

BSS SYLLABUS

[AHE001] - BSS DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY – [TWO YEARS]

- 1 PAPER1 AHE001-01 COMMUNICATIVE ENGLISH AND COPMPUTER FUNDAMENTALS 1YEAR**
- 2 PAPER2 AHE001-02 CLINICAL BIO CHEMISTRY-1 1 YAER**
- 3 PAPER3 AHE001-03 CLINICAL MICROBIOLOGY -1 & PARASITOLOGY 1YEAR**
- 4 PAPER4 AHE001-04 HEAMATOLOGY, BLOOD BANKING & HISTO PATHOLOGY -1 1YEAR**
- 5 PAPER5 AHE001-05 PRACTICAL -1 1 YEAR**
- 6 PAPER6 AHE001-06 PRACTICAL -2 1 YEAR**
- 7 PAPER7 AHE001-07 PRACTICAL -3 1 YEAR**
- 8 PAPER8 AHE001-08 PRACTICAL -4 1 YEAR**
- 9 PAPER9 AHE001-09 CLINICAL BIO CHEMISTRY – 2 2 YEAR**
- 10 PAPER10 AHE001-10 CLINICAL MICRO BIOLOGY – 3 2 YEAR**
- 11 PAPER11 AHE001-11 HAEMATOLOGY, BLOOD BANKING & HISTOPATHOLOGY – 2 2 YEAR**
- 12 PAPER12 AHE001-12 PRACTICAL - 5 2 YEAR**
- 13 PAPER13 AHE001-13 PRACTICAL – 6 2 YEAR**
- 14 PAPER14 AHE001-14 PRACTICAL – 7 2 YEAR**

[AHE001] – BSS DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY – [TWO YEARS]

[AHE001-01] – COMMUNICATIVE ENGLISH AND COMPUTER FUNDAMENTALS

COMMUNICATIVE ENGLISH

UNIT – I

Communication - communication process - Verbal Communication – Non – verbal Communication - Pros & Cons of Communication - communicative English Exercises.

UNIT- II

Phonetics – Organs of speech – Vowels – Spelling Areas – Consonants – stress – word Accent – The Parts of speech in English.

UNIT – III

Communicative grammar – Classification of Noun and Their functions – Verbs – Symbol –Pronoun – Auxiliary Verbs – Articles – Use of the indefinite article – Use of the definite articles – Tenses – Prepositions – Phrasal verbs and adverb particles – Verbs Patterns and structures.

UNIT – IV

Patterns of Sentences – Direct and indirect speech – Degrees of Comparison – Simple, Complex and compound sentences – Basics of Inter – personal skills – Basics of body language.

COMPUTER FUNDAMENTALS (MS-OFFICE)

UNIT – V

Windows Introduction – Operating System – Desk Top Icons – My Computer, Recycle Bin, Internet Explorer, Network Neighborhood, My documents, working with Windows – How to Create a Folder, Copying and cutting files, Renaming – start Icon – Programs, Favorites, Documents, setting, Find, Run, Shutdown – Application Icons.

UNIT – VI

An Introduction to Word – The word workspace, Starting and quitting Word, Creating and Manipulating various documents, Editing of proofing files, merging documents and macros, How to use Mouse and Menu – working with dialog box – Primary Commands, The Close command, The Close command, The page setup, The Print commands, The exit commands.

Edit Menu Command – The cut, Copy, and Paste commands, The Undo and Repeat Commands, Find and Replace commands- format Commands – The view menu, the Insert menu, the table menu, the window menu.

UNIT – VII

Building a Simple worksheet- Entering Text, entering Values, Entering Dates and Times, Moving around, Scolding Selecting Ranges, Using Menu, Using Tool Bar, Using Tool Bar, Using Shortcut Menu, Changing Entries, Moving Entries, Inserting Deleting Cells – Formatting Basics – Changing Character Style, changing Alignment, Changing Column width, changing Row Height, Sheet Rename, conditional Formatting, Auto Formatting.

Working with Multiple Worksheet – copying entries between workbooks, Moving sheets work books, Deleting sheets, quitting Excel- Opening Existing Workbooks – Simple calculations, Doing arithmetic, Totaling Column of Values, Naming cells and Ranges, Formatting Text – Displaying dollars and cents, Formatting decimal places, Formatting dates, copying style and formats, Formulas that Make Decisions – Using IF function, using the nested IF function, Copying formulas.

Checking spelling, Printing Worksheets, Preview Worksheets, Goal seek, scenarios, Marco, protection- Sorting data, Keeping leading view, Finding records, Adding and deleting records, Filtering records, plotting charts, Sizing and moving charts, Updating charts, changing the charts Type, Using auto format. Creating Marcos, Recording Marcos, running Marcos

UNIT – VII

Basics of Ms office Tools, Ms office Access, Ms office Groove, Ms office one note, Ms office outlook, Ms office power point.

[AHE001-02]- CLINICAL BIO CHEMISTRTY - I

UNIT-1

Over view of Biochemistry: Definition, scope and significance of Biochemistry.

Important discoveries in Biochemistry, An overview of elements, chemical reactions and bio molecules in living organisms

UNIT-2

Concentration units: Avagadro's number, mole, mole fraction, Molarity, Equivalent weight, Normality, Molality, percentage- Properties of water: Molecular structure of water physical properties of water-Colligative properties- physical properties of molecules

UNIT-3

Adsorption: Definition, Freundlich and Langmuir's adsorption isotherm- Application of adsorption-viscosity-Distribution law-Equilibria-Bio Inorganic-Co-ordination compounds-Types of ligands-Uni, bi and polydentate with Examples- Co-ordination number

UNIT-4

Bilepigments- Types, structure and chemical-Nature-Nitrogen: Fixation of atmospheric nitrogen- symbiotic and non-symbiotic-Nitrogen cycle-Environmental pollution by nitrogen compound- phosphorous-Importance of phosphorus compounds in biological system, phosphorous cycle

UNIT-5

Oxygen: Importance of oxygen in biological system-Formation and role of ozone in maintenance of life on earth-Effects of Environmental pollutant on ozone layer- Sulphur and selenium-Importance of compound of sulphur and selenium in biological system

[AHE001-03]-CLINICAL MICROBIOLOGY- 1 & PARASITOLOGY

UNIT-1

Historical development in Bacteriology, Classification of Pathogenic bacteria, General methods of isolation and identification of pathogenic bacteria-Infections associated with following Gram-positive bacteria-Bacillus anthracis. Clostridium, pneumococcus, Coryne bacterium, Streptococcal infections

UNIT-2

Staphylococcal infections- Infections associated with following Gram-negative bacteria-Enterobacteriaceas- Salmonella, Shigella, Klebsiella, proteus, Yersinia and Escheichia

UNIT-3

Vibrio, pseudomonas, Neisseria, Haemophilus, Campylobacter, Bordetella, Brucella-classification and Brief history of protozoa and helminthic infections-mechanism of disease production by parasites

UNIT-4

Etiology, pathogenesis, Clinical diagnosis of following protozoans – Entamoebahistolytica, Giardialamblia, Leishmania, Plasmodium and Cryptosporidium

UNIT-5

Etiology, Pathogenesis, Clinical diagnosis of following Nematodes-Trichonella, Trichuris, Ancylostoma and Wucheriabancrofti

[AHE001-04]- HAEMATOLOGY, BLOOD BANKING &HISTO PATHOLOGY-1

UNIT-1

Specimen Collection And Laboratory Preparations In Hematology-Roution Hematological Test, Hb Estimation, Total eukocyte estimation-total Ery Throcyte Estimation, Differential Leulo Cycte count, Esr, Packed

UNIT-2

Cell Volume-Reticulocyte Count, Platelet Count, Absolute Eosinophil Count, Arnet Count-Schilling Count, Red Cell Indices, Periphery Cell-Morphology-Special Hematological test-Foetal Hemoglobin Estimation, Foetal Red Cell Estimations

UNIT-3

Lupus Erythrocyte Cell Preparation, osmotic Fragility Test-Heinz Bodies Preparation, Bone Marrow Smear Preparation, study of Blood parasites- Interpretation of Lab Findings In Hematology Anemia, Leukemia Abnormal Rbc and WBC Morphology

UNIT-4

Introduction To Homeostasis, Coagulation And Bleeding Disorders-Haematology And Blood Banking- clotting And Bleeding Time Determinations, Coagulation Mechanism, Coagulation Studies-

UNIT-5

Principles of Immuno Haematology, Clinical Significance of Blood Transfusions- Collections And Processing of Blood For Transfusion

Routine Lab Procedures In Blood Bank

[AHE001-05] – PRACTICAL-I

[AHE001-05]-PRACTICAL –I should be conducted based on PAPER -1

BSS RECORD NOTE must be utilized by the student to complete this Practical.

[AHE001-06] – PRACTICAL -II

[AHE001-06] – PRACTICAL – II should be conducted based on PAPER 2

BSS RECORD NOTE must be utilized by the student to complete this Practical.

[AHE001-07] – PRACTICAL – III

[AHE001-07]- PRACTICAL – III should be conducted based on PAPER – 3

BSS RECORD NOTE must be utilized by the student to complete this Practical.

[AHE001-08] – PRACTICAL – IV

[AHE001-08]-PRACTICAL – IV should be conducted based on PAPER – 4

BSS RECORD NOTE must be utilized by the student to complete this Practical.

[AHE001-09] – CLINICAL BIO CHEMISTRY –II

UNIT-1

Hydroxy Acids and Dicarboxylic Acid-structure & properties of Hydroxy

Acids: Lactic acid, Citric acid and Isocitric acid Dicarboxylic acid: Maleic and Fumaric acid Ketoacid: Pyruvic, -Ketoglutaric, Oxaloacetic acid

UNIT-2

AMINES: Classification, properties, Amino functional group- Basicity of amines, acylation-Reaction with HNO_2 & Schiff's base formation-Distinguishing reaction of primary, secondary and tertiary amines

UNIT-3

Heterocyclic Compounds- Definition, classification with examples, structure and biological importance of Furan, Pyrrole, Thiophene, Pyridine, Pyran, Thiazole, Pyrimidine, Purine, Indole, Imidazole, Quinoline and Isoquinoline –Basicity of pyrrole and pyridine

UNIT-4

Terpenes: Definition, Isoprene rule, classification, isolation, structure and biological importance of menthol, camphor, farnesol, phytol, lanosterol, lycopene and dolichols

UNIT-5

Steroids: Basic ring structure in steroids-Structure and biological importance of cholesterol, Phytosterols, ergosterol, cortisol, β -estradiol, testosterone and Aldosterone- Bile acids [Mono, Di & Tricholic acids]

[AHE001-10] – CLINICAL MICRO BIOLOGY – II

UNIT-1

Infections associated with Mycoplasma, Mycobacterium tuberculosis and Mycobacterium leprae

UNIT-2

Spirochetes -Treponema, Borrelia and Leptospira.

Actinomycetes-Rickettsiae and Chlamydiae

UNIT-3

Nosocomial infections and Zoonotic diseases, Sterilization, disinfection and antimicrobial agents, culturing Techniques and sensitivity Testing a

UNIT-4

MPN count for water Quality-Etiology, Pathogenesis, clinical diagnosis of following Cestodes –Tinea, Diphylobotrium, Cysticercus and Echinococcus

UNIT-5

Etiology, Pathogenesis, clinical diagnosis of following Trematodes –Schistosoma, Medical entomology.

[AHE001-11] – HAEMATOLOGY, BLOOD BANKING & HISTOPATHOLOGY –II

UNIT-1

Abo System, Rh System Sub Grouping, Compatibility Testing, Coombs Testing, Antibody Titration and D Testing-histopathology of Liver –kidney- Adrenal –Ovary –Testes –Ocular Parasitology –Introduction –Definition – Classification – Acantamoeba –Toxoplasma –Toxocara Filaria –Cysticercus

UNIT-2

Echinococcus -Phthirus –Common Parasites –Clinical Importance – Diagnosis- determination of Hemoglobin content – Total Rbc – Wbc And Platelet Count –Est –Calculation of Red Blood Cell Indices Mcv –Vch Etc. examination of Blood For Parasites

UNIT-3

Peripheral Blood Smear Examination –Identification of Anaemias –Fibrinolysis – Bleeding Time –clotting Time –PtEtc –routine Examination of Urine –Physical – Chemical And Microscopic Examination of Urine –Rapid Chemical Tests For Urine

UNIT-4

Introduction To Clinical Pathology & Histo Pathology-Microscopic Examination of Semen –Specimen Collection –Lab Investigations –Examination for Presence of Semen –Sperm Motility And Sperm Count- Collection of Faecal Specimen Fluid – Physical

UNIT-5

Chemical And Microscopic Examination For Stool –Csf Examination – Serous Fluid – Synovial Fluid –Gastric Juice, Etc-clinical Significance of Histopathology –Study of Common Instruments In Histology And Their Operation-Tissue Processing – Fundamentals of Microscopic

[AHE001-12] – PRACTICAL – V

[AHE001-12]- PRACTICAL – V should be conducted based on PAPER – 9

BSS RECORD NOTE must be utilized by the student to complete this Practical.

[AHE001-13] – PARCTICAL –VI

[AHE001-13]-PRACTICAL – VI should be conducted based on PAPER – 10

BSS RECORD NOTE must be utilized by the student to complete this Practical.

[AHE001-14]-PRACTICAL –VII

[AHE011-14]-PRACTICAL – VII should be conducted based on paper -11

BSS RECORD NOTE must be utilized by the student to complete this Practical.

