

# **RAHIDA IQBAL FINANCIAL AID ORGANIZATION**

## **( GENERAL PATHO AND MICRO BIOLOGY )**

### **GENERAL PATHOLOGY ... THINGS TO PREPARE FROM MEDIUM ROBBINS!**

\*DO WATCH PATHOMAS LECTURES ! THEY ARE A MUST FOR CONCEPT BUILDING AND WILL HELP YOU GRASP THE ESSENCE OF THE SUBJECT AND WILL HELP YOU UNDERSTAND THE HIGH-YEILD STUFF

**1) CHAP 1** COMPLETE

**2)CHAP 2** COMPLETE

**3)CHAP 3** COMPLETE

**4)** NO NEED TO PREPARE **CH 4** AS IT IS COVERED IN IMMUNOLOGY (MICRO) JUST GIVE A READ TO SLE

### **5)NEOPLASIA.....Things To Do from Medium Robbins**

.Pg 161-169 Complete

.Fig 5-12

.Fig 5-13 (Mcqs)

.Table 5-2 (Mcqs)

.Table 5-3 (Mcqs)

- .Aneuploidy
- .Carcinogenesis complete
- .Hallmarks of cancer (Complete)
- .RB gene (Seq)
- .TP 53 GENE (SEQ)
- .Ability to invade and metastasize \*
- .Vascular dissemination and homing of tumors
- .Evasion of immune system
- .Hnpcc
- .Xeroderma pigmentosum
- .Diseases with defects in dna repair
- .Tumor promoting inflammation as enabler of malignancy
- .Table 5-4 (mcq n seq)
- .viral and microbial oncogenesis (Names only)
- .TUMOR ANTIGENS (Names/Headings)
- .FIGURE 5-32

- .CLINICAL ASPECTS OF NEOPLASIA
- .GRADING AND STAGING OF CANCER
- .PARANEOPLASTIC SYNDROMES (SEQ AND MCQ)
- .LAB DIAGNOSIS (SEQ)
- \*ALL SUMMARIES

## **6)GENETICS**

(Things to Do...Medium Robbins)

- .DEFINITIONS OF MUTATION TYPES ON PG 216
- .epigenetic changes

.Marfan syndrome Morphoogy (read syndrome if possible)

.Summary 221

.Summary 223

.Pathogenesis and Morphology Cystic Fibrosis

.Table 6-4 (very important)

.table 6-5 (especially enzyme deficiency)

.Down syndrome .. fig 6-15 complete

.klinefelter n turner fig 6-16

.indications for genetic analysis (pg 267)

## **MICROBIOLOGY.....THINGS TO PREPARE FROM LEVINSON!**

### **1)GENERAL BACTERIO (SELECTIVE)**

Chap 1 full

Chap 2 full

Chap FULL

Chap 4 table 4-1 + pearls

Chap 5 pearls

Chap 6 table 6-1 6-2 pearls

Chap 7 principles of pathogenesis ... 7-1 ...7-2..7-4...7-5..toxin production...7-14...stages of infectious disease..pearls

Chap 8 pearls

Chap 9 9-1...9-2 ...9-3

Chap 10 no need to prepare

Chap 11 pearls

Chap 12 full in detail

Chap 13 full v v v imp

## **2)CLINICAL BACTERIO**

PREPARE ALL THE CHAPTERS .. BUT FROM CHAP 20 ONLY TABLE 20-1 AND FROM MINOR BACTERIA DO ONLY GARDENELLA AND MORAXELLA

## **3)BASIC VIROLOGY**

DO ONLY PEARLS

## **4)CLINICAL VIROLOGY**

DO ONLY THE VIRUSES LISTED BELOW .. ALL CAN BE DONE FROM THE SUMMARIES IF U R AWARE OF THE CLINICAL FINDINGS OF EACH .. JUST GIVE A READ TO HEPATITIS FROM THE MAIN TEXT AND CLINICAL FEATURES OF EVERY VIRUS FROM MAIN TEXT

MUMPS ....HERPES.....MEASLES.....INFLUENZA ....

...HEPATITIS....ROTA...CMV....EBV....RUBELLA...POX...HIV....RABIES....PARAINFLUENZA...POLIO...DENGUE..  
..EBOLA

## **5)MYCOLOGY**

UHS K COURSE WALAY FUNGI (TINEA SPECIES,CANDIDA,CRYPTOCOCCUS) MAIN YAAD RAKHNA K DERMATOPHYTOSES IS ALSO INCLUDED IN TINEA SPECIES AND IS VERY IMPORTANT

DELAYED HYPERSENSITIVITY SKIN TEST

GENERAL LAB DIAGNOSIS ON PG 375

Pg 374 PAR AIK PARAGRAPH HAI ABOUT SKIN TEST WO KARNA HAI !

Pg 380 PAR SPIROTRICHOSIS DEKH LENA CUZ OF SCENARIO ABOUT GARDENER HANDLING PRUNE ROSES

Pg 382 PAR COCCIDIODES KO TABLE 49-1 SE KARNA

Pg 384 PAR HISTOPLASMA IS V.IMP DUE TO SCENARIO OF BIRD POOP, CHICKEN HOUSE OR BAT INFESTED CAVE

Pg 386 PAR BLASTOMYCOSES KE PROPERTIES MAIN DIFFERENCE HAI B/W ITS YEAST AND THAT OF CRYPTOCOCCUS ( IT IS IMPORTANT)

Pg 389 CANDIDA KA SCENARIO AATA HAI ABOUT DIAPER RASH

TRANSMISSION OF CANDIDA .. ITS NORMAL FLORA PRESENCE AND LAB DIAGNOSIS \*\*\*\* ( REPEATED MANY TIMES )

Pg 392 cryptococcus poora krna, lekin us k text mein aik cheez nahe likhi hui, which is v.imp. fig 50-6 mein india ink prep for cryptococcus. V.imp for mcq.

Pg 393 aspergillosis is imp

## **6)PARASITOLOGY**

SHOULD BE DONE COMPLETE .. BUT THE ONES IN UHS SYLLABUS SHOULD BE STRESSED UPON

## **7)IMMUNOLOGY**

CH 57 FULL

CH 58 FULL

CH 59 TBL 59-1 FIG 59-2 ..Isotypes allotypes and idiotypes...isotype switching

Ch 60 full

Ch 61 full

Ch 62 table 62-1 ..hla typing in lab ..TRANSPLANTATION

Ch 63 ... full

Ch 64 table 64-1 ... precipitation. ..elisa.....complement fixation...HEMAGGLUTINATION TESTS...COOMBS TEST ..Abo bld grps and transfusion reactions ...rh blood type and hemolytic disease of new born

Ch 65 v v v imp full

Ch 66 tbl 66-1 .. diseases involvinone cell/organ and systemic diseases (sirf names)

Ch 67 no need to prepare

Ch 68 b and t cell def diseases (names) ..combined t and b cell def diseases (names)

## **IMPORTANT STUFF/TOPICS FROM EACH TOPIC!**

# **GENERAL PATHOLOGY**

## **1)CELL INJURY , DEATH AND ADAPTATIONS ( CHAP 1 )**

-DEFINITION , MECHANISM , PHYSIOLOGIC EXAMPLES AND PATHOLOGIC EXAMPLES OF HYPERTROPHY , HYPERPLASIA , ATROPHY , METAPLASIA

-BARRETT'S ESOPHAGUS

-CAUSES OF CELL INJURY

-MORPHOLOGY AND DEF OF NECROSIS

-TYPES OF NECROSIS ( VERY IMPORTANT )

-MECHANISM OF APOPTOSIS ( DO HAVE A LOOK AT THE DIAGRAM )

-HOW CCL4 DAMAGES LIVER

-HOW ISCHEMIA CAUSES DAMAGE

-HOW FREE RADICALS ARE INACTIVATED

-FATTY CHANGE

-REVERSIBLE CELL INJURY

- LIPOFUSCIN
- SARCOIDOSIS
- DIFFERENCE B/W DYSTROPHIC AND METASTATIC CALCIFICATION
- FATTY LIVER

## **2)INFLAMMATION AND REPAIR (CHAPTER 2)**

- DIFFERENCE B/W ACUTE AND CHRONIC INFLAMMATION
- CARDINAL SIGNS OF INFLAMMATION
- STIMULI CAUSING ACUTE INFLAMMATION
- DIFFERENCES B/W TRANSUDATE AND EXUDATE
- STIMULI FOR CHRONIC INFLAMMATION
- FATES AFTER ACUTE INFLAMMATION
- MORPHOLOGICAL PATTERNS OF ACUTE INFLAMMATION
- CHEDIAK-HIGASHI SYNDROME
- CHRONIC GRANULOMATOUS DISEASE (CGD)
- LEUKOCYTE ADHESION DEFECTS
- HOW INGESTED MATERIAL IS DEGRADED ( BOTH OXYGEN DEPENDENT AND OXYGEN INDEPENDENT MECHANISMS )
- GRANULOMATOUS INFLAMMATION ( DEFINITION , TYPES , WHAT CAUSES BOTH CASEATING AND NON-CASEATING)
- STEPS INVOLVD IN GRANULOMA FORMATION \*\*
- DIFFERENCE B/W REGENERATION AND REPAIR
- CLASSIFICATION OF TISSURES ON BASIS OF REGENERATION POTENTIAL ( LABILE , STABLE , PERMANENT)
- FACTORS REQUIRED FOR TISSUE REPAIR \*\*
- DELAYED WOUND HEALING \*\*
- FIRST INTENTION V/S SECOND INTENTION

- ANGIOGENESIS MECHANISM
- ENUMERATING MEDIATORS OF INFLAMMATION

### **3)HEMODYNAMIC DISORDERS , THROMBOEMBOLISM AND SHOCK ( CHAP 3)**

- NUTMEG LIVER\*
- CAUSES OF EDEMA\*\*
- DIFFERENCES B/W TRANSUDATE AND EXUDATE\*\*

-HOW HEART FAILURE CAUSES EDEMA

-TYPES OF HEMMORHAGE

-VIRCHOW'S TRIAD\*

-HYPERCOAGUABLE STATES \*

-ARTERIAL V/S VENOUS THROMBI

-FATE OF THROMBUS

-TYPES OF EMBOLISM

-RED V/S WHITE INFARCTS

-LINES OF ZAHN

-SEPTIC SHOCK ( DIAGRAM )

-TYPES OF SHOCK

-STAGES OF SHOCK

### **4) NEOPLASIA ( CHAPTER 5)**



-DIFFERENCE B/W MALIGNANT AND BENIGN TUMORS

-NOMENCLATURE OF TUMORS

-OCCUPATIONAL CANCERS

-EPIGENETIC CHANGES

-ENUMERATING HALLMARKS OF CANCER

-RB GENE

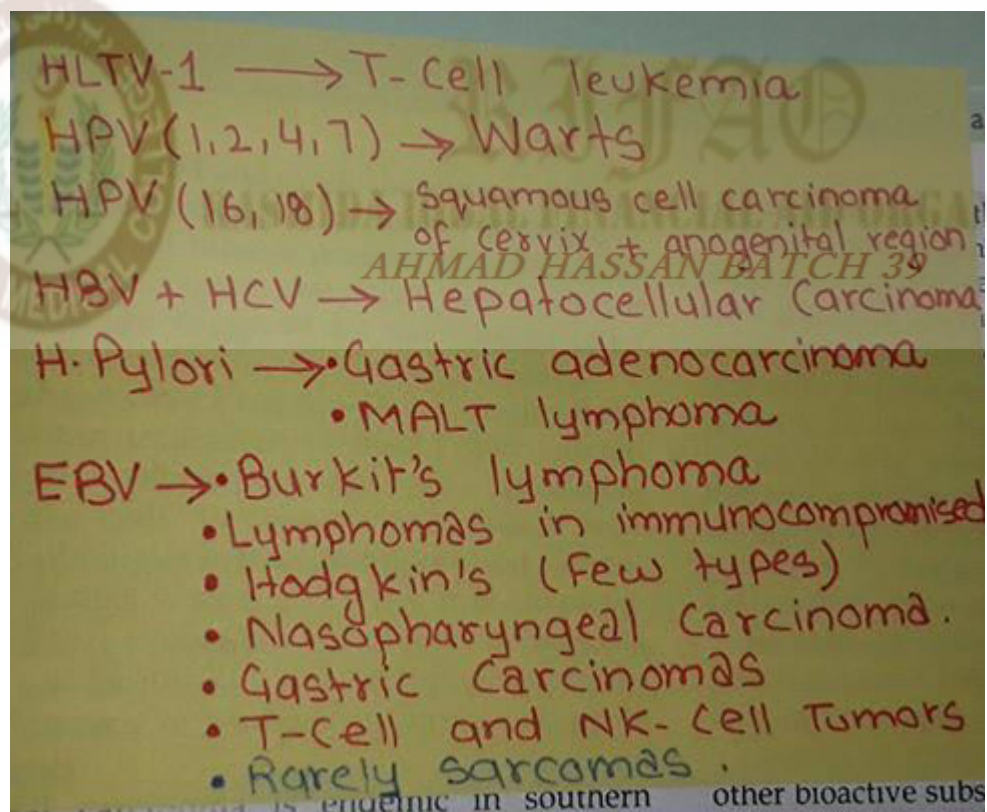
-TP-53 GENE

-METASTATIC CASCADE

-HNPCC

-MAJOR CHEMICAL CARCINOGENS

-VIRUSES



-CANCER CACHEXIA

-PARANEOPLASTIC SYNDROMES \*\*\*

-TUMOR MARKERS \*\*\* ( TABLE FROM BIG ROBBINS)

-STAGING AND GRADING OF CANCER

## 6) GENETICS

.DEFINITIONS OF MUTATION TYPES ON PG 216

.epigenetic changes

.Marfan syndrome Morphology (read syndrome if possible)

.Summary 221

.Summary 223

.Pathogenesis and Morphology Cystic Fibrosis

.Table 6-4 (very important)

.table 6-5 (especially enzyme deficiency)

.Down syndrome .. fig 6-15 complete

.klinefelter n turner fig 6-16

.indications for genetic analysis (pg 267)

# **MICROBIOLOGY**

## **1) GENERAL BACTERIOLOGY**

- DIFFERENCE B/W EUKARYOTES AND PROKARYOTES \*\*
- DIFFERENCE B/W HUMAN CELLS , BACTERIA AND VIRUSES
- DIFFERENCES B/W GRAM POSITIVE AND GRAM NEGATIVE CELL WALL\*\*
- PEPTIDOGLYCAN IN DETAIL
- COMPONENTS OF ENDOTOXIN ( DAGRAM ALSO)
- PLASMIDS DEF , TYPES AND FUNCTIONS \*\*
- DIFFERENCE B/W PLASMIDS AND TRANSPOSONS\*
- RESISTANCE OF SPORES (REMEMBER DIPICOLINIC ACID)
- DRAWING GROWTH CURVE AND ROLE OF CHEMOSTAT
- CLASSIFYING BACTERIA ACCORDING TO GROWTH IN OXYGEN ( SEE TABLE ON PG 106)
- SUGAR FERMENTATION
- DIFFERENCES B/W CONJUGATION,TRANSFORMATION AND TRANSDUCTION
- DIFFERENCES B/W ENDO AND EXO TOXIN
- ENUMERATING WATER BORNE, MILK BORNE , TRANSPLACENTAL AND STDs
- EFFECTS OF ENDOTOXIN
- STAGES IN INFECTIOUS DISEASE
- BACTERIOLOGIC AGARS AND FUNCTIONS ( IMP FOR MCQS)
- NAMES OF DIFFERENT VACCINES ! (IMP )
- DEF OF STERLIZATION,DISINFECTION AND ANTISEPTICS
- RATE OF KILLING OF MICROBS
- CLASSIFYING AGENTS USED FOR DINSINFECTION AND STERLIZATION \*\*\*
- AUTOCLAVE\*\*
- PASTEURIZATION\*\*

## **2)CLINICAL BACTERIO**

## GRAM P.O.S.I.T.I.V.E C.O.C.C.I

- ENUMERATING DISEASES CAUSED BY ALL THE BACTERIA IN THIS CHAP
- HOW TO DIFF B/W STREP AND STAPH
- CLASSIFICATION OF GRAM POSITIVE COCCI \*\* DO IT REALLY WELL
- TOXINS AND ENZYMES PRODEUCED BY STAPH AUREUS \*
- CLASSIFY STREPTOCOCCI ON BASIS OF HEMOLYSIS
- ENZYMES AND TOXINS PRODUCED BY GROUP A STREPTOCOCCI
- ACUTE GLOMERULO NEPHRITIS AND ACUTE RHEUMATIC FEVER ( MECH IN DETAIL )
- PROPERTIES OF STREP PNEUMONIAE
- HOW TO DIFF B/E E.BOVIS AND S.BOVIS

## GRAM N.E.G.A.T.I.V.E C.O.C.C.I

- CLASSIFYING THEM ON BASIS OF SUGAR FERMENTATION
- TRANSMISSION OF GONNORHEA AND MENINGITIS
- DIFF B/W BACTERIAL AND FUNGAL MENINGITIS
- GONNORHEA
- DGI
- OPHTHALMIA NEONATORUM
- LAB DIAGNOSIS

## GRAM P.O.S.I.T.I.V.E R.O.D.S

- B.CEREUS FOOD POISONING DUE TO RICE
- WOOLSORTER'S DISEASE.. MEDIASTINAL WIDENING
- ANTHRAX TOXIN MOA

- ESCHAR FORMATION IN ANTHRAX
- CLOSTRIDIUM (( EVERYTHING ) ( PATHOGENESIS , DISEASES NAMES , TRANSMISSION , CLINICAL FINDINGS)
- BOTOX
- ANTIBIOTICS THAT CAUSE PSUEDO MEMBRANOUS COLLITIS
- TENNIS RACKET LIKE APPEARANCE ( C. TETANI )
- NAIL ENTRING FOOT SCENARIO ( C.TETANI)
- DIFFERENCE B/W BOTULISM AND TETANUS
- ENUMERATING FOOD POISONING CAUSING ORGANISMS
- DIPHThERIA TOXIN MOA
- LAB DIAGNOSIS OF C.DIPHThERIA (VOLUTIN GRANULES\*\*)
- LISTERIOSIS ... TRANSMISSION ( REMEMBER COLD ENHANCEMENT ,, CANNED FOODS)

## GRAM N.E.G.A.T.I.V.E RODS

-->RELATED TO ENTERIC TRACT

- DISEASES CAUSED BY EACH BACTERIA
- WHICH CAUSES BLOODY AND WHICH CAUSES NON BLOODY DIARRHEA
- PATHOGENESIS OF E.COLI
- TSI ( TRIPPLE SUGAR IRON ) TEST
- SALMONELLA V/S SHIGELLA
- TYPHOID IN DETAIL
- SALMONELLA \*\*\*
- BACILLARY DYSENTRY
- CHOLERA \*\*\*

GIVE A READ TO EVERYTHING !!!!

-->RESPIRATORY TRACT

READ THE WHOLE CHAPTER .. EVERYTHING IS IMPORTANT

-->ZOOONOTIC

NO NEED TO PREPARE ! IF POSSIBLE GIVE A READ TO YERSINIA AND BRUCELLA !

## M.I.S.C.E.L.L.A.N.E.O.U.S

-->MYCOBACTERIA

THIS CHAPTER NEEDS TO BE DONE FULL IN DETAIL ALSO THE TREATMENT !!!

NO NEED TO DO TREATMENT IN REST !

-->ACTINOMYCETES

WHOLE CHAP AND DIFFERENCES B/W A.ISRAIELII AND NOCARDIA

-->MYCOPLASMA PNEUMONIAE

-PROPERIES

-FRIED EGG LIKE COLONY

-WHITE SPUTUM PRODUCING

-EXTRA PULMUNARY MANIFESTATIONS OF M.PNEUMONIAE

-LAB DIAGNOSIS

-->SPIROCHETES

-CLASSIFICATION

-NAMES OF DISEASES

-PRIMARY SECONDARY AND TERTIARY SYPHILLIS IN DETAIL

-CONGENITAL SYPHILLIS

-LAB DIAGNOSIS OF T.PALLIDUM AND LEPTOSPIRA

-STAGES OF LYME DISEASE

-TRANSMISSION

--PATHOGENESIS OF LEPTOSPIRA

-->CHLAMYDIAE

-INCLUSION BODIES

-LAB DIAGNOSIS

-C.TRICHOMATIS IN DETAIL

-->RICKETTSIAE

-DISEASES CAUSED BY EAC SUB TYPE

-WHICH IS NOT TRANSMITTED BY ARTHOPOD BITE

-WHICH IS NOT ZOONOTIC

-R.RICKETSII IN DETAIL \*\* .. ROCKY MOUNTAIN SPOTTED FEVER

### **3)GENERAL VIROLOGY**

NAMING RNA AND DNA VIRUSES

PRIONS

STAGES OF VIRAL GROWTH CYCLE

PERSISTENT VIRAL INFECTIONS

HERD IMMUNITY

## **4)CLINICAL VIROLOGY**

GIVE A READ TO EVERYTHING .. THAT ARE IN THE SYLLABUSS

DO ONLY THE VIRUSES LISTED BELOW .. ALL CAN BE DONE FROM THE SUMMARIES IF U R AWARE OF THE CLINICAL FINDINGS OF EACH .. JUST GIVE A READ TO HEPATITIS FROM THE MAIN TEXT AND CLINICAL FEATURES OF EVERY VIRUS FROM MAIN TEXT

MUMPS ....HERPES.....MEASLES.....INFLUENZA ....

...HEPATITIS....ROTA...CMV....EBV....RUBELLA...POX...HIV....RABIES....PARAINFLUENZA...POLIO...DENGUE..  
..EBOLA

MOST REPEATED ARE HEPATITIS .. MUMPS..DENGUE .. POLIO

## **5)MYCOLOGY**

DELAYED HYPERSENSITIVITY SKIN TEST

GENERAL LAB DIAGNOSIS ON PG 375

Pg 374 PAR AIK PARAGRAPH HAI ABOUT SKIN TEST WO KARNA HAI !

Pg 380 PAR SPIROTRICHOSIS DEKH LENA CUZ OF SCENARIO ABOUT GARDENER HANDLING PRUNE ROSES

Pg 382 PAR COCCIDIOIDES KO TABLE 49-1 SE KARNA

Pg 384 PAR HISTOPLASMA IS V.IMP DUE TO SCENARIO OF BIRD POOP, CHICKEN HOUSE OR BAT INFESTED CAVE

Pg 386 PAR BLASTOMYCOSES KE PROPERTIES MAIN DIFFERENCE HAI B/W ITS YEAST AND THAT OF CRYPTOCOCCUS ( IT IS IMPORTANT)

Pg 389 CANDIDA KA SCENARIO AATA HAI ABOUT DIAPER RASH

TRANSMISSION OF CANDIDA .. ITS NORMAL FLORA PRESENCE AND LAB DIAGNOSIS \*\*\*\* ( REPEATED MANY TIMES )



Pg 392 cryptococcus poora krna, lekin us k text mein aik cheez nahe likhi hui, which is v.imp. fig 50-6 mein india ink prep for cryptococcus. V.imp for mcq.

Pg 393 aspergillosis is imp

## **6)PARASITOLOGY**

-DRAWING CYSTS , EGGS AND TROPHOZOITES OF DIFFERENT PARASITES (ALL)

-DRAWING LIFE CYCLES OF THE FOLLOWING :

ENTAMOEBIA HYSTOLYTICA ...GIARDIA .... PLASMODIUM \*\* ...TRYPANOSOMA CRUZII \* ..TAENIA SOLIUM  
... TAENIA SAGINATA ...SCHISTOSOMA....ENTEROBIUS\*\* ...ASCARIS\*\* ...HOOK WORM\*\*\*

-LAB DIAGNOSIS OF ENTAMEOBA HYSTOLYTICA

-STRING TEST FOR GIARDIA LAMBLIA

-KINYOUN ACID FAST STAIN FOR CRYPTOSPORIDIUM

-SCENARIO OF GREENISH DISCHARGE FROM VAGINA ( T. VAGINALIS)

-PLASMODIUM IN FULL DETAIL

-CAT SCENARIO ( TOXOPLASMA GONDII)

-PNEUMOCYSTIS PATHOGENESIS AND CLINICAL FINDINGS

-DIFFERENCES B/W SCOLEX OF TINEA SAGINATA AND TENIA SOLIUM

-CYSTICERCOSIS

-SCENARIO OF HIKERS DRINKING STREAM WATER ( GIARDIASIS )

-SCENARIO OF SPACE OCCUPYING LESIONS ( TAENIA SOLIUM )

-LONGEST AND SHORTEST TAPEWORM

-DIFFERENCES B/W DIFFERENT SCHISTOSOMA SPECIES

-SWIMMER'S ITCH

-SCENARIO OF PERI ANAL PRURITIS ( ENTEROBIUS)

-SCENARIO OF RECTAL PROLAPSE ( TRICHURIS)

- LARGEST INTESTINAL NEMATODE ( ASCARIS )
- SCENARIO TO PREVENT WORM INFECTION BY WEARING SHOES ( ANCYCLOSTOMA AND NECATOR)
- SCENARIO OF ELEPHANTIASIS (WUCHERERIA )

## 7)IMMUNOLOGY

- DIFFERENCE B/W ACTIVE AND PASSIVE IMMUNITY
- DIFFERENC B/W CELL MEDIATED AND HUMORAL IMMUNITY
- FUNCTIONS OF T CELLS , B CELLS
- FUNCTIONS OF MACROPHAGES\*\*
- DIFFERENCE B/W INNATE AND ADAPTIVE IMMUNITY

-DIFFERENCE B/W T AND B CELLS\*\*

-ORIGIN AND DEVELOPMENT OF T AND B CELLS

-NEGATIVE AND POSITIVE SELECTION\*\*

-RETICULO ENDO THELIAL SYSTEM CELL TYPES \*\*\*

-SUBTYPES OF CD4 POSITIVE T CELLS

-ACTIVATION OF T AND B CELLS

-DRAWING ANTIBODY STRUCTURE (ALL) (59-2 59-3 59-4)

-PROPERTIES IF DIFFERENT IGS ( VERY IMPORTANT)

-PRIMARY AND SECONDARY RESPONSE\*\*

-FUNCTIONS OF ANTIBODIES\*\*

-GRAFT VERSUS HOST REACTION

-CLINICAL ASPECTS OF COMPLEMENT

-ELISA

-HEMAGGLUTINATION TESTS

-COOMBS TEST

-TRANSFUSION REACTIONS

-HYPERSENSITIVITY (WHOLE CHAPTER IS IMPORTANT ... ANYTHING CAN BE ASKED !!!)

**JAZZAKALLAH UL KHAIR !**

**DO REMEMBER ME IN YOUR PRAYERS !**

**DONATE GENEROUSLY , HELP YOUR FELLOWS :)**

**REGARDS**

**AHMAD HASSAN**

**BATCH 39**

**RMC**

**RIFAO**

**RASHIDA IOBAL FINANCIAL AID ORGANIZATION**

**AHMAD HASSAN BATCH 39**