is a 5-HT_{1D} receptor agonist and is used in treatment of acute migraine.
 - Enalapril can be used in asthmatic and diabetic patient.
 - Ranitidine, famotidine and nizatidine do not bind to androgen receptors.
- 4- Which one of the following statements is False:
- Overproduction of 5-HT in carcinoid tumor is associated with severe diarrhea.
 - Metoclopramide relaxes the lower esophageal sphincter.
 - Chlorpheniramine is unsuitable for daytime use.
 - Naratriptan is contraindicated in patients with angina or hypertension.
- 5- All the following statements are True Except:
- Potassium chloride can be used I.V. to control digitalis-induced extrasystole or pulsus bigeminus.
 - The use of morphine I.V. reduces cardiac preload and afterload in cardiac asthma.
 - The oral bioavailability of digoxin is about 75%.
 - Digoxin has a diuretic action in edematous patients with CHF.
- 1- Regarding labetalol and carvedilol, all the following statements are True Except:
- Labetalol exhibits both selective α₁ and non-selective β-adrenergic blocking activity.
 - Labetalol is not effective in hypertension secondary to pheochromocytoma.
 - Carvedilol is used in hypertension.
 - Labetalol is more potent in blocking β-receptors than α-receptors.
- 2- Concerning β-blockers, all the following statements are True Except:
- β-blockers are used in Prinzmetal angina.
 - β-blockers are used in acute dissecting aortic aneurysm.
 - Timolol lowers I.O.P. by reducing production of aqueous humor.
 - Propranolol augments the hypoglycemic response of insulin or oral hypoglycemic in diabetic patients.
- 3- Regarding prazosin and terazosin, all the following statements are True Except:
- Prazosin is a selective α₁-adrenergic blocker.
 - Terazosin has high oral bioavailability than prazosin.
 - Terazosin but not prazosin is effective in congestive heart failure.
 - Prazosin is used in conservative treatment of benign prostatic hyperplasia.
- 4- Concerning clonidine, All the following statements are True Except:
- Clonidine is well absorbed after oral administration.
 - Clonidine blocks α-receptors.
 - Clonidine causes dry mouth and sedation.
 - Clonidine reduces the incidence of menopausal hot flashes.
- 5- Concerning β₂ adrenergic agonist, all the following statements are true Except:
- Albuterol can be given orally and by inhalation.

- b) Ritodrine is given I.V. to delay or prevent premature labor.
- c) Albuterol is not effective in treatment of status asthmaticus.
- d) Albuterol causes skeletal muscle tremors.
-

May 2004

Write a brief pharmacological account of each of the following items:

- 1- Mechanism of action, major adverse effects and therapeutic uses of **Prazosin**.
 - 2- Pharmacological differences between $5HT_{1A}$ receptor agonists and **Benzodiazepines** as anxiolytic agents.
 - 3- Mechanism of action and adverse effects of **Phenothiazine** antipsychotic drugs.
 - 4- Drug treatment of **megaloblastic anemia**.
 - 5- Drugs used for **promoting GIT motility**.
 - 6- Three examples of synergism between **Antibacterial** agents.
 - 7- Clinical indications and contraindications of **Vasopressin**.
 - 8- **Natural Products** as cancer chemotherapeutic agents.
-

August 2004

Write a brief pharmacological account of each of the following:

- 1- Adverse effects of drugs.
 - 2- Pharmacological actions of amphetamine.
 - 3- Therapeutic uses of angiotensin converting enzyme inhibitors.
 - 4- Non-depolarizing neuromuscular blockers.
 - 5- Drug therapy of Parkinsonism.
 - 6- Drug therapy of hyperlipoproteinemias.
 - 7- Bronchodilators in the therapy of bronchial asthma.
 - 8- Mechanism of action, untoward and therapeutic uses of erythromycin.
 - 9- Antithyroid drugs.
 - 10- Adverse reactions and contraindications of glucocorticoids
-

August 2005

ALL QUESTIONS ARE TO BE ATTEMPTED:

- 1- Discuss the main pharmacological action, therapeutic uses and adverse reactions of Non- Steroidal Anti-inflammatory drugs (NSAIDs).
- 2- Mention the main differences between:
 - a) thiazide and high-ceiling diuretics.

- b) Benzodiazepines and barbiturates.
- c) Cephalosporins and aminoglycosides.
- d) Competitive and Non-competitive neuromuscular blockers.

3- Explain the following giving examples:

- a) First dose phenomenon.
- b) On-off phenomenon.
- c) First pass metabolism.
- d) Tolerance.

4- Mention the absolute and relative contraindications of:

- a) Corticosteroids.
- b) Opioids.
- c) Cardiac glycosides.
- d) Beta adrenergic receptor blockers.

5- Give an account of the following:

- a) Therapeutic uses of H₂ receptor antagonists.
- b) First line treatment of tuberculosis.
- c) Adverse reactions of oral contraceptives.
- d) Selective serotonin reuptake inhibitors (SSRI).

December 2005 (Mid Term)

For each of the following MCQ , select the one most appropriate answer as indicated for each one:

1- All the following are used as pre-anesthetic medication, Except:

- A) Diazepam is used to relieve anxiety.
- B) Ranitidine is used to prevent hyperacidity.
- C) Atropine is used to prevent tachycardia induced by some general anesthetic.
- D) Morphine is used to relieve pain.

2- Regarding bethanechol the following statements are False Except that it:

- A) Is reversible cholinesterase inhibitor.
- B) Is mainly acting on nicotinic receptors.
- C) Decreases gastric acid secretion.
- D) Can be used in treatment of post-operative paralytic ileus.

3- Concerning muscarinic antagonists the following are true Except:

- A) Atropine can be used for treatment of organophosphate poisoning.
- B) Cyclopentolate can be used to produce mydriasis.
- C) They produce bradycardia.
- D) Can be used in pre-anesthetic medication.

4- Neostigmine is used for treatment of the following, Except:

- A) Myasthenia gravis.
- B) Urinary retention.
- C) Paralytic ileus.
- D) Bronchial asthma.

For each of the following MCQ , select the one most appropriate answer as indicated for each one:

1- Regarding carrier drug transport mechanism, all the following statements are True Except that it:

- A) Is energy dependent?
- B) Means drug transfer against concentration gradient.
- C) Exhibits no selectivity.
- D) Requires carrier for drug transport.

2- Regarding sublingual drug administration, all the following statements are True Except:

- A) It means drug administration under the tongue.
- B) It exhibits rapid drug absorption.
- C) It is used in treatment in emergency conditions.
- D) Drugs absorbed by this route will be subjected to first pass metabolism.

3- Regarding intravenous drug administration, all the following statements are true Except:

- A) It means drug absorption from the stomach.
- B) It is used for irritant drugs.
- C) Drugs used by this route must be in an aqueous form.
- D) Drugs used by this route must be sterile

4- The following drug are reversible anticholinesterases Except:

- A) Physostigmine.
- B) Neostigmine.
- C) Edrophonium.
- D) Echothiophate.

For each of the following MCQ , select the one most appropriate answer as indicated for each one:

1- Regarding the B-adrenergic blockers, all the following statements are True Except:

- A) Metoprolol is a selective B₁ blocker.
- B) Timolol exhibits a very good ocular hypotensive effect.
- C) Labetalol blocks both B₁ and B₂ adrenergic receptors.
- D) Oxprenolol possesses intrinsic sympathomimetic activity (ISA).

2- Regarding - methyl dopa, all the following statements are True Except that it:

- A) Decreases peripheral biosynthesis of NEP.
- B) May form a false transmitter which is methyl.
- C) Inhibits -adrenergic receptors leading to a decrease in the blood pressure.
- D) May lead to rebound phenomenon on its sudden withdrawal.

3- Regarding the principles of clinical pharmacokinetics, all the following statements are true Except:

- A) The pharmacological drug effect is directly proportional to the drug concentration in GIT.
- B) Concentration of drug at site of action is directly proportional to its plasma concentration.
- C) Pharmacological effects of a drug are directly proportional to drug concentration at the site of action.
- D) Toxic effect of a drug is directly proportional to the drug concentration.

4- Regarding passive drug diffusion, all the following statements are True Except:

- A) It requires no energy.
- B) It means the passage of drugs from low to high concentration.
- C) It exhibits no selectivity.
- D) Water soluble, small molecules penetrate the water pores via filtration.

For each of the following MCQ , select the one most appropriate answer as indicated for each one:

- 1- Adrenergic agonists include all the following Except:
- A) Methoxamine is - adrenergic agonist.
 - B) Clonidine is - adrenergic agonist.
 - C) Stimulation of - adrenergic receptors by adrenergic-methyl dopa inhibits the release of NEP.
 - D) Amphetamine stimulates adrenergic receptors directly.
- 2- Regarding the metabolic effects of epinephrine, all the following statements are True Except that it lead to:
- A) Hyperglycemia.
 - B) Hyperlipaemia.
 - C) Hypolactic-acidaemia.
 - D) An increase in oxygen consumption.
- 3- Regarding the effect of epinephrine on the bronchi, all the following statements are True Except:
- A) It stimulates B₂ adrenergic receptors.
 - B) Stimulation of B₂ adrenergic receptors resulted in bronchodilatation.
 - C) It leads to bronchial decongestion.
 - D) It enhances blood flow to the bronchi.
- 4- Regarding isoproterenol, all the following statements are true Except that it:
- A) Is a non-selective B-adrenergic agonist.
 - B) Stimulates all B-adrenergic receptors.
 - C) Is used in Adams Stockes syndrome.
 - D) Is absolutely contraindicated in bronchial asthma.

For each of the following MCQ , select the one most appropriate answer as indicated for each one:

- 1- Concerning hypertensive emergencies and urgencies, which one of the following statements is Incorrect:
- A) Each of them is associated with an end- organ damage and requires immediate lowering of blood pressure.
 - B) Each of sodium nitroprusside, diazoxide and trimethaphan is used intravenously in hypertensive emergencies.
 - C) Diazoxide is not recommended in patients with ischemic heart diseases.
 - D) The direct vasodilator action of sodium nitroprusside does not require intact endothelium.
- 2- All the following antihypertensive agents and their linked common adverse reactions are correct Except:
- A) Hydralazine → Lupus-like syndrome.
 - B) Minoxidil → Hypertichosis and tachycardia.
 - C) Verapamil → Postural hypotension and tachycardia.
 - D) Trimethaphan → Urinary retention and cycloplegia.
- 3- Concerning drugs used in hypertension, which one of the following statements is correct:
- A) The hypotensive action of indapamide is entirely related to its diuretic effect.
 - B) Minoxidil is effectively used as a monotherapy for long term control of severe hypertension.

- C) Concurrent administration of hydralazine and atenolol is recommended.
D) Co-administration of sodium nitroprusside and sodium thiosulfate should be avoided.
- 4- Regarding adrenergic receptors, all the following statements are True Except:
- A) -adrenergic receptors are distributed on smooth muscles.
 - B) Stimulation of -adrenergic receptors stimulates the release of NEP.
 - C) B_1 -adrenergic receptors are present in the heart.
 - D) Stimulation of B_2 -adrenergic receptors results in bronchodilatation.

For each of the following MCQ, select the one most appropriate answer as indicated for each one:

- 1- Concerning organic nitrates, all of the following are True Except:
- A) Organic nitrates inactivate guanylyl cyclase.
 - B) Tolerance and headache are among the most common side effects.
 - C) They decrease the systolic as well as the diastolic blood pressure.
 - D) They could be used to relieve esophageal spasm.
- 2- Verapamil could be used in exertional angina due to the following effects Except that it:
- A) Decreases the severity of acute attacks.
 - B) Possesses a negative inotropic and dromotropic effect.
 - C) Increases the coronary blood flow.
 - D) Depresses SAN rate of firing.
- 3- Concerning diuretics which one of the following statements is Incorrect:
- A) The primary effect of thiazides is inhibition of Na^+/Cl^- cotransport system in distal tubules.
 - B) Triamterene produces mild natriuresis and retention of potassium.
 - C) Concurrent use of furosemide with an aminoglycoside antibiotic may cause ototoxicity.
 - D) Chronic use of thiazides leads to hypomagnesaemia, hypocalcaemia and hypokalaemia.
- 4- Concerning diuretics one of the following statements is Correct:
- A) The natriuretic effect of each of furosemide and hydrochlorothiazide leads to excretion of at least 20% of the filtered sodium.
 - B) The hypotensive effect of furosemide occurs at doses below the maximal diuretic dose.
 - C) Furosemide plus hydrochlorothiazide decreases the amount of sodium chloride delivered to the collecting tubules.
 - D) Co-administration of spironolactone with carbenoxolone is not recommended.

For each of the following MCQ, select the one most appropriate answer as indicated for each one:

- 1- Concerning therapeutic uses of diuretics, which one of the following statements is Incorrect:
- A) Furosemide is effectively used in acute pulmonary edema since it reduces left ventricular filling pressure.
 - B) Amiloride is useful in cases of lithium-induced nephrogenic diabetes insipidus.
 - C) Mannitol is preferable than metolazone in patients with severe congestive heart failure.
 - D) Mannitol is used in dialysis disequilibrium syndrome to reduce cerebral edema.
- 2- Concerning sedative-hypnotics, which one of the following statements is Correct:
- A) Benzodiazepines directly open chloride channels.
 - B) Flumazenil is effectively used in a single oral dose for the treatment of benzodiazepine poisoning.

- C) Phenobarbital decreases the REM sleep period to the same extent as that of oxazepam.
- D) Zolpidem is preferred for individuals with prolonged sleep latency.

3- Concerning benzodiazepine, only one of the following statements is Incorrect:

- A) they produce anterograde amnesia and pharmacodynamic tolerance.
- B) Clorazepate undergoes activation and subsequent absorption in the stomach.
- C) Flurazepam withdrawal reactions are more abrupt and severe than those of triazolam.
- D) Diazepam is useful for control of status epileptics and spasticity.

4- Concerning buspirone, only one of the following statements is Incorrect:

- A) It selectively binds to and activates $5HT_{1A}$ receptors.
- B) Unlike benzodiazepines it does not impair driving skill of the patient.
- C) It is effectively used in panic disorders.
- D) Development of tolerance.

For each of the following MCQ , select the one most appropriate answer as indicated for each one:

1- Concerning histamine antagonists all of the following are True Except:

- A) Corticosteroids prevent the release of histamine from its storage sites.
- B) H_1 -antagonists have local anesthetic and antipruritic effects.
- C) Loratadine could be used for treatment of motion sickness.
- D) Cimetidine could be used for the treatment of uncomplicated gastro-esophageal reflux.

2- Which one of the following statements is Incorrect:

- A) Dysgeusia is a side effect, which is more frequent with enalapril than other members of its group.
- B) Angiotensin II plays a crucial role in the regulation of electrolytes and body fluids.
- C) The dipsogenic effect of angiotensin II leads to an increase in blood volume.
- D) Angioneurotic edema is an uncommon but a very dangerous adverse effect of ACE inhibitors.

3- Concerning prostaglandins, all of the following are True Except:

- A) PGF₂ is used as an abortifacient agent.
- B) Cloprostenol is used as a luteotropic agent.
- C) PGE is used in treatment of impotence.
- D) Fluprostenol is used in induction of parturition at term.

For each of the following MCQ , select the one most appropriate answer as indicated for each one:

1- Regarding receptor regulation, all the following are Correct Except:

- A) Down regulation is produced by continued stimulation of the cell with the agonist.
- B) Up regulation means supersensitivity of a receptor by long exposure to an antagonist.
- C) Down regulation can be explained by increased effectiveness of receptors.
- D) The number of receptors may be changed by a disease state.

2- Regarding drug tolerance, all the following are True Except:

- A) It means an increase of drug response due to repeated administration.
- B) Barbiturates may cause pharmacokinetic and pharmacodynamic tolerance.
- C) Amphetamine may cause pharmacodynamic tolerance.
- D) Cross tolerance may occur between morphine and heroin.

3- Undesirable drug effects include all the followings Except:

- A) Carcinogenicity.
- B) Anaphylaxis.
- C) Tachyphylaxis.
- D) Blood dyscrasias.

4- All of the following statements are Correct Except:

- A) Spare receptors do not bind with the drug when the maximal effect is achieved.
- B) A chemical antagonist interacts directly with the agonist drug but not with a receptor.
- C) Therapeutic index is the ratio between ED₅₀ to LD₅₀.
- D) Efficacy of drug is very important for the clinical purposes.

For each of the following MCQ, select the one most appropriate answer as indicated for each one:

1- Quinidine is an antidysrhythmic drug that has only one Correct statement of the following:

- A) May induce paradoxical ventricular tachycardia as it enhances automaticity.
- B) Increases the incidence of digitalis toxicity when both are given in combination, as quinidine enhances digitoxin absorption from the G.I.T.
- C) Its side effect includes hypotension as it blocks alpha-adrenoceptors.
- D) Shortens the ERP and enhances impulse conduction in AVN.

2- Regarding the antidysrhythmic drugs all of the following are Correct Except:

- A) Flecainide can be used for treatment of Wolff-Parkinson-White syndrome.
- B) Disopyramide may produce blurring of vision & urinary retention as side effects.
- C) Lidocaine is effective orally for treatment of ventricular fibrillation.
- D) Phenytoin is the drug of first choice in digitalis induced atrial dysrhythmias.

3- Excitotoxicity (nerve cell death) can develop due to excess exposure to high concentrations of:

- A) Glutamate.
- B) Glycine.
- C) Dopamine.
- D) Acetylcholine.

4- Excess secretion of dopamine neurotransmitter in brain leads to all the following Except:

- A) Depression.
- B) Schizophrenia.
- C) Mania.
- D) Reduced prolactin hormone secretion.

January 2006

I- For each of the following questions select the one most appropriate answer:

1- High plasma protein binding of drugs:

- A) Always leads to a decrease in volume of distribution.
- B) Usually increases the rate of drug metabolism.
- C) Is a non-competitive process.
- D) Usually enhances the rate of drug excretion.

2- Therapeutic uses of atropine substitutes include all the following Except:

- A) Telenzepine is used in treatment of peptic ulcer.
- B) Scopolamine patch in management of motion sickness.
- C) Tropicamide in management of Parkinsonism.
- D) Propantheline as a spasmolytic.

3- All of the following statements are correct Except:

- A) Therapeutic index is the ratio of the ED₅₀ to LD₅₀.
- B) Potency of the drug is more important characteristic for the pharmaceutical manufacturers.
- C) Different individuals may show different responses to drugs.

- D) Spare receptors are unoccupied receptors when maximal drug response is attained.
- 4- Epinephrine increases the concentration of all the following Except:
- A) Triglycerides in fat cells.
 - B) Glucose in blood.
 - C) Free fatty acids in blood.
 - D) Lactate in blood.
- 5- Regarding the use of quinidine in treatment of arrhythmia, one of the following is False:
- A) It decreases effective refractory period in A-V node in therapeutic doses.
 - B) It may produce paradoxical tachycardia mediated by antimuscarinic action.
 - C) Prior digitalization is necessary in case of AF.
 - D) Concurrent use of anticoagulants is required in case of old standing atrial fibrillation.
- 6- Regarding statins one of the following statements is Incorrect:
- A) They are used in hypercholesterolemia.
 - B) They are used once daily (except fluvastatin given twice daily).
 - C) They are taken in the morning or at bed time.
 - D) They produce myopathy as an adverse effect.
- 7- All of the following drugs can be used in hypertensive emergencies but should be avoided in anginal patients Except:
- A) Diazoxide.
 - B) Nicardipine.
 - C) Nitrolycerine.
 - D) Hydralazine.
- 8- One of the following diuretics is safely used in treating mild hypertension.
- A) Furosemide.
 - B) Mannitol.
 - C) Hydrocortisone.
 - D) Hydrochlorothiazide.
- 9- Stimulation of different subtypes of a (μ) opioid receptors leads to all types Except:
- A) Spinal analgesia.
 - B) Hallucination.
 - C) Supraspinal analgesia.
 - D) Respiratory depression.
- 10- Dihydroergotoxine is used clinically in one of the following conditions:
- A) To suppress physiological lactation.
 - B) In treatment of senile cerebral insufficiency.
 - C) In diagnosis of variant angina.
 - D) In treatment of post-partum hemorrhage.
- Write down (T) for true statements and (F) for the false statements in the following:
- 1- A drug is considered more potent when it shows greater biological activity per unit time.
 - 2- For measuring peak concentration of a drug the blood sample should be obtained just before a next dose.
 - 3- Ambenonium is a synthetic quaternary ammonium compound that has longer duration of action and low incidence of side effects.
 - 4- I.V. edrophonium improves the weakness in cholinergic crisis and exacerbate myasthenic weakness.
 - 5- Recovery from atropine cycloplegic response occurs within 1-3 days.

- 6- Regular use of B2-agonists over prolonged periods may cause increased bronchial hyperactivity and failure to control the disease.
- 7- Anorectic effect of amphetamine is mediated through an action on chemoreceptor trigger zone (CTZ).
- 8- Restlessness, excitement, headache and tremors induced by I.V. epinephrine are secondary to its cardiovascular and metabolic effects.
- 9- Buspirone has good efficacy in treatment of panic attacks.
- 10-Tegaserod is a serotonin agonist useful in treatment of gastroesophageal reflux and motility disorders.
- 11-Carvedilol is a mixed alpha and beta antagonist used in hypertension and symptomatic heart failure.
- 12-Terazosin is a selective beta blocker used to treat hypertension.
- 13-Hydralazine and enalapril are used to reduce afterload in heart failure.
- 14-Cardiac arrhythmias limit the usefulness of phosphodiesterase inhibitors in the management of heart failure.
- 15-Diphenoxylate is a meperidine derivative used in treatment of diarrhea.
- 16-Morphine causes pin point pupil through its direct action on the radial muscles of the iris.
- 17-Entacapone acts only peripherally while tolcapone acts both centrally and peripherally.
- 18-On-off phenomenon of levodopa may appear after 5- days of starting treatment.
- 19-Halothane is given intravenously to produce controlled hypotension in plastic surgery.
- 20-Vitamin D deficiency and rickets are common side effects in children treated with valproic acid for long period of time.

Select from column (II) the appropriate answer for the statement in the column (I):

Column (I)	Column (II)
1- It induces changes in the electrolyte composition of the endolymph in the inner ear and produces ototoxicity.	A) Dofetilide
2- It has some selectivity to cerebral blood vessels so it is useful in subarachnoid hemorrhage.	B) Esmolol
3- It produces pulsating headache.	C) Nimodipine
4- Currently used only in pheochromocytoma.	D) Nadolol
5- Has no extracardiac effects because it acts only on rectifier potassium channel in the heart.	E) Ondansetron
6- Is a specific angiotensin receptor antagonist used in CHF or hypertension in patient intolerant to ACE inhibitors?	F) Isosorbide dinitrate
7- Prevent nausea -vomiting associated with cancer chemotherapy.	G) Phenylephrine
8- Induces mydriasis without cycloplegia.	H) phenoxybenza-mine
9- An ultra short acting beta blocker used in emergencies hypertension.	I) Candesartan
10- A drug that inhibits the lipolytic and glycogenolytic actions of catecholamines and masks the signs of hypoglycemia.	J) Ethacrynic acid

June 2006

A- SHORT ESSAY QUESTIONS:

- 1- Classify Non-Steroidal Anti- Inflammatory Drugs (NSAIDs) and Mention their therapeutic uses.
- 2- Mention the drugs used in treatment of peptic ulcer with an emphasis On their mechanisms of action and adverse effects.
- 3- Classify fluoroquinolones and describe their clinical uses.
- 4- Mention the drugs used in treatment of type II (Insulin Non-Diabetes Mellitus INDDM) and discuss their mechanism of action and adverse effects.
- 5- Mention the mechanism of action, pharmacokinetics, side effects and therapeutic uses of loop diuretics.
- 6- Mention the benefits gained by using multidrug therapy in hypertension giving examples.
- 7- Write a brief account on the pharmacology of anti-epileptic drugs affecting GABA system.

B- BRIEFLY GIVE REASONS FOR THE FOLLOWING:

- 1- Oximes are effective only when administered within minutes or few hours after poisoning with organophosphorus compounds.
 - 2- Corticosteroids must be used cautiously in postmenopausal women.
 - 3- Tolerance to nitrates develops soon except when the period of no therapy exceeds 8 hours every day.
 - 4- Prolonged and habitual use of laxatives must be avoided.
 - 5- Metronidazole should not be given to alcoholic patients
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August 2006

Answer the following questions:

- 1- Classify antibacterial agents according to their mechanism of action giving drug examples and mentioning the major therapeutic uses of each drug.
- 2- Discuss the mechanism underlying the use of different drug groups in the treatment of peptic ulcer.
- 3- Discuss the measures undertaken to manage a case of status asthmaticus.
- 4- Classify sympathomimetic agents giving drug examples and mentioning the therapeutic uses and adverse reactions for each drug.
- 5- Write an account of the pharmacology of anxiolytic and hypnotic drugs.

Explain the pharmacological idea behind the following giving as many examples as you can:

- 1- The use of calcium channel blockers in treatment of angina pectoris.
- 2- The hazards of using morphine in biliary colic and head injury.
- 3- The benefits gained by using thiazide diuretics with other drugs in treating hypertension.
- 4- The use of certain beta adrenergic blockers in treatment of heart failure.
- 5- The possible complications of using corticosteroids in patients with several other diseases.
- 6- The use of serotonin receptor agonists and antagonists in treatment of irritable bowel syndrome (IBS).
 - in treatment of megaloblastic anemia . ₁₂
 - 7- The use of vitamin B
- 8- The concurrent use of pyridoxine with isoniazide.
- 9- The combined use of estrogen and progesterone for oral contraception.
- 10- The decrease in the response to many drugs following their repeated administration.

Column (I)	Column (II)
1- A potent opioid non- addicting drug.	A) Clonazepam
2- A neuroprotector and can induce dissociative anesthesia.	B) Astemizole
3- A codeine analog which inhibits norepinephrine and 5-HT reuptake in the CNS.	C) Trihexiphenidyl
4- Used in treatment of myoclonus.	D) Dantrolene sodium.
5- Used as prophylactic treatment to prevent drug-induced extrapyramidal side effects.	E) Phenelzine.
6- A drug of choice in bulimia nervosa.	F) Pilocarpine.
7- Ingestion of grape fruit juice increases its level and induces cardiac arrhythmia.	G) Clo-imipramine.
8- Its systemic toxicity induces pulmonary edema.	H) Ketamine.
9- Used by I.V. injection in treatment of neuroleptic malignant syndrome.	I) Loperamide.
10- Its prolonged use leads to an increase in body weight.	J) Tramadol.

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May 2007

ALL QUESTIONS ARE TO BE ANSWERED:

- 1- Enumerate the adverse reactions of acute and long-term therapy with morphine.
- 2- **Briefly** discuss the current status of the pharmacotherapy of heart failure.
- 3- Classify the alkylating antineoplastic drugs and mention their mechanism of action and therapeutic uses.
- 4- **Briefly** explain why:
 - (a) Thiazide diuretics are used with (ACEIs) or Angiotensin Receptor Blockers (ARB) in some cardiovascular disorders.
 - (b) Tinidazole is preferred than the other drugs used in treatment of amebiasis.
 - (c) Bromocriptine is used in cases of hyperprolactinemia.
- 5- Mention **ONE** macrolide antibiotic and discuss its pharmacology.
- 6- Mention the metabolic actions and clinical indications of estrogens.
- 7- Discuss the pharmacology of **ONE** oral anticoagulant mentioning its mechanism of action, therapeutic uses, conditions affecting its activity, adverse reactions and contraindications.
- 8- Select **ONE** drug of choice for each of the following conditions and **briefly** explain why you chose it:
 - (a) A Hypertensive emergency.
 - (b) Prophylaxis of mild to moderate bronchial asthma.
 - (c) Portal hypertension in patients with liver cirrhosis.

9- Write an account of the pharmacology of ***ONE*** of the Disease Modifying Anti-Rheumatic Drugs (DMARDs).

10- In a tabular form mention the drug group, main therapeutic uses and adverse reactions of the following drugs:

(a) Dramamine. (b) Clonidine. (c) Domperidone.

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May 2007 (practical)

For Each of the following questions select the one most appropriate false answer:

1-In a group of mice injected with pentobarbital sodium; the sleeping time of mice was remarkably longer, it was concluded that these mice might have been:

- A) Pretreated with an enzyme inducer.
- B) Previously starved for a long period.
- C) Pretreated with an enzyme inhibitor.
- D) Infected with Schistosomiasis.

2- The following drugs forms are administered by inhalation:

- A) Gases.
- B) Suspensions of insoluble drugs.
- C) Volatile compounds.
- D) Aerosols.

3-Two drops of a 1% solution of an unknown drug were instilled into the right eye of a rabbit. Into the left eye of the same rabbit; two drops of saline (0.9% NaCl) solution were instilled. It was noticed that the pupil size of the right eye was much less than that of the left eye. It was concluded that this unknown drug could be any of the following drugs:

- A) Pilocarpine.
- B) Physostigmine.
- C) Pseudoephedrine.
- D) DFP

4- The following drugs are used mainly in grand mal epilepsy:

- A) Valproic acid.
- B) Carbamazepine.
- C) Ethosuximide.
- D) Primidone.

CASE (1)

Ms. J.R is a 55 years old lady who is 198 kg body weight. She could not control her diet and was unable to lessen any weight during the last 4 months. At the same time her blood glucose level was fluctuating between 180 and 250 mg/dl. This was also accompanied with thirst, polyurea and persistent fatigue.

5- One of the following decisions was properly taken concerning her condition:

- A) To put her on another diet control regimen for another 4 months
- B) To carry out urine glucose testing for 3 weeks to verify her case.
- C) To initially prescribe glipizide and regularly check her blood glucose level.
- D) To promptly administer her crystalline insulin 3 times a day before meals for 3 months.

6- The above decision was based on one of the following facts:

- A) This lady is suffering from type I diabetes and should be treated with insulin.
- B) The blood glucose level of this lady was too high to be treated with oral drugs only.
- C) Urine glucose measurement is the best test for checking blood glucose level.
- D) Glipizide is a relatively well tolerated and potent 2nd generation sulfonylurea.

CASE (2)

Mr J.B is a 77 years old man who is a heavy smoker is suffering from rheumatic arthritis which was treated with an oral acetylsalicylic acid during the last 10 years. About 3 months ago his condition has become worse with a persistent pain in his joints. Accordingly, prednisone was added to the regimen in a dose of 20 mg 3 times daily.

Two weeks ago; Mr. J.B noted that his stool was becoming black with tarry appearance upon endoscopy. Multiple erosions and petechial hemorrhage were demonstrated in his stomach and duodenum and a 5 cm ulcer was detected just beyond the pylorus in the duodenal bulb.

7- All the following decisions were properly taken by Dr. MD Except:

- A) Discontinue acetylsalicylic acid and replace it with indomethacin.
- B) Discontinue acetylsalicylic acid and replace it with celecoxib to control the pain.
- C) Prescribe mesoprostol to treat the ulcer induced by the NSAIDs
- D) Advise the patient to avoid frequent drinking of caffeine beverages and eating spicy food.

8- The above decision was based on all the following true facts Except:

- A) The combination of acetylsalicylic acid, prednisone and smoking enhanced the bleeding and the development of ulcer.
- B) Celecoxib is much safer than acetylsalicylic acid regarding the gastric irritation it causes.
- C) Prostaglandin can be effective in treating NSAIDs induced ulcer.
- D) Indomethacin is a much safer drug compared to acetylsalicylic acid especially on chronic use.

CASE (3)

Mr .J.B was admitted to the ICU after a 3 days suffering from epigastric pain associated with nausea and vomiting. His drug history showed that he was taking digoxin (0.25 mg/day) and hydrochlorothiazide (50mg bid) for his mild congestive heart failure and prednisone 15 mg/day to treat rheumatoid arthritis. The laboratory investigation report showed that he had considerable hypokalemia and hypomagnesemia as well as high levels of serum digoxin (2 mg/L) ECG showed occasional premature ventricular contractions and bigeminy.

9- All the following decisions were properly taken to treat this condition Except:

- A) Discontinue digoxin and watch for any kind of life threatening arrhythmia.
- B) Replace hydrochlorothiazide with intravenous furosemide.
- C) Reduce the dose of prednisone or replace it with dexamethazone.
- D) Administer potassium chloride.

10- The above decisions were based on all the following true facts Except:

- A) In some patients with digitalis poisoning simple withdrawal of digoxin may be the only treatment required.
- B) Dexamethazone has less mineralocorticoid activity than prednisone.
- C) Furosemide is a loop diuretic and, thus, dose not produce hypokalemia.
- D) Most short and intermediate acting glucocorticoids can produce hypokalemia with varying degrees.

For each of the following MCQ , select the one most appropriate answer indicate for each one:

1- Regarding Genetic Polymorphism, all the following statements are True Except:

- A) It means a difference in the rate of drug metabolism in different individuals.
- B) Fast and slow metabolizers is now explained by the variation in the genetically determined difference.
- C) Acetylation is one of the best examples for genetic polymorphism.
- D) Rapid acetylators in case of the anti-T.B. drug (isoniazide).

2- Regarding the treatment of the drug effects all the following statements are True Except:

- A) It will be enhanced by activation of prodrugs in the liver.
- B) It increases by acceleration of physiological compensatory mechanisms.

- C) Renal tubular reabsorption reduces drug termination.
- D) Renal tubular secretion enhances drug termination.

3- Digoxin plasma concentration may increase and consequently digoxin toxicity may develop when the drug is combined with One of the following antidysrhythmic drugs:

- A) Propranolol.
- B) Procainamide.
- C) Quinidine.
- D) Lidocaine.

4- Combination of verapamil and propranolol as antidysrhythmic drugs may lead to One of the following in the heart:

- A) Atrial flutter.
 - B) Atrial fibrillation.
 - C) Bradycardia and heart block.
 - D) Ventricular tachcasdia.
-

For each of the following MCQ , select the one most appropriate answer indicated for each one:

1- Concerning mechanisms of drugs action, all the following are Correct Except:

- A) Corticosteroids and sex hormones bind to intracellular receptors
- B) Stimulation of nicotinic receptors is associated with opening of Na^+ channels.
- C) Stimulation of beta-adrenoceptors decreases the intracellular level of cAMP.
- D) G-proteins regulate the activity of adenylyl cyclase, phospholipases and ion channels.

2- Regarding agonist / antagonist the following statements are Correct Except:

- A) A receptor antagonist binds to the appropriate receptors without activating it.
- B) Partial agonist can produce the same maximum response as full agonist.
- C) A chemical antagonist does not depend on the interaction with the agonist's receptor.
- D) Adrenaline is a physiological antagonism of histamine.

3- Which of the following H_1 -antagonists has no anticholinergic effect?

- A) Diphenhydramine.
- B) Astemizole.
- C) Promethazine.
- D) Dimenhydrinate.

1- Which of the following that induce platelet aggregation and produce vasoconstriction?

- A) Thromboxane A_2
 - B) Prostaglandin E_2
 - C) Leukotriene B_2 .
 - D) Prostacyclin.
-

For each of the following MCQ , select the one most appropriate answer indicated for each one:

1- Regarding phase II reaction in drug metabolism, all the following statements are

True Except:

- A) It is a coupling of the drug with endogenous substrates.
- B) It increases the drug bioavailability.

- C) It may take place for the metabolites of phase I reaction.
- D) Intestinal B glucuronidases may lead to enterohepatic circulation to the glucuronide conjugate.

2- Which one of the following statements about tolerance is **False**:

- A) Repeated administration of some drugs, decreases the intensity of response.
- B) Occurs due to alteration of the pharmacokinetics of drugs.
- C) Occurs due to the adaptation of the cells to the presence of the drug.
- D) Occurs due to inhibition of liver microsomal enzymes responsible for the biotransformation of drug.

3- The use of albuterol (salbutamol) in acute attacks of bronchial asthma depends upon the following **Except**:

- A) A selective action on B_2 -receptors in the bronchioles.
- B) Its cardiovascular effects are minimal.
- C) A direct spasmolytic action.
- D) Duration of action is considerably longer than that of isoproterenol.

4- All of the following statements about cromoglycate (cromolyn sodium) are **True** **Except** that it:

- A) Inhibits the release of histamine and other inflammatory factors.
- B) Is given by inhalation.
- C) Relaxes the bronchial smooth muscle fibers.
- D) Can be used as a prophylactic in between acute attacks of bronchial asthma.

For each of the following MCQ , select the one most appropriate answer indicated for each one:

1- As an anticoagulant, heparin has the following Correct statements **Except**:

- A) It acts by inhibition of plasma anti-thrombin.
- B) Cannot be given orally as it has a large molecular size.
- C) Can be used to inhibit coagulation in blood banks.
- D) May induce thrombocytopenia & alopecia as side effects.

2- Warfarin has the following Correct statements **Except**:

- A) Should be combined with heparin injection for the first 3-5 days of anticoagulant therapy.
- B) Its dosage can be controlled by monitoring the partial thromboplastin time.
- C) Can cross the placental barrier.
- D) Its effectiveness increases in case of vit.K deficiency.

3- Thrombolytic agents have the following Correct statements **Except**:

- A) They act by accelerating activation of plasminogen into plasmin.

B) Alteplase is a tissue plasminogen activator that activates plasminogen specifically on fibrin surface.

C) Urokinase has limited therapeutic uses as its production is difficult and expensive.

D) Their thrombolytic effect can be potentiated by aminocaproic acid.

4- One of the following is the most common side effect of hypolipidemic drugs:

A) Cardiac dysrhythmia.

B) Migraine headache.

C) Gastrointestinal disturbance.

D) Elevated blood pressure.

For each of the following MCQ , select the one most appropriate answer indicated for each one:

1- Concerning pheochromocytoma one of the following statements is Incorrect:

A) propranolol is the usual initial therapy before phenoxybenzamine administration.

B) Guanethidine but not labetalol is contraindicated.

C) Phentolamine is used to control hypertensive crisis.

D) Clonidine is useful in its differential diagnosis from primary hypertension.

2- Concerning adrenoceptors blocking agents One of the following statements is Correct:

A) Ergotamine prevents the vasodilation of the cerebral blood vessels during the headache stage of migraine.

B) The use of prazosin in the treatment of benign prostatic hyperplasia is usually associated with marked tachycardia.

C) Propranolol is preferable than atenolol in diabetic patients.

D) Carvedilol has equal blocking effects in alpha and beta receptors.

3- One of the following about the therapeutic uses of mannitol is Correct:

A) Heart failure.

B) Acute pulmonary edema.

C) Cerebral edema.

D) Hypertension.

4- In acute pulmonary edema one of the following is a life-saving diuretic:

A) Spironolactone.

B) Furosemide.

C) Hydrochlorothiazide.

D) Triamterene.

For each of the following MCQ , select the one most appropriate answer indicated for each one:

1- All the following statements about pharmacological actions of muscarinic agonists on the stomach are False Except that it:

A) Increases gastric motility as well as secretion and dilate sphincters.

B) Increases gastric motility as well as secretion and constrict sphincters.

C) Increases gastric motility, decreases secretion and dilate sphincters.

D) Increases gastric motility, decreases secretion and constrict sphincters.

2- Concerning physostigmine, all of the following statements are False Except that it:

A) Acts directly on the muscarinic and nicotinic receptors.

B) Acts through inactivation of choline-esterase enzyme lead to endogenous acetylcholine which act only on muscarinic receptors.

C) Reversibly inhibits choline-esterase enzyme leading to increased endogenous acetylcholine which act on all cholinergic receptors.

D) Acts on either denervated or innervated skeletal muscles.

3- Contraindications of choline esters include all of the following Except:

- A) Urinary retention.
- B) Bronchial asthma.
- C) Peptic ulcer.
- D) Peptic ulcer.

4- Regarding the therapeutic uses of atropine, which One of the following cases is False:

- A) Intestinal colic.
- B) Glaucoma.
- C) Parkinsonism.
- D) Toxicity of organophosphorous insecticides.

For each of the following MCQ , select the one most appropriate answer indicate for each one:

1- Digitalis has the following Correct statements Except:

- A) They induce positive inotropic effect by inhibition of phospho-diesterase enzyme.
- B) They produce a decrease in heart rate due to central vagal stimulation as well as sensitization of carotid sinus baroreceptors.
- C) Hyperkalaemia decreases digitalis effects as potassium ions compete with it for its side of action.
- D) Digitoxin is metabolized in the liver while digoxin mainly excreted unchanged.

2- In treatment of heart failure, all the following are Correct Except:

- A) Diuretics e.g. thiazides are useful as they reduce sodium and water retention.
- B) ACE Inhibitors can be used as they reduce afterload as well as sodium & water retention.
- C) Digitalis is effective as they decrease cardiac mechanical efficiency.
- D) Dobutamine as it increases cardiac contractility via its effect on B_1 - adrenoceptors.

3-The following statements regarding laxatives are False Except:

- A) Castor oil acts as a lubricant laxative.
- B) Lactulose is an irritant laxative.
- C) Cellulose can bind and decrease absorption of cardiac glycosides.
- D) Magnesium sulphate can be used in pregnant woman.

4- All the following drugs are used as antidiarrheal drugs Except:

- A) loperamide.
- B) Phenolphthalein.
- C) Diphenoxylate.
- D) Clonidine.

For each of the following MCQ , select the one most appropriate answer indicate for each one:

1- Concerning non-competitive antagonist, which one of the following examples is Correct:

- A) Noradrenaline and phenoxybenzamine.
- B) Noradrenaline and propranolol.

- C) Histamine and adrenaline.
- D) Acetylcholine and atropine.

2- In treatment of angina pectoris, all of the following statements are Correct
Except :

- A) Nitrates are useful as they decrease both preload & afterload that lead to a decrease in cardiac contractility & O₂ consumption.
- B) Verapamil is more selectively acting on the cardiac muscles as it blocks the L-type of Ca²⁺ channels.
- C) Beta adrenoceptor blocking agents are effective in treatment of variant angina as they decrease cardiac contractility and heart rate.
- D) Ca²⁺ channel blockers dilate arteries more efficiently than veins, therefore, they have less incidence of developing orthostatic hypotension.

3- Regarding the plasma protein binding, all of the following statements are True
Except :

- A) creates a higher concentration of the drug in the blood than in tissues.
- B) The unbound fraction of drugs is responsible for their pharmacokinetic and pharmacodynamic processes.
- C) Hypoalbuminic patients may suffer from toxic manifestations of drugs more than normoalbuminic patients.
- D) represents a good site for pharmacodynamic drug-drug interaction via displacement.

4- Regarding microsomal enzyme inducers, all of the following statements are True
Except :

- A) It increases biosynthesis of the microsomal enzymes in the liver.
- B) It increases the amounts of the liver microsomal enzymes and their quality.
- C) It increases the duration of action of drugs.
- D) It enhances the drug metabolism and leads to tolerance.

For each of the following MCQ , select the one most appropriate answer indicate for each one:

1- In the treatment of myasthenia gravis, only one of the following drugs will be used as a drug of choice:

- A) Physostigmine.
- B) Neostigmine.
- C) Edrophonium.
- D) Tacrine.

2- Concerning adrenergic neurotransmission, One of the following statements is Incorrect:

- A) Conversion of tyrosine into DOPA is inhibited by metyrosine.
- B) Dopamine is converted into norepinephrine in the cytoplasm of adrenergic neurons.
- C) Presynaptic alpha-2 receptors display a negative feed back control on norepinephrine release.
- D) Uptake-1 is not highly specific for norepinephrine.

3- Concerning epinephrine One of the following statements is Correct:

- A) It increases cyclic AMP and triglyceride contents of adipose tissues.
- B) It is effectively used in anaphylactic shock and in prophylaxis of bronchial asthma.
- C) Its conjunction with local anesthetics prolongs the duration of anesthesia but may delay the healing of wounds.
- D) It reduces the intraocular pressure with cycloplegic effects.

4- Regarding anti hypertensive drugs all the following statements are Correct Except:

- A) Clonidine acts centrally by blocking presynaptic alpha -2 adrenoceptors.
 - B) Labetalol is a selective blocker and non selective B-blocker..
 - C) Guanethidine acts by depleting noradrenaline stores in the nerve terminal.
 - D) Nifedipine causes tachycardia.
-

For each of the following MCQ , select the one most appropriate answer indicated for each one:

1- Regarding sympatholytics, One of the following statements is Incorrect:

- A) Alpha methyldopa is contraindicated in active liver cirrhosis while reserpine is contraindicated in peptic ulcer.
- B) Each of reserpine and guanethidine reduces norepinephrine contents of the central adrenergic neurons.
- C) Postural hypotension, bradycardia and miosis are among the possible effects of guanethidine.
- D) Chronic use of reserpine reduces the activity of the subsequently administered ephedrine.

2- Nitrates has the following Correct statements Except:

- A) Arterioles & precapillary sphincters are more sensitive as they are more liable to release nitric oxide from nitrate.
- B) High doses, reduce cardiac output and reflex tachycardia.
- C) Nitroglycerin is ineffective when given orally as it suffers extensive hepatic metabolism.
- D) May induce methaemoglobinemia that can be treated by ascorbic acid or methylene blue.

3- Captopril and enalapril, all the following:

- A) Decrease the angiotensin II concentration in the blood.
- B) Competitively inhibit angiotensin at its receptor.
- C) Increase bradykinin and decrease aldosterone levels in the blood.
- D) Increases sodium and decrease potassium levels in the urine.

4-One of the following drugs is the drug of choice used in the treatment of hypertensive emergencies intravenously:

- A) Sodium nitroprusside.
- B) Minoxidil.
- C) Triamterene.
- D) Propranolol.

August 2007

ALL QUESTIONS SHOULD BE ATTEMPTED:

- 1- In tabular form mention the different groups of diuretics, their sites of actions, mechanism of actions, and adverse reaction.
- 2- Explain the mechanism underlying the use of different drug groups in the treatment of peptic ulcer and their main side effects.
- 3- Write a brief account of type, mechanism of action and side effects of combined oral contraceptives.
- 4- Discuss the pharmacological actions, pharmacokinetics, therapeutic uses and side effects and toxicity of paracetamol (Acetaminophen).
- 5- Discuss the pharmacotherapy of hyperlipoproteinemia and mention the mechanism of actions and adverse reactions of commonly used antihyperlipidemic groups.
- 6- Compare between the pharmacological effects of different types of B-adrenergic blocking drugs and mention their therapeutic uses and adverse reactions.
- 7- Briefly mention the pathways of drug biotransformation and factors influencing drug biotransformation.
- 8- Classify anxiolytic and hypnotic drugs giving drug examples and mention their mechanism of actions and therapeutic uses.
- 9- Write short note on classification, mechanism of action, pharmacokinetics, therapeutic uses and side effects of fluoroquinolones.
- 10- Mention the mechanism of action, therapeutic uses, and adverse reactions of substances that inhibit the renin angiotensin system-give examples.

June 2008

ANSWER THE FOLLOWING QUESTIONS:

- (1) Principles of using corticosteroids.
- (2) Therapeutic uses of and precautions with morphine therapy.
- (3) Warfarin, mechanism of action, untoward effects and conditions that affects.
- (4) Loop diuretics, mechanism of action, therapeutic uses and side effects.
- (5) In a table form compare between pharmacological actions and Therapeutic uses of physostigmine and neostigmine.
- (6) First line drugs for treatment of tuberculosis with special emphasis of the mechanism of action and side effects of two of them.
- (7) Classification, therapeutic uses and side effects of renin/ angiotensin converting enzymes.
- (8)
 - a) Therapeutic uses of propranolol.
 - b) Adverse reactions of insulin.
- (9)
 - a) Names, advantages and side effects of selective serotonin reuptake inhibitors (SSRI) drugs.
 - b) Side effects of benzodiazepines.
- (10) a) Definition and factors determining volume of distribution.
b) Mechanism of action and side effects of quinidine

August 2008

ALL QUESTIONS ARE TO BE ANSWERED:

Write an account on each of the following:

- 1- Beta adrenergic blockers: Therapeutic uses, and adverse effects.
- 2- Antihistamines H₂ blockers : Clinical uses, and side effects.
- 3- Clonidine: Mechanism of action and therapeutic uses.
- 4-Benzodiazepines: Examples, mechanism of action, therapeutic uses and main adverse effects.
- 5- Insulin: preparations, pharmacological effects and side effects.
- 6- Nitroglycerin: Mechanism of action and adverse effects.
- 7- Penicillins: Types, uses, mechanism of action and adverse effects.
- 8- Phenytoin: Uses, and mechanism of action.
- 9- Oral contraceptives: Types, mechanism of action and adverse effects.
- 10- Reversible anticholinesterase: Therapeutic uses, mechanism of action and adverse effects.
- 11- Thiazide diuretics: Therapeutic uses and adverse effects.
- 12- factors affecting biotransformation.

Write true or false corresponding each of the following statements after writing in your answer notebook:

- 1- Atropine is the drug of choice in motion sickness.
- + 2- Digoxin stimulates Na/A T Pase. + K
- 3- Angiotensin converting enzyme inhibitors are used in depression.
- 4- Verapamil is used in angina.
- 5- Sumatriptan is used in acute migraine.
- 6- Morphine causes bronchodilatation.
- 7- Lidocaine is a sodium channel blocker used in cardiac arrhythmia.
- 8-Warfarin is used as anticoagulant.
- 9- Memantine is used in Alzheimer's disease.

For each of the following MCQ, select the one most appropriate answer:

- 1- The tonic convulsion induced by pentylenetetrazole in mice can be prevented by pretreating the mice by any one of the following drugs Except:
 - A) Phenytoin.
 - B) Ethosuximide.
 - C) Theophylline.
 - D) Phenobarbital.
- 2- The action of acetylcholine on the isolated rectus abdominus preparation can be potentiated by all the following drugs Except:
 - A) Echothiopate.
 - B) Succinylcholine in small dose.
 - C) Flaxedil.
 - D) Neostigmine.

3- All of the following agents are suitable for surface anesthesia Except:

- A) Xylocaine.
- B) Mepivacaine.
- C) Procaine.
- D) Tetracaine.

4- All of the following are inhalational anesthetic liquids Except:

- A) Thiopental.
- B) Halothane.
- C) Methoxyflurane.
- D) Isoflurane.

5- The techniques of administration of local anesthesia include all of the following

Except:

- A) Surface anesthesia involves topical application of anesthetic agent directly to the skin.
- B) Infiltration anesthesia involves subcutaneous administration of anesthetic in close to nerve endings.
- C) Spinal anesthesia involves injection of anesthetic into one of the intervertebral spaces from the 2nd to the 5th lumbar regions.
- D) Block anesthesia involves I.V. administration of anesthetic agent.

For each of the following MCQ, select the one most appropriate answer:

- 1- In mice pretreated with morphine (group I) indomethacin (group II), morphine + naloxone (group III) or saliae (group IV), injection of 1% acetic acid will induce zero % writing reflex in the following group:
A) group I B) group II C) group III D) group IV
- 2- In animals pretreated with indomethacin and naloxone, the % of inhibition of writing reflex after injection of 1% acetic acid will be:
A) 100 B) 80 C) 30 D) zero
- 3- A patient is taking aspirin and ammonium chloride, the excretion of aspirin will be:
A) Increased because it exists in urine as ionized form.
B) Decreased because ammonium chloride compete with its tubular absorption.
C) Not affected as urinary PH is stable.
D) None of the above is applicable.
- 4- Ado has been prepared for B.P measurements. Atropine and physotigmine were intravenously injected into such animal. The subsequent administration of acetylcholine will produce:
A) Fall in B.P
B) Rise in B.P
C) Biphasic response, initial rise following by fall in B.P
D) No change in B.P
- 5- Hexobarbitone sleeping time is prolonged in animals:
A) Pretreated with phenobarbitone.
B) Starved for 36 hours.
C) Received saline with hexobarbitone.
D) Fed with a high protein diet

For each of the following MCQ, select the one most appropriate answer:

- 1- Intravenous injection can be used in the following cases Except One:
 - A) Infusion of large volumes solution.
 - B) Injection of highly irritant oily solution.
 - C) When rapid onset of action is required.
 - D) in case of unconscious patients.
- 2- Regarding rabbits as experimental animal , all the following are correct Except One:
 - A) They can be easily injected intravenously into their marginal ear veins.
 - B) They should be lifted from their ears.
 - C) Some of their isolated muscle preparations are taken from rabbits.
 - D) They are used to study the effects of drugs one eye.
- 3- Regarding sublingual administration of drugs which one of the following is incorrect?
 - A) Has a short duration of action as it suffers extensive first pass effects
 - B) Absorption of the drugs is faster than oral administration.
 - C) Not suitable for irritant drugs.
 - D) Not need strict sterility.
- 4- Drugs metabolism has all the following correct statements Except:
 - A) Converts hydrophilic drugs to lipophilic metabolites.
 - B) It can be classified into phase I and phase II.
 - C) Phases I includes oxidation, reduction, acetylation and hydrolysis.
 - D) Mostly decreased the pharmacological activities of drugs.
- 5- Referring to liver microsomal enzyme system all the following are correct Except:
 - A) Metabolism takes place in the rough endoplasmic reticulum.
 - B) The activity of these enzymes can be included by malnutrition.
 - C) Insecticides and cigarette smoke can enhance the activity of these enzyme.
 - D) Liver diseases reduce the metabolic activities of these enzymes.

For each of the following MCQ, select the one most appropriate answer:

- 1- Sodium bicarbonate could enhance the renal excretion of aspirin due to one of the following:
 - A) Increased the renal blood flow.
 - B) Enhances the tubular secretion of aspirin.
 - C) Increased the degree of ionization of aspirin in renal filter.
 - D) Displaces the aspirin from its binding sites on plasma protein.
- 2- Regarding the study of the effect of different drugs on the rabbits eye, which one of the following is correct:
 - A) Adrenaline dose not affect the light reflex but can produce active mydriasis.
 - B) Tropicamide produces passive mydriasis as it blocks central vagal nuclei.
 - C) Eserine produces miosis by stimulation of muscarinic receptor of sphincter pupillae muscle.
 - D) Cycloplegia can be tested by failure to see near objects.
- 3- An unknown drug was found to stimulate the isolated rabbit's intestinal movements. This stimulate could not be blocked by large dose of nicotine but could be blocked by atropine. Which one of the following is the unknown drugs:

- A) Barium chloride.
 - B) Trimethaphan.
 - C) Pilocarpine.
 - D) Oxytocin
- 4- Which one of the following represents the site of action of the unknown drug chosen in Q 3.
- A) Alpha and beta adrenoceptors.
 - B) Peripheral muscarinic receptors.
 - C) Parasympathetic ganglion receptors.
 - D) Direct on smooth muscle fibers.
- 5- In the dose-response curve, a competitive antagonist has all the following characters Except:
- A) It possesses some receptor affinity but no intrinsic activity.
 - B) It shifts the dose response curve of its pure agonist to the left.
 - C) It does not affect the drug efficacy.
 - D) It increases the median effective dose (ED 50) of pure agonist.

For each of the following MCQ, select the one most appropriate answer:

- 1- An unknown drug was given into an anesthetized rat IV and its effect on systemic blood pressure was recorded as appear in Fig.1. Which one of the following drugs may be the unknown:
- A) Norepinephrine.
 - B) Isoproterenol.
 - C) Epinephrine.
 - D) Dopamine.
- 2- In the same animal in Q 1, the same experiment was repeated but after giving second drug and the response was recorded as in Fig.2. Which of the following is the second drug:
- A) Prazosin.
 - B) Propranolol.
 - C) Phenoxybenzamine.
 - D) Acetylcholine
- 3- The drug chosen in Q2, act by one of the following:
- A) Stimulation of beta adrenoceptors.
 - B) Blocking of beta adrenoceptors.
 - C) Stimulation of alpha adrenoceptors.
 - D) Blocking of alpha adrenoceptors.
- 4- Regarding skeletal muscle relaxants which one of the following is correct:
- A) Succinylcholine causes competitive blockade.
 - B) D-tubocurarine may cause muscle fasciculation at the onset of its action.
 - C) Atropine relaxes the muscle by competitive blockade of AChreceptor.
 - D) D-tubocurarine may cause bronchospasm as it releases histamine.
- 5- The surgical stage planes of general anesthetics are characterized by the following Except One:
- A) Roving eye ball movement and normal pupil size in first plane.
 - B) Fixed eye ball and start of pupillary dilatation in second plane.
 - C) Complete loss of light reflex in third plane
 - D) Complete pupillary dilatation in forth plane.

For each of the following MCQ, select the one most appropriate answer:

Mr. Ali is 40 years old worker who was suffering from intermittent headache of that was not responsive to analgesic antipyretics . Measurement of the blood pressure of this patient revealed that he had a blood pressure of 200/120 mmHg.

1- As physician you are going to advice this patient to avoid all the following

Except:

- A) Increase sodium chloride intake.
- B) Physical and mental rest.
- C) High caloric diet.
- D) Increase of body weight.

2- Treatment of this patient can be started by one of the following:

- A) methyldopa.
- B) Trimethaphan.
- C) Hydrochlorothiazide.
- D) Guanethidine.

3- In spite of the administration of drug in Q2, the B.P. remained at 170/110, what is the drug of choice to be added to the previously selected drug:

- A) Furosemide.
- B) Minoxidil.
- C) Guanethidine.
- D) Propranolol.

4- Hypertensive emergency developed in this patient due to sudden discontinue of treatment. Which of the following drug is preferred as safe life treatment:

- A) Nicardipine.
- B) Sodium nitroprusside.
- C) Alpha methylodopa.
- D) Clonidine.

5- The drug is selected in Q4 because it has one of the following characters:

- A) Can be used orally.
- B) Has long duration of action.
- C) Has rapid and controllable action.
- D) Could counteract the side effects of thiazide diuretics.

For each of the following MCQ, select the one most appropriate answer:

Ms. Hoda is a 52 years old lady she suffers from persistant cough, wheezing and mild asthma that occurs frequently. Her case was diagnosed as an acute attack of bronchial asthma.

1- The treatment of this case can be started by one of the following:

- A) Theophylline.
- B) Inhaled salbutamol.
- C) Injectable ipratropium.
- D) Inhaled cromolyn sodium.

2- After 7 days, Ms. Hoda phonded her physician and told him that she suffers one of the following side effects due to the drug selected in Q1:

- A) Chest tightness and throat irritation.
- B) Dry mouth and dry bronchial secretion.
- C) Headache, tremors and palpitations.
- D) Urinary retention and constipation.

3- One of the following drugs should be used by Ms. Hoda as prophylaxis against asthma:

- A) Cromolyn sodium.
- B) Theophylline.
- C) Ipratropium bromide.
- D) Corticostroid.

4-The drug chosen in Q3 acts by one of the following mechanisms

- A) Stimulation of B_2 adrenoceptor
- B) Inhibition of phosphodiesterase enzyme.
- C) Inhibition of release of histamine and other autacoids from sensitized mast cells.
- D) Prevention of binding of ACh with muscarinic receptors.

5-The drug selected in Q3 should be used by one of the following route of administration.

- A) Orally.
- B) Inhalation.
- C) Intravenous.
- D) Sublingual.

For each of the following MCQ, select the one most appropriate answer:

Mr. T.A. is years old hypertensive man who was presented to the clinic for ophthalmic examinations. His intraocular pressure (IOP) was 39 mmHg. This case was diagnosed as open angle glaucoma.

1- **One of the following drugs could be prescribed to this case:**

- A) Tropicamide.
- B) Pilocarpine.
- C) Furosemide.
- D) Methacholine.

2- The drug chosen in question has the following side effects Except:

- A) Reduced vision in poor light due to miosis.
- B) Salivation.
- C) Systemic acidosis.
- D) Diarrhea.

3- Re-examination of Mr. T. A. showed that IOP is still high 30 mmHg.
one of the following drugs may be added to the regimen of treatment:

- A) Epinephrine eye drops.
- B) Timolol.
- C) Acetazolamide.
- D) Dipivefrin.

4- The drug chosen in question 3 acts by:

- A) Inhibition of carbonic anhydrase enzyme activity.
- B) Reducing the rate of formation of aqueous humor.
- C) Increased drainage of aqueous humor via trabecular meshwork pores of canal of schlem.
- D) Unknown mechanism.

5- The following drugs may increase IOP therefore they should be avoided

Except One:

- A) Homatropine.
- B) Chlorpromazine.

- C) Amitriptyline.
- D) Mannitol.

For each of the following MCQ, select the one most appropriate answer:

A male patient aged 52 years consults his physician for severe chest pain. Investigations revealed that he has angina pectoris.

1- Strategy of management of angina includes all the following Except One:

- A) Maintenance of adequate cardiac perfusion.
- B) Reduction of cardiac oxygen consumption via increase of both cardiac contractility and heart rate.
- C) Reduction of risk factors such as to avoid stress and heavy meals.
- D) Operative using either coronary angioplasty or bypass.

2- The following drugs can be used in variant (vasospastic) angina Except:

- A) Atenolol.
- B) Diltriazem.
- C) Isosorbide mononitrate.
- D) Verapamil.

3-Regarding nitrates in treatment of angina, the following are their side effects Except:

- A) Reflex Bradycardiac.
- B) Pulsating headache.
- C) Transient attacks of dizziness.
- D) Tolerance.

4-The use of propranolol in the treatment is contraindicated in angina is in the following disease states Except:

- A) Diabetes mellitus.
- B) Cardiac arrhythmia.
- C) Peripheral vascular disease.
- D) Brochial asthma.

1- 5-The following are adjuvant therapy in angina Except:

- A) Treatment of atherosclerosis.
- B) The use of glucocorticoids.
- C) Physical and mental rest.
- D) The use of antianxiety drugs.

For each of the following MCQ, select the one most appropriate answer:

A male patient aged 40 years old consults his physician for epigastric pain.

Investigations revealed that he has a duodenal ulcer.

2- this patient should avoid all the following Except:

- A) Smoking.
- B) Light frequent meals.
- C) Spices and strong coffee.
- D) Alcohol.

3- The following drugs are used in treatment of peptic ulcer Except:

- 4- Bethanechol.
- A) Famotidine.
- B) Piernzepine.
- C) Omeprazole.

5- H₂ blocker in previous question could be prescribed to this patient because it has all the following effects Except:

- A) It has less antiandrogenic effect than cimetidine.
- B) It is more potent than cimetidine.
- C) It dose not significantly inhibit cytochrome p-450 hepatic enzyme activity.
- D) It significantly inhibits the ralease of prostaglandin.

6- Which of the following drugs is preferred to be added to the regimen of treatment:

- A) Magnesium trisilicate.
- B) Sodium bicarbonate.
- C) Effervescent base (sod. Bicarbonate cetric acid).
- D) Magnesium sulfate.

7- The major disadvantage of the drug selected in question 4 can be overcome by adding one of the following drugs to the therapeutic regimen.

- A) Calcium carbonate.
- B) Carbenoxolone.
- C) Aluminum hydroxide gel.
- D) Sucralfate.

May 2009

Answer the following questions:

- (1) Mention the mechanism of action, therapeutic uses and adverse effects of clonidine.
- (2) Pharmacological action and side effects of local anaestheics.
- (3) Enumerate the differences between "typical" and "atypical" antipsychotic drugs.
- (4) **A-** Indication of combined antimicrobial therapy
B- How penicillin produces its effect.
- (5) **A-** The anti-inflammatory drugs are useful in treatment of bronchial asthma. Discuss, with special emphasis on their mechanism of action and side effects.
B- Many drugs are used for its value as antagonists. Give an account of the different types of antagonism with drugs examples.
- (6) **A-** Types, preparations, indications and side effects of insulin.
B- Mechanism of action, indications and adverse reactions of thionamide drugs.
- (7) **A-** Uses and side effects of H1 receptor antagonists.
B- Uses and side effects of ACEIs.
- (8) **A-** In a table form, match between heparin and warfarin.
B- Give an account about the cytoprotective agents used for gastric ulcer.
- (9) Give the pharmacological rationale for the following combinations:
 - A-** Sulfonamides and trimethoprim.
 - B-** Furosemide and spironolactone.
 - C-** ACEIs and diuretic.
 - D-** Quinidine and verapamil.

E- Imepenim with cilastatin.

(10) Give a short note about the following:

A- Preanesthetic medication.

B- Tinidazole.

C- Chloroquine.

D- Patient's noncompliance.

E- First dose phenomenon.

Pathology



June 2000

ANSWER ALL QUESTIONS:

Compare in a table-form between:

- 1- Dry & moist gangrene.
- 2- Primary & secondary (Reinfection) types of lung T.B.
- 3- Acute & subacute infective endocarditis.
- 4- Bilharzial & non-bilharzial carcinoma of urinary bladder.

Mention five (5) complications of the following:

- 5- Malignant tumors.
 - 6- Systemic hypertension.
 - 7- Bronchiectasis.
 - 8- Urinary calculi.
-

June 2001

ALL QUESTIONS ARE TO BE ANSWERED:

- 1- Enumerate the types of:
 - a) Pneumonia.
 - b) Non-Hodgkin's lymphoma (NHL)
 - c) Ovarian tumors.
 - d) Benign epithelial tumors.
- 2- Define and enumerate the causes of:
 - a) Right sided heart failure.
 - b) Hydrocephalus.
 - c) Nephritic syndrome.
 - d) Aneurysms.
- 3- Mention the complications of:
 - a) Wound healing.
 - b) Gastric peptic ulcer.
 - c) Acute Haematogenous osteomyelitis.
 - d) Cirrhosis
- 4- Mention in a table form the differences between:
 - a) Septicemia and pyaemia.
 - b) Scirrhouss and medullary breast carcinoma.
 - c) Nodular goiter and graves disease.
 - d) Chronic myeloid and chronic lymphatic leukemia.

September 2001

ALL QUESTIONS ARE TO BE ANSWERED:

Write a short account on:

- 1- Local vascular reaction in acute inflammation.
- 2- Epithelial changes in urinary bladder bilharziasis.
- 3- Embolism (definition, types and effects).
- 4- Pott's Disease.
- 5- Types of carcinoma (enumeration and examples).
- 6- Aschoff's Nodules.
- 7- Bronchial asthma (definition, types and complications).
- 8- Causes of haematemesis.
- 9- Types of liver abscess.
- 10- Blood and urine changes in Post-Streptococcal Glomerulonephritis.

- 11- Enumerate tumours of uterus.
 - 12- Enumerate tumours of bones.
 - 13- Renal complications of diabetes mellitus.
 - 14- Hodgkin's lymphoma (classifications and microscopic picture).
-

May 2002

ANSWERE 12 QUESTIONS ONLY:

- 1- Classify epithelial tumors and mention the microscopic criteria of malignancy
- 2- Mention the pathology of fine bilharzial liver fibrosis.
- 3- Enumerate the types of congenital heart diseases and report on congenital narrowing of the AORTA.
- 4- Define emphysema and write on its pathogenesis.
- 5- Write on the pathogenesis of chronic peptic ulcer.
- 6- Give an account on the etiology and types of gall stones
- 7- Define nephrotic syndrome and enumerate its causes.
Mention in a table form the differences between carcinoma of the uterine body and cervix.
- 9- Define hydrocephalus mention its types and causes.
- 10- Define leukemia and the differences between chronic lymphatic and chronic myeloid types.
- 11- Classify Hodgkin's lymphoma and describe the (RS) cell.
- 12- Mention the sites and Effects of multiple myeloma.
- 13- Differential between the two main types of leprosy.

September 2002

ANSWERED THE FOLLOWING QUESTION:

- 1) Give an account on:
 - a) Granuloma.
 - b) Types of edema.
 - c) Primary complex...sites and fate.
 - d) Methods of spread of malignant tumors.
 - 2) Enumerate the complications of:
 - a) Bilharziasis of the urinary bladder.
 - b) Acute hematogenous osteomyelitis.
 - c) Liver cirrhosis.
 - d) Diabetes mellitus.
 - 3) Discuss the pathology of the following:
 - a) Mitral stenosis.
 - b) Bronchial (bronchogenic) carcinoma.
 - c) End stage (chronic) glomerulonephritis.
 - d) Neoplastic ovarian cysts.
-

June 2003

ALL QUESTIONS SHOULD BE ANSWERED PLEASE:

COMPARE AND CONTRAST IN A TABLE FROM THE PATHOLOGICAL FEATURES OF:

- 1- Primary and secondary intestinal tuberculosis.
- 2- Carcinoma and sarcoma.
- 3- Vascular changes and causes of death in benign and malignant essential hypertension.
- 4- Chronic peptic ulcer and ulcerative carcinoma of the stomach.
- 5- Serous and mucinous cyst adenomas of the ovary
- 6- chronic glomerulonephritis and chronic pyelonephritis.
- 7- Osteosarcoma and Ewings sarcoma of bone.

ENUMERATE:

- 8- Type and effects of thrombi.
- 9- Types and complications pneumonia.
- 10- Causes and effects of enlargement of the prostate.
- 11- types and complications of gallstones.
- 12- Type and complications of meningitis.

August 2003

ANSWERED THE FOLLOWING QUESTIONS:

Give an account on the complications of:

- a) Wound healing
- b) Chronic fibrocaceous pulmonary tuberculosis.
- c) Bilharziasis of the urinary bladder.
- d) Emphysema

. Give an account on the causes of:

- a) Sudden coronary.
- b) Abnormal uterine bleeding.
- c) Chronic intestinal obstruction
- d) Death in malignant tumors.
- e) Liver suppurations.
- f) A-lump (mass) in the female breast.

3- Give an account on the pathologic features (gross and microscopic)

- a) Renal cell carcinoma (hypernephroma).
- b) Giant cell tumor of bone,
- c) Hodgkin Disease.
- d) Meningioma.

May 2004

ANSWERED THE FOLLOWING QUESTIONS:

- 1- What are the effects of tumors on the host?
- 2- Enumerate the types of aneurysms and their complications.
- 3- Classify tumors of the lung and describe the pathologic feature of the most common primary malignant one.
- 4- What are the ulcers that can be seen in the small intestine? Describe the gross and microscopic feature of each.
- 5- Enumerate the type - give the characters and complications of urinary calculi.
- 6- Enumerate the causes and describe the pathologic feature of chronic hepatitis.
- 7- Enumerate the causes of pathological feature with a comment on osteoporosis.
- 8- Describe the pathologic feature of brain abcess.

WHAT IN YOUR OPINION ARE THE DIFFERENCE BETWEEN:

- 9- Carcinoma of the body and carcinoma of the cervix uteri.
- 10- Infiltrating duct carcinoma (scirrhous carcinoma) and medullary (encephaloïd carcinoma) of the breast.
- 11- Nodular prostatic hyperlasia and adenocarcinoma of the prostate.
- 12- Chronic lymphocytic leukemia and chronic myeloid leukemia.

August 2004

ANSWERED THE FOLLOWING QUESTIONS:

COMPARE IN TABLE LIKE MANNER:

- 1- Cellulitis and abscess.
- 2- Benign and malignant tumor.
- 3- Thrombus and embolism.
- 4- Primary secondary pulmonary tuberculosis.

GIVE AN ACCOUNT ON:

- 5- Complications of bronchiectasis.
- 6- Pathogenesis of emphysema.
- 7- Complications of peptic ulcer.
- 8- Toxic goiter.
- 9- Complications of gall stones.
- 10- Enumerate different of types aneurysms and their complications.
- 11- Classify bone tumors.
- 12- Classify ovarian cysts.
- 13- Enumerate ulcers of small and large intestine.
- 14- Enumerate causes of breast mass.

January 2005

SELECT THE BEST SINGLE ANSWER:

1-Autopsy of a patient who died from myocardial infarction often reveals coronary artery obstruction by:

- | | |
|-------------------------------|-----------------------------------|
| a) Non -complicated atheroma | b) A thrombus on top of atheroma |
| c) Thrombotic embolus | d) Stenosis at the coronary ostia |

2- If the following events were placed in their correct order which would come fourth:

- | | |
|----------------------------------|-----------------------------|
| a) Right sided heart failure | b) Pulmonary hypertension |
| c) Benign essential hypertension | d) Left sided heart failure |

3- Secondary hypertension is caused by:

- | | |
|--------------------|-----------------------------|
| a) Aortic stenosis | b) Necrotising arteriolitis |
| c) Renal ischaemia | d) Hypothyroidism |

4- Autopsy of a patient who died from mitral stenosis often reveals right sided heart failure:

- | | |
|-----------------------------|---------------------------------|
| a) Left sided heart failure | b) Left ventricular hypertrophy |
| c) Pulmonary hypertension | d) Cardiac aneurysm |

5- The liver of the same patient is expected to show:

- | | |
|----------------------|----------------------|
| a) Amyloidosis | b) Abscess formation |
| c) Nutmeg appearance | d) Honeycomb. |

6- The lower of the same patient are expected to show:

- | | |
|------------------|--------------------|
| a) Hard edema | b) Dry gangrene |
| c) Pitting edema | d) varicose ulcers |

7- Aschoff bodies are most prominent in:

- a) Pericardium
- b) Endocardium
- c) Myocardium
- d) Cardiac valves

8- MacCallum's patch is a feature of:

- a) Rheumatic pericarditis
- b) Rheumatic endocarditis
- c) Infective endocarditis
- d) Rheumatic myocarditis

9- Which type of vegetations never gives emboli?

- a) Rheumatic
- b) Acute infective endocarditis
- c) Subacute infective endocarditis
- d) Non- bacterial endocarditis

10- Atherosclerosis is characterized by all except:

- a) Very common
- b) Affects arteries and veins
- c) Hypertension is a major risk factor
- d) Thrombosis is an important complication

11- The most important carcinogenic virus in Egypt is:

- a) Human papilloma virus
- b) Ebstein - Barr virus
- c) Hepatitis C virus
- d) HIV

12- Which of the following benign tumours is most liable to malignant transformation

- a) Lipoma
- b) Leiomyoma
- c) villous papilloma
- d) Hemangioma

13- In situ is:

- a) An intraepithelial malignancy
- b) Detected by exfoliative cytology
- c) A stage zero carcinoma
- d) All of the above
- e) None of the above

14- Basal cell carcinoma is:

- a) An intraepithelial carcinoma
- b) An -occult carcinoma
- c) A locally malignant tumour
- d) A - borderline tumour

15- Chemical carcinogens include all except:

- a) Polycyclic hydrocarbon
- b) Asbestos
- c) Corticosteroids
- d) Azo compounds

16- Ana plastic tumour is a tumour in which the tissue is:

- a) Well differentiated
- b) Moderately differentiated
- c) Poorly differentiated
- d) Undifferentiated

17- Glandular can be:

- a) Adenocarcinoma
- b) Signet Ring carcinoma
- c) Undifferentiated carcinoma
- d) All of the above

18- Squamous cell carcinoma is not common in:

- a) Tongue
- b) Bronchus
- c) Breast

- d) Cervix uteri e) Urinary bladder

19- Embryonal tumours include all except:

- a) Neuroblastoma b) Seminoma
c) Nephroblastoma d) Retinoblastoma

20- Atrophy is:

- a) Always pathological b) Not Seen in glands
c) Often produced by ischaemia
d) All of the above e) None of the above

21- The most significant disturbance of growth is:

- a) Hyperplasia b) Hypertrophy c) Dysplasia
d) Neoplasia e) Metaplasia

22- Bilharzial fibrosis of the liver can lead to all following except:

- a) Liver cell carcinoma b) Haematemesis
c) Ascites d) Splenomegaly

23- Bilharzial granuloma depends on:

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

24- In filariasis rupture of lymphatic varix may result in:

- a) Hydrocele b) Chylocele c) Haematocele
d) All of the above e) None of the above

25- Which is responsible for progressive enlargement of the spleen in
Case of advanced Bilharzial hepatic fibrosis:

- a) Portal hypertension b) Hyperplasia of the R.E.S
c) Both d) Neither

26-Girdle ulcer of the intestine is due to:

- a) Primary tuberculosis b) Bilharziasis
c) Amebiasis d) Secondary tuberculosis e) Gumma

27-Generalized miliary tuberculosis is characterized by:

- a) Hematogenous dissemination of tubercle bacilli
b) Multiple small lesions in several organs
c) High mortality rate
d) All of the above e) None of the above

28-Pott's disease is tuberculous infection of:

- a) Vertebral bodies b) Vertebral bodies and intervertebral discs
c) Spinous process d) All e) None

29- Vitamin C deficiency results in:

- a) Night blindness b) Osteomalacia c) Pellagra
d) All of the above e) None of the above

30-Diagnosis of diseases can be obtained by:

- a) Autopsy
- b) Biopsy
- c) Exfoliative cytology
- d) All of the above
- e) None of the above

31-In acute inflammation the exudates has high protein content because:

- a) Intracapillary pressure is raised
- b) Blood flow is increased
- c) Capillary walls are more permeable
- d) Plasma cells secrete gamma globulin

32- All of the following are form of transudate except:

- a) Hydrothorax
- b) Hydropericardium .
- c) Hydroperitoneum
- d) Hydrocele
- e) None of the above

33- A case of septicaemia will show:

- a) Blood haemolysis
- b) Acute splenic swelling
- c) Bacterial endocarditis
- d) Focal liver necrosis
- e) All of the above

34-All of the following are causes of portal pyaemia except:

- a) Acute appendicitis
- b) Infected Piles
- c) Puerperal sepsis
- d) Suppurative colitis
- e) Suppurative cholecystitis

35-Prostaglandins are important for:

- a) Vasodilatation of acute inf1ammation
- b) chemotaxis
- c) Both
- d) Neither

36-Leucocytic emigration in acute inflammation is helped by:

- a) fibrin
- b) Chemical mediators
- c) Both
- d) Neither

37-Cellulitis is characterized by:

- a) Caused by hemolytic streptococci
- b) More complications
- c) Occurs in loose
- d) All
- e) None

38-Healing of liver lesions often takes place by:

- a) Fibrosis
- b) Regeneration
- c) Both
- d) Neither

39- Not a mechanism of repair is:

- a) Regeneration
- b) Resolution
- c) Organization
- d) All of the above
- e) None of the above

40- The earliest cellular change following failure of sodium pump is:

- a) Hypertrophy
- b) Hyperplasia
- c) Fatty change
- d) Clowdy swelling
- e) Necrosis

41- The earliest irreversible cellular damage is:

- a) Mitochondria damage b) Cell membrane damage
c) Nuclear damage d) All e) None

42-Albinism is due to:

- a) Increased melanin pigmentation b) Excessive haemolysis
c) Lipid storage disease d) All e) None

43-Secondary amyloidosis is:

- a) Commoner than the primary type
b) Often associated with hepatosplenomegaly c) both d) neither

44-Post necrotic changes in cells appear by light microscopy after:

- a) Few minutes b) 1 to 3 hours
c) 6 to 12 hours d) 24 hours

45-Ischaemia is the commonest cause of:

- a) Coagulative necrosis b) Fat necrosis
c) Caseation necrosis d) All e) None

46-Moist gangrene occurs in:

- a) Intestine b) External genitalia c) Limb
d) All of the above e) None of the above

47-Firm mass circulating in the blood is called:

- a) Thrombus b) embolus c) clot
d) All of the above e) none of the above

48-A red infarction is seen in:

- a) Heart b) brain c) kidney d) none e) lung

49-All are forms of haemorrhage except:

- a) petechial b) ecchymosis c) haematocoele
d) haemosiderosis e) haematoma

50-Memory cells produced by

- a) T-lymphocytes b) B- lymphocytes
c) Both d) neither.

51-Plasma cells derived from:

- a) T-lymphocytes b) B-lymphocytes
c) macrophages d) All e) None

52-Mast cell granules contain

- a) phospholipase enzyme b) Histamin
c) Chemo tactic factor d) All e) None

53-Autoimmune disease Occurs as a result of:

- a) Failure of recognition b) Formation of auto- antibodies.
c) Both d) Neither

54-Lepra cells are:

- a) Altered lymphocytes
- b) Altered macrophages
- c) Foreign body giant cells
- d) Schwann cells

55-Syphilitic aortitis is:

- a) Often seen in aortic root and arch
- b) complicated by aortic stenosis.
- c) Both.
- d) Neither

56-Manifestations of toxemia include all the following except:

- a) Degeneration of liver
- b) Necrosis of liver
- c) Carcinoma of liver
- d) All
- e) None

57-Streptococcal viridans bacteraemia may cause:

- a) Acute bacterial endocarditis
- b) Suppurative myocarditis
- c) Suppurative pericarditis
- d) All
- e) None

58- Kaposi's sarcoma is common in patients suffering from:

- a) Smallpox
- b) AIDS
- c) German measles
- d) All of the above
- e) None of the above

59- The commonest site for actinomycosis:

- a) Liver
- b) Lung
- c) Cecum
- d) Bones of lower limb
- e) Angle of mandible

INDICATE WHETHER EACH OF THE FOLLOWING STATEMENTS

IS TRUE [T] OR FALSE [F]:

60- A boy of 12y. Has a congenital hole in the heart 10 mm. in diameter giving free communication between left and right ventricles. He is expected to have hypertrophy of right ventricle.

61- The same patient is also expected to have pulmonary hypertension.

62- The same patient is expected to have the risk of developing sub acute bacterial endocarditis.

63- The same patient will not be cyanosed. from the start.

64- Early in the disease, flows of blood in the defect in the same patient will be from right to left.

65-The main cause of death in malignant hypertension is renal failure.

66- Malignant melanoma always contain melanin pigment.

67- Broder's classification is used for grading squamous cell carcinoma according to degree of cytological atypia.

68- Cathepsin D and collagenase type IV are involved in the mechanisms of tumour spread.

69- Dysplasia means transformation of normal cells to malignant ones.

70- The lung is the commonest site for hydratid cyst.

71- Amoeboma is a benign tumour of the colon.

72- Presence of small number of bacteria in the blood stream without toxic manifestation is called septicaemia.

73- Anaphylaxis may occur in the first exposure to antigen.

74- Graft rejection occurs by delayed hypersensitivity reaction.

75- Endothelial injury is an important cause of thrombosis.

76- Oedema of acute inflammation is soft and pitting.

77- Cardiac oedema often starts in the face.

78- Frequent loss of small amount of blood for long period has no effects.

- 79- Ghon's focus is a huge TB granuloma in lung or intestine.
- 80- Caseating necrosis can be explained by type IV hypersensitivity
- 81- Tissue histiocytes are only noticed in chronic inflammation,
- 82- Pyogenic organisms are highly chemotactic to leucocytes.
- 83- Transected peripheral nerves usually show repair by regeneration.
- 84- Russel's bodies represent macrophages with hyalinosis.
- 85- Apoptosis and necrosis have the same meaning.
- 86- Sago spleen is the spleen showing diffuse amyloid deposition,
- 87- Bilharzial infestation of the liver can lead to cirrhosis.
- 88- Hyperplasia is fairly common in breast and prostate.
- 89- Polyarteritis nodosa can be a cause of mycotic aneurysm
-

January 2005

Answer all Questions:

Cardinal signs of inflammation(*5 signs*):

Types of non suppurative inflammation(*6 Types*):

Function of inflammatory fluid exudate (4 functions)

Factors affecting repair (5 factors)

Chemical mediators of inflammation *include* (*3 mediators*)

Charcters of moist gangrene: (4 characters)

Aetiology of thrombi (4 points)

Sites of dystrophic calcification :(3 sites)

Sites of secondary amyloidosis :.(4 sites)

Examples of cellular hyalinosis :.(3 examples)

Causes of edema in chronic venous congestion: (3 causes)

.Causes of necrosis:(4 causes)

Examples of liquefactive necrosis:(3 examples)

Granuloma is: (3 points)

Tubercle is formed of:(3 points)

Ghons focus is:(5 points)

Tabes mesentrica is:(2 points)

Pellagra characterised by: (3 points)

Examples of immune complex diseases: (3 examples)

Mechanism of autoimmune diseases: (3 points)

Epithelial change in urinary bilharziasis:. (4 points)

Aschoff nodule is formed of: (4 points)

Causes of left sided heart failure (5 causes)

Vascular changes in benign hypertension .. (3 points)

Characters of rheumatic vegetation: (4 points)

Complications of aneurysms: (4 points)

Sites of thrombi: (3 sites)

Nuclear changes in necrosis: (4 points)

Arteries responsible for infarction of the heart :(3 arteries)

Liver in chronic venous congestion: (4 points)

Sites of actinomycosis : (3 sites)

Non cardiac lesions of rheumatic fever:

June 2005

IN TABLE FORM COMPARE BETWEEN:

- 1- Dry and moist gangrene.
- 2- Benign and malignant tumors.
- 3- Primary and secondary intestinal tuberculosis.

DISCUSS THE PATHOGENESIS OF:

- 4- Peptic ulcer.
- 5- Emphysema.
- 6- Rheumatic.

DISCUSS THE COMPLICATIONS:

- 7- Acute hematogenous osteomyelitis.
- 8- Benign hyperplasia of prostate.
- 9- Hydrocephalus.

COMPARE BETWEEN:

- 10- Nephroblastoma and renal cell carcinoma.
- 11- Serous and mucinous cystadenoma of the ovary.
- 12- Reactive hyperplasia of lymph node and follicular lymphoma.

September 2005

ALL QUESTIONS ARE TO BE ANSWERED:

- 1- Discuss the pathogenesis and complications of bronchial asthma.
- 2- Causes pathology of nephrotic syndrome.
- 3- Enumerate the types of:
 - * Non-Hodgkins lymphoma.
 - * Testicular tumors.
 - * Biliary stones.
 - * Acute inflammation.
 - * Aneurysm.
 - * Carcinoma of the stomach (naked eye and microscope types).
- 4- In a table form compare between:
 - * Benign and malignant tumors.
 - * Primary and secondary tuberculosis.
 - * Abscess and cellulitis.
 - * Nodular goiter and gravis disease.
 - * Thrombus and embolus.
- 5- Enumerate the causes of:
 - * Right sided heart failure.
 - * Biliary cirrhosis.
 - * Enlargement of cervical lymph node.
 - * Endometrial hyperplasia.
 - * Peptic ulcer.

December 2005

SELECT THE SINGLE BEST ANSWER:

- 1- The aims of inflammatory reaction are all except:
- a) Localization
 - b) Destruction
 - c) Removal of irritant
 - d) Activation of complement system

2- Pyogenic abscess is caused by:

- a) Staph. Aurous
- b) Strept. haemolyticus
- c) Both
- d) None

3- The main factor of increased escape of plasma from capillaries is:

- a) Fenestrations of basement membrane
- b) Pours in between endothelial cells.
- c) Transfer through endothelial cells by pseudopodia

4- Which one is NOT important in production of inflammatory exudates?

- a) Activation of complement.
- b) Bradikinin
- c) Hydroxytryptamine
- d) Prostaglandins

5- A localized suppuration with multiple sinuses is called:

- a) Abscess
- b) Cellulitis
- c) Furuncle
- d) Carbuncle

6- Which factor is involved in the formation of inflammatory fluid exudates?

- a) Increased vascular permeability
- b) Vasoconstriction
- c) Decreased intravascular hydrostatic pressure
- d) Decreased interstitial

7- A granuloma is:

- a) Granulation tissue
- b) Tumour
- c) Made of inflammatory exudates
- d) All of the above
- e) None of the above

8-Microscopic diagnosis of diseases is best obtained by

- a) Aspiration smear
- b) Needle biopsy
- c) Punch biopsy
- d) Incisional biopsy
- e) All
- f) none

9- Suppurative inflammation is characterized by:

- a) Little destruction of tissues
- b) Common healing by regeneration
- c) Both
- d) Neither

10- Granulomatous inflammation do not lead to:

- a) Tissue destruction
- b) Organ failure
- c) Obstructive effect
- d) All of the above
- e) None of the above

11- Chronic venous congestion results from:

- a) Obstruction of venous blood flow
- b) Obstruction of blood supply
- c) Both
- d) Neither

12- Lines of Zahn formed of:

- a) Fibrin network
- b) Platelets
- c) Both
- d) Neither

13- Thrombosis of lower limb veins can result in:

- a) Cerebral embolism
- b) Pulmonary embolism
- c) Coronary embolism

14- Gas gangrene is:

- a) Dry gangrene
- b) Moist gangrene
- c) Infective gangrene

15- Haemoperitonium is:

- a) external haemorrhage
- b) internal haemorrhage
- c) interstitial
- d) haemorrhage

16- Cerebral infarction is:

- a) gummatus necrosis
- b) coagulative necrosis
- c) fibrinoid necrosis
- d) liquifactive necrosis
- e) caseation necrosis

17- Fat embolism can originate from:

- a) bone factor
- b) fatty liver
- c) both
- d) neither

18- Conversion of infarct into a cystic space containing clear fluid is characteristic of:

- a) myocardium
- b) kidney
- c) heart
- d) brain
- e) liver

19-The condition which is not a manifestation of hemorrhage is

- : a) epistaxis
- b) petechiae
- c) melena
- d) melanosis
- e) haematocoele

20- All of the following forms of transudates:

- a) hydrothorax
- b) hydrocele
- c) hydropericardium
- d) hydroperitoneum
- e) none of the above

21- Not cause of impaired energy production (A T P):

- a) hypoglycaemia
- b) hypoxia
- c) Cytochrome inhibition
- d) free radical

22- The essential constituent of senile amyloidosis is:

- a) immunoglobulin
- b) serum associated protein
- c) prealbumin
- d) peptide

23- Councilman bodies are due to:

- a) cloudy swelling
- b) hyaline degeneration
- c) apoptosis
- d) caseation

24- NOT true for metastatic calcification:

- a) always associated with hypercalcaemia
- b) can lead to renal failure
- c) both
- d) neither

25- Increase melanin pigmentation is not seen in:

- a) Addison's disease
- b) Von Recklinghausen's
- c) haemochromatosis
- d) leucoderma

26- Healing of cut wounds occur by:

- a) secondary intention
- b) always associated with abundant scarring
- c) both
- d) neither

27- fibroblasts in granulation tissues characterized by:

- a) abundant rough endoplasmic reticulum

b) abundant minute pores in plasma members.

c) both

d) neither

28- Autopsy from cases of streptococcal septicemia often shows:

a) adrenal gland haemorrhage b) acute splenic swelling

c) acute suppurative endocarditis d) all of the above

29- Acute toxemia may lead to:

a) acute tubular necrosis of the kidney:

b) acute toxic myocarditis c) both d) neither

30- NOT a manifestation of exudative reaction of T.B

a) pleural effusion b) ascitic T.B peritonitis c) joint effusion

d) all of above e) none of the above

31- Acinar lesion of the lungs are seen in :

a) T.B pneumonia with acute cavitations

b) Chronic fibrocaseous T.B c) miliary T.B

d) all d) none

32- Girdle ulcers are due to:

a) primary T.B b) secondary T.B c) gumma

d) amoebiasis e) bilharziasis

33- Tuberculosis of the bone is NOT:

a) a cause of pathological fracture

b) a cause of T.B dactylitis c) both e) neither

34- Pott's disease of the spine is characterized by all except:

a) usually occurs in children b) it is almost a blood born infection

C) the lesion involves the vertebral bodies and disc

d) kyphosis is common

35- When T.B affects the male genital tract; is usually first appears in

a) epididymis b) prostate c) urethra d) testis e) seminal vesicles

36- Posterior scrotal sinus is mainly due to:

a) T.B of epididymis b) T.B of testis

c) T.B of prostate d) T.B vas deferens

37- Syphilitic aortitis in:

a) saccular aneurysm b) narrowing of coronary artery

c) aortic incompetence d) all e) none

38- The following are Syphilitic lesions except:

a) chancre b) condyloma lata c) condyloma accuminata e) gumma

39- Which of the following is considered an immune complex disease?

a) serum sickness b) allergic rhinitis c) bronchial asthma

d) bronchiectasis e) angioneurotic oedema

40- In autoimmune disease:

- a) the antigen is particulate antigen
- b) the antigen is administered I.V
- c) antibodies are always IgM
- d) the Ag..Ab reacation is very rapid
- e) the antigen is not recognized as self

41- poliovirus infection is associated with:

- a) paralytic poliomyelitis
- b) aseptic meningitis
- c) pharyngitis
- d) all
- e) none

42- The following disorders are associated with Epstein- Barr virus except :

- a) infectious mononucleosis
- b) Burkitt's lymphoma
- c) Kaposi sarcoma
- d) nasopharyngeal carcinoma

43- Which of the following is transmitted by needle infection:

- a) rabies
- b) hepatitis B
- c) german mrasles
- d) trachoma

44- Human immunodeficiency virus can result in all except:

- a) anaemia and leukopenia
- b) tuberculosis
- c) toxoplasmosis
- d) dementia

45- Squamous metaplasia do not occur in:

- a) gall bladder
- b) urinary bladder
- c) bronchus
- d) skin
- e) endocervix

46- Anaplastic tumour is a tumour in which the tissue is:

- a) well differentiated
- b) moderately differentiated
- c) poorly differentiated
- d) undifferentiated

47- The edges of the malignant ulcer are

- a) undermined
- b) sharp
- c) everted
- d) inverted

48- Signet ring carcinoma is a type of:

- a) Adenocarcinoma
- b) Squamous cell carcinoma
- c) transitional cell carcinoma
- d) basal cell carcinoma

49- Chemical carcinogens include all except:

- a) polycyclic hydrocarbons
- b) A Z O compounds
- c) corticosteroids
- d) asbestos

50- Carcinoma insitu is:

- a) carcinoma of unknown origin
- b) carcinoma with bad prognosis
- c) none invasive carcinoma
- d) occult carcinoma
- e) carcinoma occurring in certain sites

INDICATE WHETHER EACH OF THE FOLLOWING STATEMENTS IS TRUE (T) OR FALSE (F)

51- The majority of cells in pus are polymorphs

52- Plasma cells are derived from T- lymphocytes.

53-Streptococcus areus is responsible in abscess formation

54- Chemo taxis occurs in acute and chronic inflammation.

55- Lymphocytes are the main cells in granuloma formation.

56- Diphtheria caused by pyogenic infection.

57- Bread and butter appearance occurs in allergic inflammation.

- 58- Inflammatory oedema starts in lower limbs.
- 59- Sarcoidosis is a granuloma of unknown etiology
- 60- Inflammatory fluid exudate helps in spread of inflammatory process.
- 61- Pyaemic abscesses are often small and multiple.
- 62- Pleural effusion is a common clinical presentation of T.B patients.
- 63- Epithelioid cells are originally macrophages altered by T.B bacilli.
- 64- Poliovirus produces solid immunity.
- 65- Spread of malignant tumour is delayed by elastic tissue.
- 66- Contact inhibition mechanism is an important factor against proliferation of malignant cell.
- 67- Milk patches is due to healing of severe rheumatic pericarditis
- 68- Subacute infective endocarditis is caused mainly by streptococcus viridans.
- 69- Mitral stenosis is one of the causes of left sided heart failure.
- 70- Atherosclerosis is the main cause of myocardial infarction.
- 71- The commonest benign tumour of the heart is myxoma.
- 72- The commonest microscopic type of bronchial carcinoma is adenocarcinoma.
- 73- Bronchiectasis is an irreversible dilatation of bronchi.
- 74- Bronchial asthma can lead to obstructive emphysema
- 75- The bronchial epithelium is a common site for squamous metaplasia.
- 76- Aspiration lung abscess is more common in the right lung .
- 77- Brain is the commonest site of metastasis from bronchogenic carcinoma.
- 78-The consolidates is a feature of emphysema.
- 79- Lobar pneumonia usually heals by resolution.
- 80-The main cause of death in malignant hypertension is renal failure.

MATCH EACH ITEM IN COLUMN (A) WITH THE MOST RELATED ITEM IN COLUMN (B)

(A) (B)

- | | |
|-------------------------------|--------------------------|
| 81- Urinary bladder carcinoma | a) Arsenic |
| 82- Bronchial carcinoma | b) Granulosa cell tumour |
| 83- Squamous cell carcinoma | c) Aspergillus flavus |
| 84- Hepatoma | d) Asbestos |
| 85- Endometrial carcinoma | e) Rubber industry |
-

- | | |
|-------------------------|----------------------|
| 86-Adenoma of the liver | a) Onchos |
| 87- Cytokeratin | b) Anderogen |
| 88- Alpha -fetoprotein | c) Oestrogen |
| 89- Prostatic carcinoma | d) Epithelial tumour |
| 90- Neoplasm | e) Hepatic carcinoma |
-

- | | |
|-------------------|------------------------|
| 91- Pulmonary T,B | a) Krukenberg's tumour |
| 92- Hamartoma | b) Osteothesclerosis |
| 94- Teratoma | c) Gohn's focus |

95- Prostatic carcinoma

d) Nevus

96- Atherosclerosis

a) Collagen disease

97- Arteriolosclerosis

b) Medium -sized arteries

98- polyarteritiis nodosa

c) Large and small arteries

99- Endarteritis obliterans

d) Arterioles

100- Medial calcification

e) peptic ulcer

May 2006

ALL QUESTIONS ARE TO BE ANSWERED:

Discuss each of the following:

- 1-Formation, complication and function of inflammatory fluid exudates
- 2- Comparison between necrosis and apoptosis.
- 3- Types and fate of thrombi.
- 4- Tuberle formation in primary tuberculosis.
- 5- Definition, aetiology and types of aneurysm.
- 6- Causes and complications of lung abscess.
- 7- Causes and types of acute intestinal obstruction.
- 8- Definition, classification and complication of cirrhosis.
- 9- Aetiology and types of renal calculi.
- 10- Classification of testicular tumors, with details pathology of one of them.
- 11- Causes of abnormal uterine bleeding.
- 12- Classification of Hodgkins lymphoma.

August 2006

ALL QUESTION ARE TO BE ANSWERED:

Discuss each of the following:

- 1- Definition and types of granuloma.
- 2- Repair of bone fracture.
- 3- Definition and types of pathological calcification with examples.
- 4- Benign tumors of epithelium.
- 5- Aetiology, pathology and complication of mitral stenosis.
- 6- Aetiologyand pathology of bronchial asthma.
- 7- Pathology of malignant tumors of salivary gland.
- 8- Pathology of gastric carcinoma.
- 9- Definition and causes of nephronic syndroma.
- 10- Classification of ovarian tumors with special reference to one of them.
- 11- Aetiology,patho genesis and complication of acute haematogenous osteomyelitis.
- 12- Definition and types of goiter.

January 2007

SELECT THE BEST SINGLE ANSWER:

1- Inflammatory reaction occurs as a response to:

- a) living irritant
- b) none living irritant
- c) Immunologic reaction
- d) none of the above

2- cellulitis is:

- a) suppurative inflammation
- b) granuloma
- c) Allergic inflammation

3- Necrotic cells release:

- a) chemical mediators
- b) compliments
- c) enzymes
- d) prostaglandin
- e) all of the above

4- Emigration of leukocytes occurs by:

- a) chemotaxis
- b) pseudopodia
- c) proes in between endothelial cells
- d)) all of the above

5- All are function of inflammatory fluid exudate except:

- a) providing antibodies
- b) diluting bacteria
- c) providing fibrin network
- d) phagocytosis

6- Granuloma is:

- a) a neoplasm
- b) a tumour- like mass
- c) a swelling
- d)) all of the above

7- Repair may be through:

- a) regeneration
- b) fibrosis
- c) organization
- d)) all of the above

8- Mature fibrous scar contains all except:

- a) dense collagen
- b) few capillaries
- c) fibrocytes
- d) excess fibrin

9- A burn of the skin is excepted to heal by:

- a) regeneration
- b) organization
- c) both
- d) neither

10- Ballooning degeneration is:

- a) a hydropic degeneration
- b) common in burns
- c) common in urticaria
- d) all of the above
- e) none of all

11- Fatty change of the liver can be induced by:

- a) protein deficiency
- b) hypoxia
- c) both
- d) neither

12- The essential constituent of senile amyloidosis is:

- a) immunoglobulin
- b) serum associated
- c) prealbumin
- d) peptide

13- The earliest cellular change following mitochondrial damage is:

- a) cloudy swelling
- b) coagulative necrosis
- c) hypochromasia

14- Tabes mesenterica is:

- a) a bilharzial granuloma
- b) a tuberculous granuloma
- c) mycotic granuloma
- d) a viral granuloma

15- Fibrinoid necrosis can be caused by:

- a) pyogenic infection
- b) hypersensitivity
- c) both
- d) neither

16- Gumma is a form of:

- a) enzymatic necrosis
- b) gangrenous necrosis
- c) caseation necrosis
- d) liquefactive necrosis
- e) traumatic necrosis

17- Infarction is due to:

- a) acute ischaemia in presence of good collateral circulation
- b) acute ischaemia in presence of poor collateral circulation
- c) gradual ischemia
- d) toxemia

18- Petechial hemorrhage may be seen in patients with:

- a) bacterial infection
- b) viral infection
- c) both
- d) neither

19- Oedema is generalized in all the following except:

- a) cardiac
- b) lymphatic
- c) allergic
- d) renal

20- Metastatic calcification occurs in:

- a) hyperparathyroidism
- b) hypervitaminosis D
- c) hypoparathyroidism
- d) prostatic carcinoma

21- Endogenous pigmentation includes:

- a) silicosis
- b) anthracosis
- c) melanosis
- d) tattoo
- e) albinism

22- Epithelioid cells are seen in the following:

- a) lupus vulgaris
- b) sarcoidosis
- c) tuberculosis
- d) lepromatous leprosy

23- Primary complex of T.B is characterized by:

- a) common incidence in adults
- b) progressive course
- c) enlargement of regional lymph node
- d) all of the above
- e) none of all

24- In intestinal bilharzias is:

- a) the lesion is commonly multiple polyps formation
- b) carcinoma of the colon is not a frequent association
- c) both
- d) neither

25- Blood group antigens are considered:

- a) heterophil antigen
- b) hap ten
- c) isoantigen
- d) immune complex
- e) none

26- Autoimmune disease occurs as a result of:

- a) failure of cell recognition
- b) formation of autoantibodies
- c) both
- d) neither

27- Amoebic liver abscess is characterized by the following Except:

- a) common in right lobe
- b) thick pus formation

- c) hepatomegaly d) precancerous

28- In hepatic bilharziasis:

- a) liver architecture lost b) portal tracts thickened
c) both d) neither

29- Urinary bilharziasis may be complicated by:

- a) stricture ureter b) anaemia c) uraemia
d) all of the above e) none of all

30- Portal hypertension is frequently found in:

- a) patients with bilharzial hepatic fibrosis
b) patients with liver cirrhosis
c) both d) neither

31- Carcinoma in - situ is:

- a) carcinoma of unknown origin b) carcinoma with bad prognosis
c) none invasive carcinoma d) occult carcinoma

32- Which of the following benign tumors is considered premalignant:

- a) lipoma b) leiomyoma c) villous papilloma d) hemangioma

33- Basal cell carcinoma is:

- a) an intraepithelial tumour b) occult tumour c) locally malignant tumor

34-Multiple foci of destruction in the skeleton may indicate metastasis from any of the following tumors except:

- a) cancer breast b) cancer pancreas c) cancer prostate
d) cancer colon e) cancer parathyroid

35- Rheumatic vegetation are:

- a) bulky b) dark brown c) friable d) give emboli e) firmly adherent

36- Vegetation of subacute bacterial endocarditis gives rise to:

- a) multiple infarction b) mitotic aneurysm
c) glomerulonephritis d) all of the above

37- In atherosclerosis:

- a) the main vessel involved is the aorta
b) hyalinosis and elastosis are the main features
c) arterioles are often involved d) all

38- Lung abscess may follow:

- a) lobar pneumonia b) bronchopneumonia c) tonsillectomy
d) all e) none

39- Which of the following is NOT a cause of cor- pulmonale:

- a) emphysema b) partial collapse c) bronchiectasis
d) chronic pulmonary

40- The most common microscopic type of bronchogenic carcinoma is:

- a) adenocarcinoma
 - b) squamous cell carcinoma
 - c) Oat cell carcinoma
 - e) large cell carcinoma
-

June 2007

ALL QUESTIONS ARE TO BE ANSWERED:

DISCUSS EACH OF THE FOLLOWING:

1- A etiology of the following:

- a) Thrombosis.
- b) Abnormal uterine bleeding.
- c) Gall bladder stone.
- d) Nephrotic syndrome.

2- Pathogenesis of the following:

- a) Tubercl formation.
- b) Emphysema.
- c) Cell injury.
- d) Acute haemorrhagic pancreatitis.

3- Pathology of the following:

- a) Rhinoseleroma.
- b) Gastric carcinoma.
- c) Rheumatic myocarditis.
- d) Seminoma.

4- Classification of the following:

- a) Bone tumors.
- b) Lymphoma.
- c) Ovarian tumors.
- d) Salivary gland tumors.

5- Complications of the following:

- a) Wound healing of the following:
 - b) Bronchiectasis.
 - c) Acute haematogenous osteomyelitis.
 - d) Acute appendicitis.
-

August 2007

ANSWER THE FOLLOWING QUESTIONS:

Discuss Each Of The Following:

1-Four types of:

- a) Cerebral aneurysms.
- b) Ovarian tumors of the surface epithelium
- c) Infiltrating duct carcinoma.
- d) Lung abscesses.
- e) Necrosis.

2-Four complications of:

- a) Myocardial infarction.
- b) Benign tumors.
- c) Acute pyogenic meningitis.
- d) Gall bladder calculi.

3- Three differences between each of the following:

- a) crohns disease and ulcerative colitis.

- b) Tuberculoid and lepromatous leprosy.
- c) Bacillary and amoebic dysentery.
- d) Abscess and cellulitis.

4- Three causes of each one of the following:

- a) haematemesis.
- b) Small contracted kidney.
- c) Lymphadenopathy.
- d) Right side heart failure.
- e) Liver cirrhosis.

January 2008

SELECT THE ONE BEST ANSWER :-

- 1- Pyogenic abscess is:
 - a) a granuloma
 - b) diffuse suppuration
 - c) localized suppuration
 - d) all of the above
- 2- Inflammatory fluid exudate produces:
 - a) oedema
 - b) pain
 - c) both
- 3. Granulomatous inflammation do not lead to:
 - a) tissue destruction
 - b) organ failure
 - c) obstructive effects
 - d) all of the above
 - e) none of the above
- 4- Microscopic diagnosis of disease is best obtained by:
 - a) Aspiration smear
 - b) punch biopsy
 - c) needle biopsy
 - c) incisional biopsy
 - d) all
 - e) none
- 5- Diphtheria is:
 - a) acute inflammation
 - b) a granuloma
 - c) both
- 6- In healing of peripheral nerves:
 - a) the Schwann cells play the major role.
 - b) nerve fibers are often replaced by collagen.
 - c) both
 - d) neither
- 7- Fibroblasts in granulation tissue are characterized by:
 - a) abundant minute pores in plasma membrane.
 - b) abundant rough endoplasmic reticulum
 - c) both
 - d) neither
- 8- Not a cause of impaired energy production (ATP):
 - a) hypoglycaemia
 - b) hypoxia
 - c) cytochrome inhibition
 - d) free radicals
- 9- The earliest cellular change following mitochondrial damage is:
 - a) cloudy swelling
 - b) coagulative necrosis
 - c) hypochromasia
- 10- The outline of cells is not preserved in :
 - a) caseation necrosis
 - b) coagulative necrosis
 - c) Parenchymatous infarction
 - d) all
 - e) none
- 11- Councilman bodies are due to :
 - a) cloudy swelling
 - b) hyaline degeneration
 - c) apoptosis
 - d) caseation
 - e) all of the above
- 12- Which of the following changes in cell injury is irreversible?
 - a) fatty change in liver
 - b) glycogen deposition in renal epithelium
 - c) chromatolysis of the nucleus
- 13- Increased melanin pigmentation is not seen in :
 - a) Addison's disease
 - b) Von Recklinghausen's disease
 - c) melanoma
 - e) leucoderma
- 14- Not true in metastatic calcification :

- a) renal failure b) hypercalcemia
 c) both d) neither
- 15- Oedema is not caused by:
 a) lymphatic obstruction b) increased capillary permeability c) increased Interstitial osmotic pressure
 d) venous obstruction e) decreased colloid osmotic pressure of blood
- 16- All of the following are causes of portal pyemia except:
 a) acute appendicitis b) infected plies
 c) Purpural sepsis d) suppurative colitis
 e) suppurative cholecystitis
- 17- Ischaemia is the commonest cause of:
 a) apoptosis b) coagulative necrosis c) caseation necrosis
- 18- A red Infarction is seen in:
 a) heart b) brain c) lung d) kidney e) none
- 19- Post necrotic changes in cells appear by light microscopy after:
 a) few minutes b) 1-3 hours c) 6-12 hours d) 24 hours
- 20- All are forms of haemorrhage except:
 a) petechiae b) ecchymosis c) haematocoele d) haemosiderosis
- 21- The earliest cellular change following failure of sodium pump is:
 a) hypertrophy b) hyperplasia c) fatty change d) cloudy swelling
- 22- Dry gangrene occurs in:
 a) intestine b) external genitalia c) limb d) all e) none
- 23- Line of Zahn is marked in:
 a) lower limb b) intestine c) gums
- 24- Petechial haemorrhage may be seen in patients with:
 a) bacterial infection b) viral infection c) both
- 25- Fibrinoid necrosis can be caused by:
 a) pyogenic infection b) hypersensitivity c) both
- 26- Firm mass circulating in the blood is called:
 a) thrombus b) embolus c) clot d) all e) none
- 27- Memory cells produced by:
 a) T-lymphocytes b) B-lymphocytes c) both d) neither
- 28- plasma cells produce:
 a) antibodies b) cytokines c) both d) neither
- 29- Autoimmune diseases occur as a result of:
 a) failure of recognition b) auto-antibodies c) both d) neither
- 30- A hapten is:
 a) complete antigen
 b) incomplete antigen
 c) capable of initiating immune response
- 31- Atopy is:
 a) localized type I hypersensitivity b) immune complex disease
 c) delayed hypersensitivity
- 32- Lepra cells are:
 a) altered lymphocytes b) altered macrophages
 e) foreign body giant cells d) Schwans' cells
- 33- Syphilitic aortitis is:
 a) often seen in aortic root and arch
 b) complicated by aortic stenosis c) both d) neither
- 34- The common sites for actinomycosis are all except:
 a) liver b) lung c) caecum d) brain e) mandible
- 35- Kaposi sarcoma is common in patients suffering from:

- a) small pox b) AIDS c) German measles d) all e) non

36- Complications of toxæmia include all the following except:

- a) degeneration of liver b) necrosis of liver
c) disturbed liver functions d) all e) none

37- Streptococcal viridans bacteraemia may cause:

- a) acute bacterial endocarditis b) suppurative myocarditis
c) suppurative pericarditis d) all e) none

38- Hyperplastic tissues:

- a) show marked cellular pleomorphism
b) always irreversible
c) may be metaplastic d) all e) none

39- Carcinoma in situ is:

- a) preinvasive carcinoma b) locally malignant tumour c) both

40- Squamus metaplasia do not occur in:

- a) gall bladder b) urinary bladder
c) bronchus d) skin

41- Anaplastic tumour is a tumour in:

- a) well differentiated b) moderately differentiated
c) poorly differentiated d) undifferentiated

42- The edges of malignant ulcer are:

- a) undermined b) sharp c) everted d) step like

43- Signet ring carcinoma is a type of:

- a) squamous cell carcinoma b) basal cell carcinoma
c) transitional cell carcinoma d) undifferentiated e) adenocarcinoma

44- Tuberle is:

- a) a tumour b) tumour like c) microscopic lesion

45- Epithelioid cells are seen in the following except:

- a) tuberculosis b) lupus vulgaris
c) sarcoidosis d) lepromatus leprosy

46- Bilharzial carcinoma in urinary bladder may be:

- a) squamous carcinoma b) transitional carcinoma c) both

47- Primary complex is characterized by:

- a) proliferative reaction b) exudative reaction c) massive caseation

48- Rheumatic vegetations are:

- a) bulky b) dark brown c) friable d) give emboli e) firmly adherent

II- WHETHER EACH OF THE FOLLOWING STATEMENT IS

TRUE(T) or FALSE(F).

49-A boy of 12 years, has congenital hole in the heart 10mm giving free

Communication between left and right ventricle. He is expected to have hypertrophy of right ventricle

50-The same patient is also expected to have pulmonary hypertension.

51-The same patient is expected to have the risk of developing subacute bacteria endocarditis

52-The same patient will not be cyanosed from the start

53-Endothelial injury is an important cause of thrombosis

54-Cardiac oedema often starts in the face

55-Oedema of acute inflammation is soft and pitting

56-Russel bodies represent macrophages with hyalinosis

57-Caseation necrosis can be explained by type IV hypersensitivity

58-Amoeboma is a benign tumour
59-Benign tumour has no capsule
60-carcinoma insitu gives distant metastasis

61-Basal cell carcinoma is a locally malignant tumour
62-Differentiated tumour is of good prognosis.
63- Metastasis of bronchogenic carcinomareach to brain.
64 -Oncogenes are responsible for neoplastic transformation of cells.
65-Consolidation of the lung is a feature of emphysema
66-Myocardial infarction is the result of chronic ischaemia.
67-The commonest cause of death in benign hypertension is renal failure
68-Poliovirus produces solid in munity.
69-Chemotaxis occurs in both acute and chronic Inflammation.
70-Spread of malignant tumours is delayed by elastic tissue
71-Bronchial asthma can lead to obstructive emphysema.
72-Milk patches are due to healing of severe rheumatic pericarditis.

III- MATCH EACH ITI;M IN COLUM(A)WITH THE MOST RELATED IN(B)

- | | |
|------------------------------|--------------------------|
| 73-Urinary bladder carcinoma | a) Rubber industry |
| 74-Bronchial carcinoma | b) asbestos |
| 75-Squamous carcinoma | c) Arsenic |
| 76-Hepatoma | d) Aspergillus flavus |
| 77-Endometrial carcinoma | e) Granulosa cell tumour |

78- Aschoff cells 79- Mikulicz cells 80- Reed-Sternberg cells 81- Langhan's cells 82- T-Lymphocytes	a) Tuberculos b) Rhinoscleroma c) Rheumatic fever d) Hodgekin'. lymphoma e) Cytokine.
83- Tuberculous ulcer 84- Malignant ulcer 85-Amoebic ulcer 86- Gummatus ulcer 87- Rodent ulcer	a) Beaded b) Everted c) Flask d) Undermined e) Punched out
88- Atherosclerosis 89- Arteriosclerosis 90- Polyarteritis nodosa 91- Endarteritis obliterans 92- Medial calcification	a) Collagen disease b) Medium-sized arteries c) Large and small arteries d) Arterioles e) Peptic ulcer

93- Emphysema 94- Bronchiectasis 95- Bronchial asthma 96- Pneumonia 97- Empyema <hr/> 98- Endometrial carcinoma 99- Cytokeratin 100- Alpha-fetoprotein 101- Prostatic carcinoma 102- Neoplasm	a) Pulmonary collapse b) Honey comb appearance c) Barrel-shaped chest d) Crushmann' spirals e) Consolidation <hr/> a) Onchos b) Anderogen c) Oestrogen d) Epithelial tumour e) Hepatic carcinoma
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May 2008

DISCUSS EACH ONE OF THE FOLLOWING :

- 1- The course of acute inflammation.
- 2- A etiology and pathology of tuberculous peritonitis.
- 3- Complication of acute tonsillitis.
- 4-A etiology and pathology of bronchogenic carcinoma.
- 5- Pathology of mixed salivary gland tumors,
- 6- A etiology and pathology of atrophic gastritis.
- 7- Types and pathology of biliary cirrhosis.
- 8- Pathology and brain abscess.
- 9- Causes and complications of abnormal uterine bleeding.
- 10-A etiology and pathology of Grave's disease.
- 11- Types and pathology of malignant tumours of the testis.
- 12- Types and pathology of malignant melanoma of the skin.

IN A TABLE MANNER, COMPARE BETWEEN EACH OF THE FOLLOWING :

- 13- Rheumatic and subacute bacterial endocarditis.
- 14- Nephrotic and nephritic syndrome.
- 15- Hyperplastic lymphoid follicles and follicular lymphoma.

August 2008

ANSWER THE FOLLOWING QUESTIONS:

- 1- Discuss types and pathology of granuloma.
- 2- List the types of wounds and discuss the complications of wound healing.
- 3- Discuss the pathology of urinary bladder Billarziasis.
- 4- What are the types of gall bladder stones and what are their effects.
- 5- Discuss the aetiology of lobular pneumonia and its complications.
- 6- Discuss types of chronic viral hepatitis.
- 7- List the causes of right side heart failure.
- 8- Discuss types of teratoma of the testis.
- 9- Discuss the pathogenesis and complications of acute hematogenous osteomyelitis.
- 10- Discuss the aetiology of endometrial hyperplasia and describe its microscopic types.
- 11- Give a classification for lymphoma.
- 12- Enumerate causes of splenic enlargement.

May, 2009

I- DISCUSS EACH ONE OF THE FOLLOWING:

- 1-** Aetiology and pathology of acute haematogenous osteomyelitis.
- 2-** Sites, pathological features and spread of carcinoma of the esophagus.
- 3-** Pathological features of chronic viral hepatitis with special reference to the recent classification.
- 4-** Pathogenesis of emphysema.
- 5-** Cardiac lesions in rheumatic fever.

II- Compare between each one of the following in a table like manner:

- 6-** Serous and mucinous cyst adenoma of the ovary.
- 7-** Chronic glomerulonephritis and chronic pyelonephritis
- 8-** Vegetations of rheumatic fever, subacute and acute bacterial endocarditis.

III- Give an account on:

- 9-** Pathology of gastric carcinoma.
- 10-** Gall stones.
- 11-** Pott's disease.
- 12-** Granuloma.
- 13-** Rodent ulcer.
- 14-** Phyllodes tumour.

IV- Enumerate:

- 15-** Complications of bronchiectasis.
- 16-** Complications of healing of abscess.
- 17-** Complications of cirrhosis.
- 18-** Tumours of the testis.
- 19-** Causes of abnormal uterine bleeding.

GOOD LUCK