

## HEMATOLOGY

**1- Vitamin K antagonist :**

- a- warfarin
- b- Heparin
- c- Protein C
- d- Antithrombin III

**2- One of the intrinsic pathway**

- a- factor XI
- b- factor XIII
- c- factor I
- d- factor VII

**3- Para hemophilia is the deficiency of**

- a- factor VIII
- b- factor IX
- c- factor V
- d- factor VII

**4- Eosinophilia is seen in :**

- a- food sensitivity
- b- Drug sensitivity
- c- Atopic dermatitis
- d- all of the above

**5- Multiple myeloma is a neoplastic proliferation of:**

- a- lymphocytes
- b- Granulocytes
- c- Plasma cells
- d- Monocytes

**6- Test for intrinsic pathway:**

- a- bleeding time
- b- Thrombin time
- c- Prothrombin time
- d- Partial thromboplastin time PTT

**7- Paul-Bunnell test is done to diagnose:**

- a- multiple myeloma
- b- Hodgkin's disease
- c- Infectious mononucleosis
- d- all of the above

**8- increased platelet count is :**

- a- thrombocytopenia
- b- thrombopoietin
- c- thrombocytosis
- d- all of the above

**9- Decreased platelet count is:**

- a- thrombocytopenia
- b- Thrombopoietin
- c- Thrombocytosis
- d- all of the above

**10- All these are causes of thrombocytopenia except:**

- a- cytotoxic drugs
- b- Aplastic anemia
- c- Hemorrhage
- d- Radiotherapy

**11- Prothrombin time is done to test:**

- a- Intrinsic pathway only
- b- Extrinsic pathway only
- c- Extrinsic and common pathways
- d- Intrinsic and common pathways

**12- Normal bleeding time by Duke's method:**

- a- 2-7 minutes
- b- 2-7 seconds
- c- 2-4 minutes
- d- 2-4 seconds

**13- Normal partial thromboplastin time (PPT) is :**

- a- 3-4 minutes
- b- 30-45 seconds
- c- 12-15 seconds
- d- 12-15 minutes

**14- Hemophilia A is the deficiency of :**

- a- factor V
- b- factor VIII**
- c- factor IX
- d- all of the above

**15-the most common form of leukemia in children is:**

- a- acute lymphoblastic leukemia**
- b- Chronic lymphocytic leukemia
- c- Acute myeloid leukemia
- d- Chronic myeloid leukemia

**16- Bence-Jones protein is present in cases of:**

- a- chronic myeloid myeloma
- b-acute myeloid myeloma
- c- Hodgkin's lymphoma
- d- multiple myeloma**

**17- Reed-Sternberg cells are found in cases of :**

- a- acute lymphoblastic leukemia
- b- Non Hodgkin's lymphoma
- c- Hodgkin's lymphoma**
- d- Multiple myeloma

**18- Normal platelet count is :**

- a- 150,000 to 450,000/min<sup>3</sup>**
- b- 400,000 to 800,000/min<sup>3</sup>
- c- 4,000 to 11,000 /min<sup>3</sup>
- d- 50,000 to 100,000/min<sup>3</sup>

**19- Antithrombin III inhibits:**

- a- factor Va
- b- factor VIIIa
- c- factor Xa**
- d- all of the above

**20- Heparin potentiate the action of :**

- a- protein C
- b- protein S
- c- antithrombin III**
- d- warfarin

**21- Factor II of blood clotting is:**

- a- Christmas factor
- b- Fibrinogen
- c- Prothrombin**
- d- Thromboplastin

**22- One of fibrinogen group is : I V VIII XIII**

- a- II
- b- V**
- c- VII
- d- IX

**23- Fibrinogen is converted to soluble fibrin by:**

- a- prothrombin
- b- Thromboplastin
- c- Thrombin**
- d- all of the above

**24- Thrombopoitin control the formation of:**

- a- red blood cells
- b- White blood cells
- c- platelets**
- d- non of the above

**25- Normal prothrombin time (PT) is:**

- a- 30-45 seconds
- b- 30-45 minutes
- c- 12-15 seconds**
- d- 12-15 minutes

**26- Parasitic disease is associated with:**

- a- monocytosis            - bacteria
- b- Lymphocytosis        - virus
- c- Basophilia             - sensitive
- d- Eosinophilia**

**27- Philadelphia chromosome is diagnostic for:**

- a- acute lymphoblastic leukemia
- b- Acute myeloid leukemia
- c- Chronic lymphocytic leukemia
- d- chronic myeloid leukemia**

**28- Normal fibrinogen level:**

- a- 150-400 gm%
- b- 150-400 mg %**
- c- 15-40 mg %
- d- 15-40 gm %

**29-infectious mononucleosis is caused by:**

- a- echo virus
- b- coxsaki virus
- c- Epstein Barr virus EBV**
- d- Cytomegalo virus

**30- Atypical lymphocytosis is seen in cases of:**

- a- Hodgkin's lymphoma
- b- Multiple myeloma
- c- Infectious mononucleosis**
- d- Chronic lymphocytic leukemia

**31-monospot test is done to diagnose:**

- a- Acute myeloid leukemia
- b- Acute lymphoblastic leukemia
- c- Infectious mononucleosis**
- d- Infectious lymphocytosis

**32- The test which depend on blood platelets & capillary fragility is:**

- a- prothrombin time
- b- Thrombin time
- c- Bleeding time**
- d- Clotting time

**33- Fibrin is broken to fibrin degradation products by the action of:**

- a- Prothrombin
- b- Thrombin
- c- Plasminogen
- d- Plasmin**

**34- Acute myeloid leukemia is characterized by:**

- a- low neutrophil alkaline phosphatase
- b- Myeloblast with Auer rods
- c- Neutrophil with Pledger-Huet anomaly
- d- all of the above

**35- Plasminogen is converted to plasmin by :**

- a- Heparin
- b- Histamine
- c- Urokinase
- d- Serotonin

**36- Increase D-dimers and fibrin degradation products are seen in cases of:**

- a- Hemophilia A
- b- Vitamin K deficiency
- c- Diffuse intravascular coagulation
- d- Von Willebrand disease

**37- Activated protein C degrades:**

- a- factor IXa
- b- Factor VIIIa
- c- Factor Xa
- d- Factor XIa

**38- Heparin is found in**

- a- Neutrophil
- b- Basophil
- c- Acidophil
- d- all of the above

**39- In hemophilia A the test which will be prolonged is**

- a- PT
- b- PTT
- c- Bleeding time
- d- all of the above

**40- Bleeding due to overdose of heparin is managed by giving:**

- a- Vit K
- b- Vit C
- c- Vit A
- d- Protamin sulphate

**41- Streptokinase and staphylokinase convert:**

- a- Prothrombin to thrombin
- b- Fibrinogen to fibrin
- c- Soluble fibrin to insoluble fibrin
- d- Plasminogen to plasmin

**42- Test for platelet function:**

- a- Clot retraction
- b- Platelet aggregation
- c- Platelet adhesion
- d- all of the above

**43- Prolonged PT occurs in cases of deficiency of:**

- a- Factor III
- b- Factor IV
- c- Factor V
- d- all of the above

**44- normal thrombin time (TT):**

- a- 30-45 sec
- b- 2-4 min
- c- 3-9 min
- d- 10-20 sec

**45- cause of vitamin K deficiency:**

- a- Obstructive jaundice
- b- Prolonged use of antibiotics
- c- Inadequate intake
- d- all of the above

**46- Cause of Hyper- Coagulable state:**

- a- Aplastic anemia
- b- Cytotoxic drugs
- c- Polcythemia
- d- Radiotherapy

**47-Physiological cause of neutrophilia:**

- a- New born
- b- Radiotherapy
- c- Cytotoxic drugs
- d- Prolonged use of antibiotics

**48- Leucocytosis characterized by the presence of immature cells and high neutrophil alkaline phosphatase:**

- a- chronic myeloid leukemia
- b- Acute myeloid leukemia
- c- Leukaemid reaction**
- d- non of the above

**49- Normal coagulation time (CT):**

- a- 3-9 min**
- b- 3-9 sec
- c- 30-40 sec
- d- 30-40 min

**50- The test which measures the clotting time of citrated plasma accelerated by the addition of a clotting factor activator (kaolin) , phospholipids and calcium:**

- a- coagulation time
- b- Prothrombin time
- c- Partial thromboplastin time**
- d- Thrombin time

**51- The test which measures the clotting time of citrated plasma to which thromboplastin and calcium has been added:**

- a- thrombin time
- b- Prothrombin time**
- c- Coagulation time
- d- Partial thromboplastin time

**52- The test which is widely used as a control and follow up test to control anticoagulant treatment:**

- a- APTT
- b- PTT
- c- PT**
- d- TT

**53- A disease characterized by progressive neoplastic proliferation of immature white cell precursor:**

- a- acute leukemia
- b- Chronic leukemia**
- c- Lymphoma
- d- Multiple myeloma

**54- The absolute lymphocyte count may be up to 300,000 or more between 70 and 90 % of white cells in the blood film appear as small lymphocytes . THE CASE IS:**

- a- Acute myeloid leukemia
- b- Acute lymphoblastic leukemia
- c- Chronic myeloid leukemia
- d- Chronic lymphocytic leukemia**

**55- Variation in red cells size:**

- a- Poikilocytosis
- b- Anisocytosis**
- c- Reticulocytosis
- d- Leukocytosis

**56- Dark red cells with no area of central pallor:**

- a- Stomatocyte
- b- Spherocyte**
- c- Acanthocyte
- d- Schistocyte

**57- Microcytic hypochromic anemia**

- a- hereditary spherocytosis
- b- Sickle cell anemia
- c- Iron deficiency anemia**
- d- Vit B<sub>12</sub> deficiency anemia

**58- Target cells are seen in cases of:**

- a- folic acid deficiency
- b- Iron deficiency anemia
- c- Vit B<sub>12</sub> deficiency anemia**
- d- Thalassemia

**59- Red cells with elongated area of central pallor:**

- a- spherocyte
- b- Schistocyte
- c- Stomatocyte**
- d- Elliptocytes

**60- ..... Symmetric, short , sharp projection from the red cells and seen in iron deficiency anemia:**

- a- echinocyte
- b- Acanthocyte
- c- Elliptocyte
- d- Ovalocyte

**61- ..... is a condition in which the absorption of vit B12 is greatly impaired due to failure or marked reduction of intrinsic factor secretion:**

- a- favism
- b- fanconi's anemia
- c- sickle cell anemia
- d- thalassemia
- e- pernicious anemia

**62- Hyperchromic cells are seen in:**

- a- iron deficiency anemia
- b- Thalassemia
- c- Hereditary spherocytosis
- d- Sickle cell anemia

**63- A prolonged low rate of bleeding results in:**

- a- normochromic anemia
- b- Hypochromic anemia
- c- Hyperchromic anemia
- d- non of the above

**64- Schilling test is done in diagnosis of:**

- a- iron deficiency anemia
- b- Pernicious anemia
- c- Aplastic anemia
- d- folic acid deficiency

**65- Defective synthesis of either alpha or beta chains of normal hemoglobin**

**cause:**

- a- sickle cell anemia
- b- Aplastic anemia
- c- Pernicious anemia
- d- Thalassemia

**66- Neutrophils represent..... of circulating leukocyte:**

- a- 2-8 %
- b- 0-1 %
- c- 50-70 %
- d- 2-4 %

**67- ..... are non nucleated, biconcave shaped cells:**

- a- platelet
- b- Leukocyte
- c- Erythrocyte
- d- Macrophages

**68- ..... represent 50-70 % of total leukocytes**

- a- lymphocytes
- b- Neutrophils
- c- Monocytes
- d- Eosinophilis

**69- ..... have a characteristic biffed nucleus and their cytoplasm is filled with large refractile granules that stain red in blood smear**

- a- neutrophils
- b- Eosinophilis
- c- Basophiles
- d- Lymphocytes

**70- The cell which is responsible for antibody production is:**

- a- monocytes
- b- T-lymphocytes
- c- B-lymphocytes = plasma cell
- d- Neutrophils

**71- ..... is a curved cell with sharp ends seen in haemoglobinopathies (HBS)**

- a- sickle cell
- b- Spherocyte
- c- Ovalocyte
- d- Stomatocyte

**72- All of the following is correct about sickle cell anemia except:**

- a- leg ulcers
- b- Gall stones
- c- Enlargement of spleen**
- d- Attacks of pain

**73- ..... is a single, large, rounded , dark , purple remnant of nucleus**

- a- Heinz body
- b- Howeel-Jolly body**
- c- Pappenheimer body
- d- Cabot ring

**74- Agranulocyte:**

- a- neutrophil
- b- Lymphocyte**
- c- Basophile
- d- Eosinophil

**75- Pica ( craving to eat unusual substance such as clay or ice) is one of the symptoms of:**

- a- G6PD deficiency
- b- Thalassemia
- c- Megaloblastic anemia
- d- Iron deficiency anemia**

**76- In ..... there's a decreased or absent hemosiderin in bone marrow**

- a- sideroblastic anemia
- b- Iron deficiency anemia**
- c- Megaloblastic anemia
- d- Hemolytic anemia

**77- Chloramphenicol may cause ..... anemia in long term therapy**

- a- iron deficiency
- b- Vit B<sub>12</sub> deficiency
- c- folic acid deficiency
- d- Aplastic anemia**

**78- ..... is the fluid (with anticoagulant) component of blood , it contains salt & organic compounds:**

- a- plasma**

- b- Serum
- c- Hemoglobin
- d- Billirubin

**79- Poikilocytosis is:**

- a- variation in red cell size
- b- Variation in red cell color
- c- Variation in red cell shape**
- d- non of the above

**80- Red cell fragments:**

- a- echinocyte
- b- Elliptocyte
- c- Schistocyte**
- d- Stomatocyte

**81- It is a defect of red cell member**

- a- Thalassemia
- b- Sickle cell anemia
- c- Hereditary spherocytosis**
- d- Megaloblastic anemia

**82- All of the following is correct regarding spherocytosis except:**

- a- normocytic normochromic anemia
- b- Decreased reticulocyte count**
- c- Raised plasma bilirubin
- d- Increased osmotic fragility

**83- Heinz bodies are seen in cases of**

- a- hereditary spherocytosis
- b- Hereditary elliplocytosis
- c- G6PD deficiency**
- d- sickle cell anemia

**84- ..... is caused by substitution of amino acid (valine) instead of glutamic acid at position No.#6 in the beta chain of hemoglobin**

- a- Hb-A
- b- Hb-A2

- c- Hb –F
- d- Hb –S sickle cell

**85- Atrophy of the spleen is seen in cases of:**

- a- Thalassemia
- b- Sickle cell anemia
- c- G6PD deficiency
- d- Hereditary elliplocytosis

**86- iron deficiency lead to :**

- a- normocytic normochromic anemia
- b- microcytic hypochromic anemia
- c- macrocytic anemia
- d- hemolytic anemia

**87- Neurological symptoms are seen in cases of:**

- a- iron deficiency anemia
- b- folic acid deficiency
- c- Vit B<sub>12</sub> deficiency
- d- all of the above

**88- Megaloplastic hematopoiesis is seen in cases of:**

- a- iron deficiency anemia
- b- folic acid deficiency
- c- Vit B<sub>12</sub> deficiency
- d- Vit C deficiency

**89- Fanconi's anemia is a type of :**

- a - vit B<sub>12</sub> deficiency
- b- aplastic anemia
- c- Thalassemia
- d- folic acid deficiency anemia

**90- the most abundant leukocyte in a normal blood smear of adult is :**

- a- lymphocyte
- b- Monocyte
- c- Eosinophil

d- Neutrophil

**91- The first line of defense against parasites:**

- a- neutrophils
- b- Basophile
- c- Eosinophil
- d- Lymphocyte

**92- ..... play a role in immediate and delayed hypersensitivity:**

- a- monocyte
- b- Lymphocyte
- c- Eosinophil
- d- Basophile

**93- The largest leukocyte is :**

- a- neutrophils
- b- Lymphocyte
- c- Monocyte
- d- Basophile

**94- Cell which participate in cell mediated immunity:**

- a- monocyte
- b- B- lymphocyte
- c- T- lymphocyte
- d- neutrophils

**95- ..... promotes blood clotting and help to prevent blood loss from damaged blood vessels:**

- a- platelets
- b- WBCs
- c- RBCs
- d- all of the above

**96-antibody induced hemolytic disease in new born that is caused by blood group incompatibility between mother and fetus:**

- a- hemolytic uremic syndrome
- b- Erythroblastosis fetalis
- c- Hereditary spherocytosis
- d- Thromboloc thrombocytopenic purpura

**97- Young red blood cell with cytoplasmic RNA:**

- a- spherocyte
- b- Reticulocyte**
- c- Stomatocyte
- d- elliptocyte

**98- Normal adult hemoglobin tetramer is:**

- a- 2 alpha : 2 gama
- b- 2 alpha : 2 beta**
- c- 2 alpha : 2 delta
- d- 2 beta : 2 gama

**99- ..... represent 2-4 % of total leukocyte:**

- a- neutrophils
- b- Basophile
- c- Eosinophil**
- d- Monocyte

**100- ..... are small cytoplasmic fragment derived from megakaryocytic:**

- a- RBCs
- b- WBCs
- c- Platelet**
- d- non of the above

**101 - ..... is the reduction in the amount of circulating hemoglobin , red blood cells or both:**

- a- polycythemia
- b- Anemia**
- c- Hemophilia
- d- Leucopenia

**102- Thalassemia is :**

- a- microcytic anemia**
- b- Macrocytic anemia
- c- Normocytic anemia
- d- non of the above

**103- Vit B<sub>12</sub> deficiency lead to :**

- a- hemolytic anemia
- b- Microcytic anemia
- c- Normocytic anemia
- d- **Megaloblastic anemia**

**104- Lymphocyte represent ..... of total leukocyte:**

- a- **20-40 %**
- b- 50-70 %
- c- 2-8 %
- d- 1-5 %

**105- Plumer- Vinson syndrome may be seen in cases of:**

- a- **iron deficiency anemia**
- b- Vit B<sub>12</sub> deficiency anemia
- c- Aplastic anemia
- d- folic acid deficiency anemia

**106- peripheral, pale inclusions that push out the cell membrane and composed of hemoglobin:**

- a- cabot ring
- b- Pappenheimer body
- c- Howell-Jolly body
- d- **Heinz body**

**107- it's an acute hemolytic anemia occurring after the ingestion of broad bean in individual with deficiency of G6PD :**

- a- thalassemia
- b- **Favism**
- c- Fanconi's anemia
- d- Cooley's anemia

**108-..... is a multiple small , peripheral grape like purple clusters of iron:**

- a- cabot ring
- b- Heinz body
- c- Howell-Jolly body
- d- **Pappenheimer body**

**109- the blood smear gives the physician information concerning:**

- a- morphology of RBCs and platelet
- b- Presence of abnormal inclusion
- c- Presence of immature cells
- d- all of the above

**110- hypersplenism is one of the causes of :**

- a- iron deficiency anemia
- b- Hemolytic anemia
- c- Aplastic anemia
- d- Megaloblastic anemia

**111- Increased reticulocytes count is seen in cases of:**

- a- hereditary spherocytosis
- b- G6PD deficiency
- c- Sickle cell anemia
- d- all of the above

**112- The antibody which can pass the placenta:**

- a- Ig M
- b- Ig G
- c- Ig D
- d- Ig E

**113- ..... is an autoimmune disease in which there is an immune destruction of the acid and pepsin secreting cells of the stomach:**

- a- fanconi's anemia
- b- cooley's anemia
- c- pernicious anemia
- d- non of the above

**114- All of these are laboratory features of aplastic anemia except:**

- a- pancytopenia
- b- markedly hypocellular marrow
- c- Increased reticulocyte count
- d- Markedly increase in serum erythropoietin

**115- Secondary granules of neutrophils contain:**

- a- elastase
- b- Myeloperoxidase
- c- Lysozyme
- d- Histamine

**116- Monocytes represent ..... of total leukocyte:**

- a- 0-1 %
- b- 2-4 %
- c- 2-8 %
- d- 20-4 %

**117- the reagent used for leukocyte count is :**

- a- citric acid
- b- Acetic acid
- c- Hydrochloric acid
- d- Sulphoric acid

## **BACTERIOLOGY**

**118- All are Prokaryotic cells except:**

- a- Fungi
- b- Bacteria
- c - Chlamydia
- d- Mycoplasma

**119- Viruses:**

- a- Contain only DNA or RNA
- b - They Contain ribosome
- c- Did not affected by antibiotics
- d- a+c

**120- All of these are essential structure except:**

- a- Nuclear body
- b- Spores
- c- Cell wall
- d- Plasma Membrane

**121- \_\_\_\_\_ is giving the shape to the bacteria**

- a.- Cytoplasmic Membrane
- b- Capsule
- c- Cell Wall
- d- All of the above

**122- One of its functions is selective permeability**

- a- Cell wall
- b- Plasma membrane
- c- Capsule
- d- Spores

**123- They are responsible for Haemagglutination Phenomenon**

- a- Flagella
- b- Fimbria
- c- Capsule
- d- Cell wall

**124- Clostridium Tetani is:**

- a- Atrichous bacteria
- b- Mono-trichous bacteria
- c- Amphi-trichous bacteria
- d- Peri-trichous bacteria

**125- Short curved or straight rods, motile by single polar flagellum**

- a- spirochaeta
- b- **Vibrio**
- c- Escherichia
- d- Lactobacillus

**126- Small gram negative cocci, occur in pairs**

- a- staphylococcus
- b- streptococcus
- c- **neisseria**
- d- non of the above

**127- Transfer of genetic information from one bacterium to another by**

bacteriophages is:

- a. Transformation
- b. **Tansduction**
- c. Conjugation
- d. Mutation

**128- Salmonella are:**

- a- Obligatory Aerobic bacteria
- b.- Obligatory Anaerobic bacteria
- c- **Facultative Anaerobic bacteria**
- d- Micro-aerophilic bacteria

**129- According to pH, vibrio cholera is**

- a- Osmophilic bacteria
- b- **Basophilic bacteria**
- c- Acidophilic bacteria
- d- Neutrophilic bacteria

**130- Staphylococci are:**

- a- **Atrichous bacteria**
- b- Mono-trichous bacteria
- c- Amphi-trichous bacteria
- d- Peri-trichous bacteria

**131- During replication of DNA, copying errors may occur and this is called**

- a- Conjugation
- b- Transduction
- c- Transformation
- d- Mutation

**132- Obligatory Anaerobic bacteria**

- a- grow only in presence of oxygen
- b- grow only in absence of oxygen
- c- grow either in presence or absence of oxygen
- d- grow in presence of oxygen traces and 5 – 10% CO<sub>2</sub>

**133- Neutrophilic bacteria grow well at**

- a- pH 8.5 – 9.0
- b- pH 7.2 – 7.4
- c- pH 5.0 – 5.5
- d- pH 2.5 – 3.0

**134- The rate of cell death increase and bacterial growth stopped, this is**

- a- Adaptation phase
- b- Exponential phase .
- c- Stationary phase.
- d- Decline Phase

**135- Beta-hemolytic**

- a- Cause complete hemolysis of RBC's
- b- Cause chemical change of Hemoglobin in RBC's
- c- Do not cause hemolysis
- d- None of them

**146- Mesophilic bacteria grow at:**

- a- 37° C
- b- 14° C
- c- 60° C
- d- 120° C

**137- Circulation of Bacteria and its toxins in blood**

- a- Pyaemia

- b- Toxemia
- c.- Bacteremia - without toxins
- d- Septicemia

**138- Disinfections that applied on living or injured tissues:**

- a- Sterilization
- b- Antiseptic
- c- Sanitation
- d- Decontamination

**139- Hot air oven is used for sterilization of**

- a- Glass
- b- Rubber Gloves
- c.- Plastic Syringes
- d- Catheters

**140- Disinfectant for superficial fungal infection**

- a- Phenol
- b- Potassium permanganate
- c- Chlorine
- d- Hypochlorite compounds

**141- Rifampin**

- a- inhibit cell wall synthesis
- b- inhibit protein synthesis
- c- inhibit folic acid pathway
- d- inhibit mRNA synthesis

**142- Transacetylase inactivate**

- a- aminoglycosides
- b- chloramphenicol
- c- penicillin
- d- cephalosporins

**143- The color of gram positive bacteria is**

- a- Yellow
- b- Black.
- c- Pink
- d- Violet

**144- Selective media for fungi**

- a- blood agar

- b- Mac Conkey agar
- c- Nutrient agar
- d- Sabourand's dextrose agar

**145- Histoplasma is a :**

- a- Systemic mycosis
- b- Sub – Cutaneous mycosis
- c- Cutaneous mycosis
- d- Superficial mycosis

**146- All are asexual spores produced by mould except**

- a- Conidio – spores
- b- Sporangio – spores
- c- Endospores
- d- Arthro – spores

**147- They reproduce only by Asexual reproduction**

- a- Blastomycosis
- b- Deutromycosis
- c- Ascomycetes
- d- Zygomycetes

**148- The functions of cell wall is all of the following except:**

- a- Giving the shape to the bacteria
- b- Carrying somatic antigen
- c- Selective permeability & transport of solutes = plasma membrane
- d- Protect the bacteria from plasmolysis

**149- Atrichous Bacteria are:**

- a- Bacteria contain one flagellum
- b- Bacteria contain 2 flagella
- c- Bacteria without flagella
- d- Bacteria with a tuft of flagella

**150- \_\_\_\_\_ are essential for host cell attachment:**

- a- Flagella
- b- Fimbria
- c- Spores
- d- Capsules

**151- Irregular clusters of spherical cells:**

- a- Streptococcus

b- Staphylococcus

c- Lactobacillus

d- Escherichia

**152- Clostridium Botulinum is:**

a- Obligatory Aerobic Bacteria

b- Facultative Anaerobic Bacteria

c- Obligatory Anaerobic Bacteria

d- Micro- aerophilic Bacteria

**153- Basophilic Bacteria grow well at:**

a- pH 8.5 – 9.0

b- pH 7.2 – 7.4

c- pH 5.0 – 5.5

d- None of the above

**154- Cells are divided at high & constant rate:**

a- Decline Phase

b- Stationary Phase

c- Log Exponential Phase

d- Adaptation Phase

**155- The dominant bacterial species in dental plaque are:**

a- Coagulase Negative Staphylococci

b- Lactobacillus

c- Bacteroides

d- Streptococcus Sanguis

**156- The spread of Pyogenic Bacteria in blood stream to different organs & produce multiple abscess is:**

a- Septicemia

b- Bacteremia

c- Toxemia

d- Pyaemia

**157- Inhibit the growth of micro organisms**

a- Bacteriostatic

b- Bactericidal

c- Fungicidal

d- Germicidal

**158- To sterilize fluid damaged by heat:**

a- Gaseous Sterilization

- b- Heat Sterilization
- c- Filtration
- d- Ionizing Radiation

**159- For water disinfection we use:**

- a- Hydrogen peroxide
- b- Formaldehyde
- c- Chlorine
- d- Hypochlorite compounds

**160- Mechanism of action of penicillin:**

- a- Block peptidoglycan synthesis
- b- Inhibit peptidoglycan cross – linking
- c- inhibit folic acid pathway
- d- inhibit protein synthesis

**161- Sulfonamides:**

- a- inhibit cell wall synthesis
- b- inhibit protein synthesis
- c- inhibit DNA synthesis
- d- inhibit folic acid pathway

**162- Acetylase inactivates:**

- a- B – Lactam antibiotics
- b- Aminoglycosides
- c- Chloramphenicol
- d- All of the above

**163- Ringworm disease is caused by**

- a- Zygomycetes
- b- Ascomycetes
- c- Blastomycosis
- d- None of the above

**164- For wet – mount technique we add:**

- a- NaOH
- b- KOH
- c- H<sub>2</sub>O<sub>2</sub>
- d- All of the above

**165- They are transmitted by arthropods**

- a- Chlamydia

- b- Spirochetes
- c- Mycoplasma
- d- All of the above

**166- In the past they were listed as large viruses**

- a- Rickettsia
- b- Mycoplasma
- c- Chlamydia
- d- None of the above

**167- Bacteria multiply by:**

- a- Replication cycle
- b- Simple binary fission
- c- Sexual reproduction
- d- All of the above

**168- It protects bacteria from antibiotics**

- a- Capsule
- b- Cell membrane
- c- Flagella
- d- Fimbria

**169- Vibrio cholera is:**

- a- Mono –trichous bacteria
- b- Atrichous bacteria
- c- Lopho-trichous bacteria
- d- Peri-trichous bacteria

**170- Short rods, motile by peritrichous flagella**

- a- Spirochaeta
- b- Lactobacillus
- c- Escherichia coli
- d- Vibrio

**171- To take up soluble DNA fragments derived from other, closely related species is:**

- a. Mutation
- b. Transformation
- c. Transduction
- d. Conjugation

**172- Tuberculosis are**

- a- micro-aerophilic

- b- Facultative anaerobic
- c- Obligatory anaerobic
- d- Obligatory aerobic

**173- According to pH, Lactobacillus is**

- a- Neutrophilic bacteria
- b- Acidophilic bacteria
- c- Basophilic bacteria
- d- None of the above

**174- Bacteria without cell Wall**

- a- Chlamydia
- b- Rickettsia
- c- Mycoplasma
- d.- Spirochetes

**175- Brucella Melitensis is**

- a- Obligatory aerobic bacteria
- b- Obligatory anaerobic bacteria
- c- Facultative anaerobic bacteria
- d- Micro-aerophilic bacteria

**176- Pseudomonas aeruginosa is**

- a- Peri-trichous bacteria
- b- Lopho-trichous bacteria
- c- Amphi-trichous bacteria
- d- Monotrichous bacteria

**177- Genetic information of bacteria is carried on**

- a- Messenger RNA
- b- Transfer RNA
- c- Transcript RNA
- d- Double – Stranded DNA

**178- Thermophilic bacteria grow at**

- a- 60 – 80 ° C
- b- 0 - 20° C
- c- . 37° C
- d- 100 - 120° C

**179- Acidophilic bacteria grow at**

- a- pH 7.2 – 7.4
- b- pH 5.0 – 5.5

- c- pH 8.5 – 9.0
- d- None of the above

**180- Mycoplasma is**

- a- Neutrophilic bacteria
- b- Acidophilic bacteria
- c- Basophilic bacteria
- d- All of the above

**181- It is the adaptation of bacteria to the fresh medium**

- a- Lag phase
- b- Decline phase
- c- Logarithmic Phase
- d- Stationary phase

**182- Bacteria which do not cause hemolysis is**

- a- Beta-Hemolytic
- b- Alpha-Hemolytic
- c- Gama Hemolytic
- d- None of the above

**183- Normal flora of Lower intestine are all of the following except:**

- a- Staphylococci
- b- Diphtheroids
- c- Shigella
- d- Lactobacillus

**184- Opportunistic pathogens are all of the following except:**

- a- Cause a disease when the host defense are suppressed.
- b- Are normal flora of healthy body
- c- Are greatly harmful
- d- Do not invade the body or tissue.

**185- For disinfection of mattresses :**

- a- Hot air oven
- b- Autoclave
- c- Ethylene Oxide
- d- Hydrogen Peroxide

**186- Psychrophilic bacteria grow at:**

- a- 10° C
- b- 6° C

c- 14° C

d- 37° C

**187- Bacteria which contain chlorophyll**

a- Heterotrophic bacteria

b- Autotrophic bacteria

c- Photosynthetic bacteria

d- All of the above

**188- Tricophyton is one of**

a- Yeast

b- Moulds

c- Dermatophyte

d- Dimorphic Fungi

**189- Plasmomyces is one of**

a- Dermatophytes

b- Dimorphic Fungi

c- Yeast

d- Moulds

**190- Color of gram negative bacteria is**

a- Violet

b- Green

c- Red

d- Black

**191- Acid Fast Bacteria**

a- Salmonella

b- Shigella

c- M. Tuberculosis

d- E – Coli

**192- Spherical or avoid cells occurring in chains**

a- Staphylococci

b- Streptococci

c- Lactobacillus

d- Spiro chaeta

**193- ..... carries the genetic information**

a- the envelope

b- the capsid

c- the nucleic acid

d- the prion

**194- ..... may be seen under light microscope**

- a- rota virus
- b- influenza virus
- c- herps virus
- d- pox virus

**195- viruses may be:**

- a- monomorphic
- b- pleomorphic
- c- dimorphic
- d- all of the above

**196- viral capsid is formed of:**

- a- protein
- b- glycogen
- c- lipoprotein bilayer
- d- glycoprotein

**197- class III in Baltimor classification is:**

- a- double stranded DNA viruses
- b- single stranded DNA viruses
- c- double stranded RNA viruses
- d- single stranded RNA viruses

**198- Hierarchial virus classification system use the following characters except:**

- a- nature of nucleic acid
- b- capsid symmetry
- c- diameter of viron & capsid
- d- virus molecular weight

**199- in viral replication which is true:**

- a- penetration is the 1<sup>st</sup> step
- b- assembly is the last step
- c- relaease is the last step
- d- all of the above

**200- viron:**

- a- may be extracellular phase of virus
- b- may be intracellular phase of virus
- c- can grow and replicate

d- means “ virus – like “

**201- pleomorphic viruses means :**

- a- virus which have constant shape
- b- virus that may appear in 2 forms
- c- virus that have not a constant morphology
- d- virus that have spherical shape

**202- vapor of gold is used in :**

- a- shadow casting technique
- b- negative staining technique
- c- positive staining technique
- d- non of the above

**203- direct diagnosis of virus :**

- a- ELISA → Antibody
- b- CFT
- c- IFT
- d- PCR → virus

**204- all of the following are required in cell culture except:**

- a- neutral PH
- b- presence of buffer salts
- c- presence of antibiotics
- d- incubation at 20 C (( 30-37 C))

**205- all of the following are diagnostic molecular biological technique except:**

- a- PCR
- b- ELISA
- c- nucleic acid hyperdization
- d- DNA finger printing

**206- PCR require all of the following except:**

- a- extracted DNA template
- b- 2 specific primers
- c- reation buffer
- d- RNA polymerase

**207- bacteriophage is :**

- a- virus that can be killed by antibiotic
- b- virus that act like a bacteria
- c- bacteria that act like a virus

d- virus that infect bacteria

**208- all of the following viruses are transmitted by blood except:**

- a- HIV
- b- HBV
- c- HCV
- d- herpes virus

**209- all of the following are RNA viruses except:**

- a- corona viridase
- b- reoviridase
- c- picorna viridase
- d- pox viridase

**210- penetration of naked virus is by :**

- a- fusion
- b- endocytosis
- c- translocation
- d- all of the above

**211- amniotic cavity inoculation is one type of virus culture in:**

- a- tissue wall
- b- lab animals
- c- embryonated egg
- d- non of the above

**212- ..... is an invitro method amplification of a short sequence of target DNA**

- a- PCR
- b- hybridization
- c- finger printing
- d- all of the above

**213- nucleic acid hybridization means:**

- a- probe annealing or binding with its complementary segment of NA
- b- fragmentation of nucleic acid
- c- amplification of nucleic acid
- d- non of the above

**214- DNA hybridization is performed by:**

- a- primers

- b- DNA labeled probe
- c- restriction endonuclease
- d- non of the above

**215-PCR starts with :**

- a- annealing
- b- denaturation of DNA
- c-extension of primers
- d- non of the above

**216- ..... is a piece of DNA fragment of a particular gene that can bind specially with it's complementary piece of DNA:**

- a- codon
- b- probe
- c- LCR
- d- code

**217- how many primers are used in PCR :**

- a- non
- b- one
- c- two
- d- three

**304-Lowenstein-Jensen media is used for the isolation for:**

- a- neisseria gonorrhoea
- b- mycobacterium tuberculosis
- c- haemophilus influenza
- d- staphylococcus aureus

**305- Hekton-Enteric agar is the selective media for:**

- a- salmonella
- b- streptococcus
- c- staphylococcus
- d- all of the above

**306- the selective media for isolation of fungi is:**

- a- S-S agar
- b- XLD agar
- c- sabouraud glucose agar

d- Hekton-Enteric agar

**307- gram positive rods with Chinese letter appearance:**

- a- mycobacterium tuberculosis
- b- corynebacteria diphtheria
- c- clostridium tetani
- d- staphylococcus pneumonia

**308- E lek test is done to diagnose :**

- a- streptococcus
- b- staphylococcus aureus
- c- clostridium tetani
- d- corynebacteria diphtheria

**309- all are lactose fermenter except:**

- a- E-COLI
- b- proteus
- c- klebsiella
- d- enterobacter

**310- produce pale colonies on MacConkey's agar and have tendency to swarm on blood agar:**

- a- salmonella
- b- shigella
- c- klebsiella
- d- proteus

**311- lactose frementer gram negative bacilli with mucoid growth:**

- a- salmonella
- b- shigella
- c- klebsiella
- d- proteus

**312-non lactose fermenter gram negative bacilli produce H<sub>2</sub>S :**

- a- salmonella
- b- shigella
- c- klebsiella

d- proteus

**313- Widal test is done for diagnosis of :**

- a- salmonella
- b- shigella
- c- E-coli
- d- klebsiella

**314- the causative agent of enteric fever:**

- a- salmonella
- b- shigella
- c- klebsiella
- d- proteus

**315- the most common cause of urinary tract infection :**

- a- E-coli
- b- salmonella
- c- shigella
- d- streptococcus

**316- an important cause of diarrhea in infant:**

- a- staphylococcus
- b- E-coli
- c- salmonella
- d- shigella

**317- the most common causative agent for peptic ulcer :**

- a- campylobacter
- b- H-pylori
- c- V-cholera
- d- all of the above

**318- TCBS is the selective media for isolation of:**

- a- H-pylori
- b- V-cholera
- c- E-coli
- d- H influenza

**319- gram negative bacilli strict aerobes grows on simple media producing a characteristic greenish pigment:**

- a- campylobacter
- b- pseudomonas
- c- pasterulla

d- bordetella

**320- the bacteria which cause scarlet fever:**

a- staphylococcus

b- streptococcus

c- salmonella

d- shigella

**321- antistreptolysin O titer (ASO) is done for the diagnosis of:**

a- group A streptococcus

b- group B streptococcus

c- staphylococcus aureus

d- staphylococcus albus

**323- Loffler's serum is used for isolation of:**

a- anthrax

b- clostridium

c- diphtheria

d- T.B

**324- gas gangrene is caused by:**

a- clostridium tetani

b- clostridium botulinum

c- clostridium welchii

d- non of the above (( clostridium perfinges ))

**325- Bacillary dysentery is caused by:**

a- salmonella

b- shigella

c- cholera

d- all of the above

**326- the cause of plague:**

a- Y-enterocolitica

b- Y-pestis

c- Y pseudotuberculosis

d- non of the above

**327- treponema palladium is the cause of :**

a- T.B

b- gonorrhoea

c- syphilis

d- AIDS

**328- the venereal disease research laboratory test (VDRL) is done for diagnosis of:**

- a- T.B
- b- gonorrhea
- c- syphilis
- d- AIDS

**329- Trachoma is caused by:**

- a- mycoplasma
- b- chlamydiae
- c- richettsia
- d- mycobacteria

**391- M-tuberculosis bacilli stain with :**

- a- gram stain
- b- Zheil Nelson stain
- c- Gimesa stain
- d- all of the above

**392- AIDS is transmitted through :**

- a- food
- b- blood
- c- semen
- d- (b) & (c)

**393- bacteria which cause syphilis:**

- a- Neisseria gonorrhea
- b- Viencent angina
- c- Treponema palladium
- d- Yersinia pestis

**394- to diagnose syphilis:**

- a- RPR
- b- VDRL
- c- Wasserman
- d- all of the above

**395- streptococci secret:**

- a- streptolysin O
- b- streptolysin S
- c- streptokinase
- d- all of the above

**396- disease caused by streptococci:**

- a- scarlet fever
- b- purperal sepsis
- c- rheumatic fever
- d- all of the above

**397- staphylococci secrets:**

- a- coagulase enzyme
- b- fibrinolysin
- c- hyaluronidase
- d- all of the above

**398- gram positive bacilli:**

- a- Klebsilla
- b- Salmonella
- c- Proteus
- d- C-diphtheria

**399- meningococcal meningitis is transmitted by :**

- a- food
- b- droplet
- c- touch
- d- all of the above

**400- dark field microscopy is used to diagnose :**

- a- T.B.
- b- syphilis
- c- gonorrhoea
- d- AIDS

**401- it cause food poisoning with flacid paralysis:**

- a- clostridium tetani
- b- clostridium welchii
- c- clostridium botulinium
- d- all of the above

**402- the infective stage of plasmodium vivax :**

a-merozoites

b- sporozoites

c- schizont

d- trophozoite

**403- Pirenella conica snail is the intermediate host of:**

a- schistosoma haematobium

b- fasciola hiptica

c- heterphyes heterophyes

d- diphyllbothrium latum

**404- Bulinus truncates snail is the intermediate host of :**

a- fasciola hepatica

b- fasciola gigantica

c- schistosoma haematobium

d- schistosoma mansonii

**405- to isolate meningococci we have to culture the sample on:**

a- Bordet Gengou

b- modified Thayer martin media

c- Lowenstein Jensen media

d- all of the above

**406- to isolate fungi :**

a- Brain-Heart infusion media

b- tissue culture

c- Lowenstein –Jensen media

d- chocolate agar

**407- to isolate H- influenza:**

a- blood agar

b- chocolate agar

c- mac Conkey media

d- all of the above

**408- the bacteria which cause pseudomembrainous conjunctivitis :**

a- N.gonorrhea

b- C. diphtheria

c- staphylococcus

d- Chlamydia

**409- the best sample to diagnose meningitis :**

- a- blood
- b- sputum
- c- CSF
- d- urine

**410- used to stain Chlamydia**

- a- gram stain
- b- giemsa stain
- c- wright stain
- d- all of the above

**411-..... is used as transport medium for sample in which cholera is suspected**

- a- Cary-Blair media
- b- Stuart media
- c- Alkaline peptone water
- d- glycerol

**412- the color of XLD medium:**

- a- green
- b- red
- c- yellow
- d- blue

**413- CIN medium is used to isolate:**

- a- E.coli
- b- Vibrio cholera
- c- yersinia
- d- salmonella

**414- to make wet mount preparation:**

- a- 10 % KOH
- b- 10 % Na OH
- c- 10 % Na CO<sub>3</sub>
- d- 10% Na Cl

**415- we do wet mount preparation for vaginal smear To diagnose:**

- a- T.vaginalis
- b- N.gonorrhoea

- c- streptococci
- d- staphylococci

**416- to isolate viruses:**

- a- Loeffler media
- b- tissue culture
- c- Bordet –Gengou media
- d- Brain- Heart infusion

**417- to diagnose whooping cough :**

- a- Bordet –Gengou media
- b- Lowenstein –Jensen media
- c- modified Thayer martin media
- d- New York city agar

**418- to diagnose systemic infection we do :**

- a- urine culture
- b- CSF culture
- c- blood culture
- d- sputum culture

**419- we give no growth for blood culture after:**

- a- 1 week
- b- 8 weeks
- c- 6 weeks
- d- 3 weeks

**420- to dissolve mucous in sputum sample :**

- a- 10% NaOH
- b- 30 % NaOH
- c- 10 % KOH
- d- 10% NaCl

**421- mutualism means:**

- a- one partner benefits , other unaffected
- b- both partner benefit
- c- one partner benefit , other damaged
- d- living together

**422- Commensalisms means:**

- a- living together
- b- one partner benefit , other damaged
- c- both partner benefit
- d- one partner benefits , other unaffected

**423- Balantidium coli moves by:**

- a- flagella
- b- cilia
- d- pseudopod
- d- all of the above

**424- Mouth inhabitant:**

- a- Trichomonas hominis
- b- Trichomonas tenax
- c- Trichomonas vaginalis
- d- giardia lamblia

**425- Transmitted by sexual intercourse:**

- a- toxoplasma
- b- giardia lamblia
- c- Trichomonas vaginalis
- d- all of the above

**465- citrate utilization test is done to assist identification of:**

- a- gram +ve bacteria
- b- gram -ve bacteria
- c- entrobacteria
- d- enterococcus

**466- the Kovac's reagent used in the following biochemical tests:**

- a- catalase
- b- coagulase
- c- indole
- d- methyl red

**467- positive results for H<sub>2</sub>S production appear as .... Colour:**

- a- black
- c- yellow
- c- red
- d- green

**468-..... Give positive coagulase test:**

- a- streptococci
- b- staphylococcus aureus
- c- staphylococcus saprophyticus
- d- Escherichia coli

**469- methyl red test is performed with:**

- a- Erlich reagent
- b- Kovac's reagent
- c- Voges proskaur
- d- non of the above

**470- ..... give positive result with urease test:**

- a- salmonella
- b- shigella
- c- Y. enterocolitica
- d- all of the above

**471-..... test is used to differentiate between bacteroides & brucella:**

- a- indole
- b- methyl red
- c- H<sub>2</sub>S production
- d- nitrate reduction

**472- DNAase test is positive with:**

- a- streptococcus pneumonia
- b- E.coli
- c- staphylococcus aureus
- d- staphylococcus epidermis

**473- ..... solution used in the gram stain technique acts as a mordant:**

- a- crystal violet
- b- safranine
- c- iodine
- d- alcohol

**474- the counter stain in Ziehl- Neelson stain is :**

- a- malachite green
- b- methylene blue

- c- iodine
- d- (a) & (b)

**475- bile solubility test is positive with :**

- a- streptococcus viridans
- b- streptococcus pneumonia
- c- streptococcus agalactiae
- d- streptococcus pyrogenes

**476-litmus milk decolorization test assist the identification of :**

- a- entrobacteria
- b- bacteroides
- c- brucella
- d- enterococci

## CHEMISTRY

**330- ..... are substance produced by specialized cells of the body and carried by blood stream where it affect other specialized cells:**

- a- vitamins
- b- enzymes
- c- isoenzyme
- d- hormones

**331- ..... is a protein which catalyse one or more specific biochemical reaction and not consumed during the reaction:**

a- enzymes

b- hormones

c- vitamins

d- proteins

**332- ..... is required in the hepatic synthesis of prothrombin and the blood clotting factors and it's deficiency is observed in newborn infants:**

a- vitamin E

b- vitamin A

c- vitamin K

d- vitamin D

**333- there are enzymes that catalyze the same reaction but differ in there physical properties:**

a- vitamins

b- adjuvents

c- isoenzyme

d- hormones

**334- it's functionis to maintain adequate serum level of calcium:**

a- vitamin E

b- vitamin A

c- vitamin K

d- vitamin D

**335-the inhibitor and substrate bind at different sites on the enzyme this type of inhibition is called:**

a- competitive inhibition

b- non competitive inhibition

c- surface recognition

d- product concentration

**336- ..... found in cartilage consist of a core protein to which the linear carbohydrates chain are covalently attached:**

a- glycoprotein

b- proteoglycan

- c- link protein
- d- hyaluronic acid

**337- ..... is synthesized only by micro-organism , it's not present in plants but present in liver , it's deficiency leads to pernicious anemia:**

- a- vit C
- b- vit B<sub>12</sub>
- c- vit B<sub>1</sub>
- d- vit B<sub>2</sub>

**338- the brown color of the stool is due to the presence of:**

- a- urobilinogen
- b- urobilin
- c- porphyrin
- d- bilirubin

**339- the degradation of heme takes place in the ..... particularly in the liver and spleen**

- a- reticulocytes
- b- erythrocytes
- c- reticuloendothelial cells
- d- non of the above

**340- increased Hb destruction , the liver is unable to cup the greater load of pigment and bilirubin level well rises this is called :**

- a- hepatogenous jaundice
- b- hemolytic jaundice
- c- obstructive jaundice
- d- non of the above

**341- ..... plays a role in visual cycle it's deficiency leads to night blindness,  $\beta$ -carotene is the major precursor of this vitamin in human:**

- a- vitamin E
- b- vitamin A
- c- vitamin K
- d- vitamin D

**342- a large percentage of the ..... requirement in humans is supplied by intestinal bacteria:**

- a- biotin
- b- niacin
- c- folic acid
- d- thiamin

**343- ..... are organic compounds required by the body in trace amount , can't be synthesized by humans , but supplied by diet:**

- a- enzymes
- b- vitamins
- c- hormones
- d- proteins

**344- it facilitate the absorption of iron by reducing it to ferrus state in the stomach and it's deficiency result in scurvy:**

- a- vit C
- b- vit B
- c- vit D
- d- vit A

**345- it's function is to transport oxygen from the lung to the tissue:**

- a- haptoglobin
- b- hemoglobin
- c- bilirubin
- d- myoglobin

**346- ..... act as an antioxidant and it's deficiency cause liver degeneration:**

- a- vit E
- b- vit A
- c- vit K
- d- vit D

**347- it's caused by liver parenchyma damage , the excretion of bile greatly decreased and the concentration of bilirubin in the blood rise :**

- a- hemolytic jaundice

b- hepatogenous jaundice

c- obstructive jaundice

d- non of the above

**348- ..... play an essential role in body metabolism , a deficiency or excess may lead to serious dearrangement of body function:**

a- enzymes

b- hormones

c- vitamins

d- isoenzymes

**349- ..... will interfere with the chemical determination of bilirubin , giving high variable results:**

a- hemolysis

b- hemoglobin

c- vitamins

d- hormones

**350- in hemolytic jaundice there will be increase ..... in serum:**

a- direct bilirubin

b- indirect bilirubin

c- total bilirubin

d- all of the above

**351- the inhibitor binds reversibly to the same site on the enzyme that the substrate normally occupy , this type of inhibition is called :**

a- competitive inhibition

b- non competitive inhibition

c- surface recognition

d- product concentration

**352- regulation of blood glucose level can be achieved by :**

a- hormonal mechanism

b- hepatic and renal mechanism

c- (a) & (b)

d- non of the above

**353- insulin is a hormone secreted by :**

- a-  $\alpha$  cell of islet of langerhans in pancreas
- b-  $\beta$  cell of islet of langerhans in pancreas
- c- suprarenal cortex
- d- non of the above

**354- cholesterol is a component of all cell membrane and it's the precursor of :**

- a- bile acid
- b- steroid hormones
- c- vit D
- d- all of the above

**355- anti diuretic hormone ( ADH) secretion is controlled by:**

- a- rennin angiotensin
- b- plasma osmlality
- c- (a) & (b)
- d- non of the above

**356- the electrophoresis is based on differential migration of :**

- a- charged particles
- b- uncharged particles
- c- molecular weight
- d- (a) & (b)

**357- acid base balance is regulated by :**

- a- oxygen concentration
- b- hydrogen ion concentration
- c- nitrogen ion concentration
- d- (a) & (b)

**358- it's an increase in hydrogen ion concentration of the blood:**

- a- acidosis
- b- alkalosis
- c- acid base balance
- d- (a) & (b)

**359- over production of acid associated with :**

- a- diabetes mellitus
- b- lactic acidosis
- c- methanol poisoning
- d- all of the above

**360- serum bicarbonate is decreased in:**

- a- respiratory acidosis
- b- metabolic acidosis
- c- renal tubular acidosis
- d- all of the above

**361- chronic deficiency in dietary calcium can lead to :**

- a- anemia
- b- bronchial asthma
- c- osteoporosis
- d- non of the above

**362- ..... is due to decrease blood CO<sub>2</sub>:**

- a- metabolic acidosis
- b- respiratory acidosis
- c- respiratory alkalosis
- d- metabolic acidosis

**363- ..... is the most important factor affecting body sodium content:**

- a- aldosterone secretion
- b- antidiuretic hormone
- c- testosterone
- d- all of the above

**364- haemosiderosis is :**

- a- increase iron store
- b- decrease iron store
- c- increase hemoglobin
- d- decrease hemoglobin

**365- if there's a mixture of protein ( colloids) and salt ( crystalloid) they can be separated by :**

- a- precipitation
- b- dialysis
- c- chromatography
- d- electrophoresis

**366- the predominant cation in intracellular fluid is :**

- a- sodium
- b- potassium
- c- calcium
- d- phosphorus

**367- metabolic acidosis is due to :**

- a- failure to secrete acid
- b- bronchial asthma
- c- loss of bicarbonate
- d- (a) & (c)

**368- high level of plasma ferritin may occur due to :**

- a- inflammatory condition
- b- malignant disease
- c- liver disease
- d- all of the above

**369- gonadal hormones estimation is important in :**

- a- detection of ovulation
- b- assessment of amenorrhea
- c- evaluation of delayed puberty
- d- all of the above

**370- the secretion of gonadal hormone is controlled by :**

- a- LH
- b- FSH
- c- TSH
- d- (a) & (b)

**371- the intensity of the color is directly proportional to the ..... of the analyte in the solution:**

- a- dilution
- b- contamination
- c- concentration
- d- observation

**372- the ..... contain information of any health or safety risk associated with use or exposure to hazardous chemicals:**

- a- MSDS
- b- NFPA
- c- POLT
- d- OSHA

**373- instrument used to measure color changes in the labs:**

- a- microscope
- b- centrifuge
- c- photometer
- d- all of the above

**374- the color coded signs used to identify flammable chemicals:**

- a- blue
- b- yellow
- c- white
- d- red

**375- quality assurance includes :**

- a- personal orientation
- b- laboratory documentation
- c- knowledge of laboratory instrumentation
- d- all of the above

**376- the laboratory procedure manual include:**

- a- patient preparation
- b- specimen collection & processing
- c- specimen preservation , storage & transport
- d- all of the above

**377- the principal of reflectance photometer**

- a- measure the amount of light that pass through the solution
- b- measure the amount of light that the solution absorbs
- c- (a) & (b)
- d- non of the above

**378- the blood cell counter include :**

- a- aperture impedance cell counter
- b- Geiger counter
- c- microscopes
- d- all of the above

**379- its mission is to save lives , prevent injuries , and protect health of all workers in the lab. :**

- a- MSDS
- b- NFPA
- c- POLT
- d- OSHA

**380- ..... requires 3 hours at 140 C ° or 1 hour at 160 C ° for complete sterilization**

- a- hot air oven
- b- autoclave
- c- filtration
- d- all of the above

**381- arterial blood samples are essential to do :**

- a- CBC
- b- urea
- c- blood glucose
- d- blood gas analysis

**382- vacuum tubes with green stopper contain:**

- a- EDTA
- b- sodium citrate
- c- heparin
- c- no anticoagulant

**383- serum separator tube is all of the following except:**

- a- contain gel that separate serum from cells during centrifugation
- b- contain clot activator to speed clot formation
- c- has red & black mottled top stopper
- d- used for coagulation tests

**384- for phlebotomy we use all of the following except:**

- a- the hypodermic needle & syringe
- b- the vacuum tube system
- c- the monolet lancets
- d- the winged infusion set

**385- lab. equipment should be cleaned and disinfected with :**

- a- hypochlorite
- b- formaldehyde
- c- glutaraldehyde
- d- (b) & (c)

**386- any blood spill in the lab should be immediately swabbed with :**

- a- hypochlorite
- b- alcohol
- c- soap
- d- water

**387- CBC is performed using:**

- a- serum
- b- well mixed EDTA whole blood
- c- plasma
- d- non of the above

**388- which tube should be filled first in blood collection:**

- a- tubes with anticoagulant
- b- tube without anticoagulant
- c- tubes for blood culture
- d- non of the above

**389- the monojector is designed to be used with :**

- a- the monolet lancet
- b- tenderlett
- c- tenderfoot
- d- non of the above

**390- the site of choice for capillary puncture in newborns is :**

- a- the earlobe
- b- middle finger
- c- the big toe
- d- the lateral medial planter heel surface

## PARASITOLOGY

**426- Intermediate host of Trypanosom:**

- a- triatoma megista
- b- sand fly
- c- tse tse fly
- d- anopheles

**427- The cause of chaga's disease:**

- a- trypanosoma gambiense
- b- trypanosoma rhodesiense

- c- *trypanosoma cruzi*
- d- *leishmania braziliense*

**428- The cause of sleeping sickness:**

- a- *trypanosoma gambiense*
- b- *trypanosoma cruzi*
- c- *trypanosoma rhodesiense*
- d- (a) & (c)

**429- Cause Kala- azar:**

- a- *leishmania tropica*
- b- *leishmania braziliense*
- c- *leishmania donovani*
- d- *leishmania mexicana*

**430-cause oriental sore:**

- a- *plasmodium ovale*
- b- *leishmania tropica*
- c- *leishmania donovani*
- d- *trypanosoma rhodesiense*

**431- Its trophozite is shaped like a pear , has the 2 nuclei that resembles eyes and 4 pairs of flagella that look like hair:**

- a- *Trichomonas vaginalis*
- b- *entameoba histolytica*
- c- *giardia lamblia*
- d- *endolimax nana*

**432- Pear shaped trophozite with 4 anterior flagella and a 5<sup>th</sup> forming the outer edge of a short undulating membrane:**

- a- *Trichomonas hominis*
- b- *entameoba histolytica*
- c- *entameoba coli*
- d- *endolimax nana*

**433- sometimes it cause metastatic infection which involve liver, lung, brain or other viscera:**

- a- *giardia lamblia*
- b- *Trichomonas vaginalis*

c- *Entamoeba histolytica*

d- *Balantidium coli*

**434- Intestinal ciliate:**

a- *Entamoeba histolytica*

b- *Entamoeba coli*

c- *Giardia lamblia*

d- *Balantidium coli*

**435- Asexual multiplication of *Plasmodium vivax* takes place in:**

a- Anopheles

b- sand fly

c- human

c- tsetse fly

**436- *Plasmodium falciparum* is transmitted by :**

a- *Triatoma megista*

b- tsetse fly

c- Anopheles

d- sand fly

**437- Moves by pseudopods:**

a- *Giardia lamblia*

b- *Balantidium coli*

c- *Entamoeba histolytica*

d- *Trichomonas vaginalis*

**438- it's one of the round worms:**

a- *Schistosoma mansoni*

b- *Schistosoma haematobium*

c- *Ascaris lumbricoides*

d- *Fasciola hepatica*

**439- it's one of the tape worms:**

a- *Ascaris lumbricoides*

b- *Ancylostoma duodenale*

c- *Trichuris trichiura*

d- *Taenia saginata*

**440- barrel shaped egg, yellow brown in color with a colorless protruding mucoid plug in each end:**

a- egg of *Ascaris lumbricoides*

b- egg of *ancylostoma duodenal*

c- egg of *trichuris tricura*

d- egg of *taenia saginata*

**441- large oval egg ,pale yellow brown in color has a characteristic side spine & contain a fully developed miracidium , the worm is:**

a- *S.mansoni*

b- *S. hematobium*

c- *A. duodenal*

d- *T. solium*

**442- large oval egg , pale yellow brown in color has an indistinct operculum and contains unsegmented ovum:**

a- *S. hematobium*

b- *fasciola hepatica*

c- *heterophyes heterophyes*

d- *taenia solium*

**443- round egg , embryo is surrounded by a thick brown radially striated wall , hooklets are present in the embryo:**

a- *S. hematobium*

b- *fasciola hepatica*

c- *A. duodenal*

d- *T. solium*

**444-oval colorless egg,flattened on one side & contains a larvae:**

a- *hymenelopsis diminuta*

b- *dipylidium caninum*

c- *entrobium vermicularis*

d- *taenia saginata*

**445- the cause of malignant malaria:**

a- *plasmodium vivax*

b- *plasmodium ovale*

c- *plasmodium malaria*

d- *plasmodium falciparum*

**446- infection occur when infective filariform larvae penetrate the skin:**

a- *ascaris lumbricoides*

b- *ancylostoma duodenal*

- c- fasciola hepatica
- d- heterophyes heterophyes

**447- .....lives in the liver and bile ducts of sheep and cattle:**

- a- stonyloides stercoralis
- b- schistosoma mansoni
- c- fasciola hepatica**
- d- ancylostoma duodenal

**448-segment found in stool which is white & opaque & measures 20 mm long by 6mm wide with uterus that has a central stem and more than 13 side branches on each side...the worm is :**

- a- fasciola hepatica
- b- trichuris trichuris
- c- heterophyes heterophyes
- d- taenia saginata**

**449- infection is by eating raw or under cooked fish:**

- a- fasciola hepatica
- b- trichuris trichuris
- c- heterophyes heterophyes**
- d- taenia solium

**450- ..... is transmitted by eating raw or under cooked beef:**

- a- heterophyes heterophyes
- b- taenia saginata**
- c- schistosoma mansoni
- d- ancylostoma duodenal

## **BODY FLUID**

**451- urine output < 400 ml/24 hours is :**

- a- polyuria
- b- anuria
- c- oligouria**
- d- non of the above

**452- precipitation of urates takes place in:**

- a- acidic urine**

- b- alkaline urine
- c- neutral urine
- d- all of the above

**453- it's one of the causes of persistently acidic urine:**

- a- urinary tract infection
- b- phenylketonurea
- c- excessive bicarbonate ingestion
- d- excessive ingestion of soda

**454- common cause of proteinuria:**

- a- alcoholism
- b- fasting > 18 hours
- c- diabetes mellitus
- d- Bence- Jones proteins

**455- dipstick detect acetoacetic acid & acetone which react with:**

- a- peroxides
- b- nitroprusside
- c- diazo compounds
- d- indoxyl esters

**456- in dipstick bilirubin reacts with :**

- a- nitroprusside
- b- peroxides
- c- indoxyl esters
- d- diazo compounds

**457- among the common cause of hematuria:**

- a- urogenital carcinoma
- b- diabetes mellitus
- c- heavy exercise
- d- metabolic disorder

**458- large number of hyaline cast indicated:**

- a- acute pyelonephritis
- b- proliferative glomerulonephritis
- c- heart failure
- d- all of the above

**459- red cell casts indicates:**

- a- acute pyelonephritis
- b- proliferative glomerulonephritis
- c- heart failure
- d- all of the above

**460- crystals which look like envelope :**

- a- triple phosphate
- b- cystine
- c- uric acid
- d- calcium oxalate

**461- Biuret test is done to determine:**

- a- glucose
- b- pentose
- c- protein
- d- galactose

**462- the 1st tube of synovial fluid is for:**

- a- hematology
- b- chemistry
- c- microbiology
- d- microscopy

**463- square plate like crystals with notched corners in synovial fluid indicate:**

- a- uric acid
- b- calcium pyrophosphate
- c- cholesterol
- d- monosodium urate

**464- abnormal forms in semen should not exceed:**

- a- 10 %
- b- 5 %
- c- 25 %
- d- 50 %

## Lab.Management

**477-The process of getting things done through and with people operating in organized group toward a common goal is the**

- a- management
- b- Organization
- c- Planning
- d- None of the above

**478- Primary objectives in the planning are directed to**

- a- the laboratory as a whole
- b- Increase the efficiency in the performance of the lab. test
- c- Decrease the costs in the performance of the lab. test
- d- All of the above

**479- Forecasting needs for staff personnel means**

- a- Prediction in relation to the kind of technician and technologist who will be working in the lab.
- b- Plan for the full utilization of efficient use of instrument
- c- Plan for the full use of space in the lab.
- d- None of the above

**480- An organization**

- a- Is formed when 2 or more persons are brought together to achieve a common goal
- b- Is closely related to planning
- c- Involves structuring activities and functions within institutions to achieve the goals and objects
- d- all of the above

**481- The real behavior and relationships of organization members usually differ from their planned behavior and relationships. It is**

- a- Formal organization
- b- Informal organization
- c- Space utilization
- d- None of the above

**482- The intra lab. System includes the following except**

- a- Calendar format
- b- Histogram format
- c- out of limits report sheet
- d- Proficiency testing and computer program

**483- The out of limits report form provides**

- a- Space for recording reagents changes
- b- Control lot number changes
- c- Serve as a general "dairy" of the test methodology
- d- All of the above

**484- Patient preparation, specimen collection and technical performance of lab. test are general categories of.....**

- a- Planning
- b- Utilization of space
- c- Work flow
- d- Quality control

**485-floor book manual includes the following except**

- a- Test name
- b- Sample fluid
- c- Minimum volume
- d- Proper procedures for collecting routine and special tests

**486- Collection procedure manual involve**

- a- Blood collection from pediatric patients
- b- Intensive care blood collection
- c- Isolation techniques for lab. Personnel
- d- All of the above

**487-On the container and \or lab requisition**

- a- Patient's full name should be put
- b- Hospital number should be put
- c- Date of collection should be put
- d- All of the above

**488 Accuracy referred to the following except**

- a- Correctness and exactness of the test
- b- Closeness of the test to the true value
- c- True value determined by comparison to a standard
- d- reproducibility

**489- Regarding precision the following is true except**

- a- Reproducibility
- b- Closeness of the test results to one another when using the same specimen
- c- In the clinical lab it is expressed as (SD) and coefficient of variation
- d- The capability of the method to detect a small amount of substance with some assurance

**490- Reliability is**

- a- The ability of a method to measure only that substance being tested
- b- The ability of the test method to maintain its accuracy despite of extraneous circumstances
- c- The ability of the method to maintain accuracy, precision and ruggedness
- d- None of the above

**491-  This symbol in the flow chart means**

- a- Beginning process
- b- Decision
- c- Manual operation
- d- Decision mod

**492- This symbol in the flow chart means (—> )**

- a- Beginning process
- b- Decision
- c- Direction flow
- d- Document

**493- Work load on which personnel requirements are usually based is influenced by**

- a- changes in volume
- b- Test mix
- c- Patient population
- d- All of the above

**494- The physical features of the lab. one of the measures of**

- a- forecasting of personnel needs
- b- Assessment of space utilization
- c- Time management
- d- None of the above

**495- If P (E) is the probability of E we may express this definition as**

- a-  $P(E) = \frac{m}{N}$
- b-  $P(E) = \frac{N}{m}$
- c-  $P(E) = m \times N$

d- None of the above

**496- When a test indicates a positive status when the true status is negative it is called**

a- positive test

b- False positive test

c- Negative test

d- False negative test

**497- The specificity of a test**

a- The probability of a positive test results or (presence of the symptoms) given the presence of the disease

b- The probability of a negative test results or (absence of the symptoms) given the absence of the disease

c- a and b

d-None of the above

**498- The largest collection of entities for which we have an interest at a particular time is called**

a- Population

b- Sample

c- Data

d-All of the above

**499- A sample is**

a- A part of a population

b- The whole population

c- Endless population

d- None of the above

**500- If we have 100 students and they are ranked by age beginning with the 4<sup>th</sup> student, every tenth student is chosen (the student no. 4 then 14 and 24 and so on) this type of sample is called**

a- Systemically selected sample

b- A stratified selected sample

c- Simple random sample

d- Cluster selected sample

**501-A point estimate is**

a- A single numerical value used to estimate the corresponding population parameter

- b- Two numerical values defining a range of values include the parameter being estimated
- c- a and b
- d- None of the above

**502- A statistical inference is**

- a- A procedure by which we reach a conclusion about population based on the information obtained from the sample drawn from it
- b- The cause behind estimation in the health science fields
- c- Calculated data from the data of the sample that are approximation of the corresponding parameter
- d- None of the above

**503- Estimator is**

- a- the rule that tells us how to compute the single value which is called estimate
- b- Two numerical values defining the range of values
- c- a, b
- d- None of the above

**504 The table which shows the way in which values of the variables are distributed among the specified class interval is called**

- a- Relative frequency
- b- Ordered array
- c- Frequency table
- c- None of the above

**505- The following are the ages of 5 patients seen in the emergency room in certain day 35, 30, 55, 40, 25 years the mean of their ages is**

- a- 37 years
- b- 30 years
- c- 39 years
- d- 40 years

**506- A mathematical tool designed to facilitate complex clinical decision in which many variables must be considered spontaneously is called**

- a- Reference value
- b- Decision analysis

- c- Quality assurance
- d- None of the above

*Good  
Luck!*