

FIRST
SEMESTER

COURSE NAME : POST GRADUATE DIPLOMA IN BLOOD BANK TECHNOLOGY AND MANAGEMENT

COURSE CODE : BB

SEMESTER : FIRST

SUBJECT TITLE : BLOOD PHYSIOLOGY AND DONOR MANAGEMENT

SUBJECT CODE : 8011

TEACHING AND EXAMINATION SCHEME:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER	TH	TEST	PR	OR	TW
04	-	06	03	80	20	50#	-	50@

Rationale

The principles of Donor Management and criteria for conducting various types of blood donation camps have wide applications in Transfusion Medicine. Collecting healthy voluntary blood, therefore, forms one of the indispensable bases for Transfusion Medicine.

Objective

- 1) To understand application of basic donor management.
- 2) To impact the knowledge of conducting various types of blood drives with various strategies for donor motivation.

Detail Contents

Chapter	Name of the Topic	Hours	Marks
	Basic Of Transfusion Medicine		
1.	Introduction -Physiology and Chemistry of blood	4	5
2.	Blood and it's constituents-RBC,WBC and Platelets-CBC	4	5
3.	Blood Components and therapeutic use in various conditions	4	5
4.	Bone marrow and stem cells	4	5

Donor Management/

5.	Introduction donor management-, selection criteria, checkup, Donor counseling,	4	5
6.	Medico-legal Aspects,-Right to information, Donor Consent, reports, Leave letters, certificates	4	5
7.	Marketing-Converting replacement donors to Voluntary donors, Rational use of blood components	4	5
8.	College drives	4	5
9.	Corporate Approach	4	5

10.	Donor Motivation	4	5
11.	Converting Relative Donors to Voluntary Donors	4	5
12.	Donor Screening, Donor Room Protocol, Qualifying Test for Blood Donation	4	5
13.	Criteria For Donor Suitability / Selection and Selection Of Bags For Collection Of Blood	4	5
14.	Blood Collection – Solutions & Method For Preparing Phlebotomy Site, Test Tube Samples– Method of Accurately Relating Product To Donor	4	5
15.	Blood Collection – Procedure, Blood Donation after Care and Management of adverse Reaction in a Donor	4	5
16.	Blood Collection-, Therapeutic Phlebotomy, Autologous Blood,	4	5
	TOTAL	64	80

LIST OF PRACTICALS DONOR MANAGEMENT

Name of the Experiment

1. Procedure for Complete Blood Count and report interpretation
2. Study of Donor Room Protocol, Donor Screening
3. Study of Qualifying Test For Blood Donation
4. Study of Donor Screening- Do's and Don'ts
5. Study of Criteria For Donor Suitability / Selection
6. Study of Selection Of Bags For Collection Of Blood
7. Study of Blood Collection – Solutions & Method For Preparing Phlebotomy Site
8. Study of Test Tube Samples – arrangement and requirement
9. Study of Blood Collection – Method Of Accurately Relating Product To Donor
10. Study of Blood Collection – Blood Collection Procedure
11. Study of Blood Collection- Blood Donation After Care
12. Study of Blood Collection Management Of adverse Reaction In A Donor
13. Study of Blood Collection- Collection Of Autologous Blood From The Donor
14. Study of Outdoor Camps – Organisation – Identifying needs
15. Study of Corporate camps – Management
16. Study of Social camps– Management
17. Study of College camps– Management

REFERENCE BOOKS:

Sr. No.	Name Of The Books	Author
1	National Guide book on Blood Donor Motivation	DGHS
2	Blood Transfusion Services –a practical manual on technical and clinical aspects	Kabita Chatterjee
3	Clinical use of Blood	WHO manual
4	Clinical Hematology	Dacie Lewis

COURSE NAME : POST GRADUATE DIPLOMA IN BLOOD BANK TECHNOLOGY AND MANAGEMENT

COURSE CODE : BB

SEMESTER : FIRST

SUBJECT TITLE : BLOOD COMPONENTS

SUBJECT CODE : 8012

TEACHING AND EXAMINATION SCHEME:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER	TH	TEST	PR	OR	TW
04	-	06	03	80	20	50#	-	50@

Rationale

The principles of Instrumentation and blood component preparation for optimal yield of the product have wide applications in Transfusion Medicine. Proper methodology and instrumentation play vital role blood component preparation thus forming the bases for Transfusion Medicine.

Objective

- 1) To understand application for various blood components and optimal values.
- 2) To impart the knowledge of quality control and instrumentation.

Detail Contents

Chapter	Name of the Topic	Hours	Marks
1.	Preparing of blood components	4	5
2.	Preparing Washed Packed cells	5	5
3.	Preparing Cryoprecipitate and cryo depleted plasma	5	5
4.	Preparing semi packed cells and packed cells	5	5
5.	Preparing random donor platelets	5	5
6.	Learning Cold Centrifuge Operating Procedure	5	6
7.	Learning Laminar Flow operating procedure	5	5
8.	Learning Irradiation procedure	5	6
9.	Learning Blood Component Separation –PRP Method For Separation	5	10
10.	Learning Blood Component Separation-Buffy Coat Method For Separation	5	4
11.	Learning Operating Procedure of Optipress II	5	8
12.	Understanding Leuco-Reduced Blood Components and Stem cell harvest	5	8
13.	Learning Aphaeresis	5	8
	Total	64	80

PRACTICALS:: Components

Name of the Experiment

1. Procedure for Cold Centrifuge Operation
2. Procedure for Laminar Flow operation
3. Procedure for Separation of Blood Component – PRP Method
4. Procedure for Blood Component Separation-Buffy Coat
5. Operating Procedure of Optipress II
6. Preparation of Leuco-Reduced Blood Components
7. Procedure for Blood Irradiation
8. Observe Plateletpheresis – Plateletpheresis Procedure
9. Observe Plateletpheresis Procedure On The Baxter CS3000 Cell Separator
10. Observe Plateletpheresis Procedure on the MCS3P Cell Separator
11. Observe Plateletpheresis procedure on Cobe Cell Separator
12. Observe Plateletpheresis procedure on Amicus Cell Separator
13. Perform Therapeutic Phlebotomy

REFERENCE BOOKS:

SR. NO	NAME OF THE BOOKS	AUTHOR
1	WHO GUIDELINES TO TRANSFUSION MEDICINE	WORLD HEALTH ORGANIZATION
2	AABB TECHNICAL MANNUAL	AMERICAN ASSOCIATION OF BLOOD BANKS
3	DRUGS AND COSMATICS ACT1940	VIJAY MALLIK
4	NACO STANDERDS	NATIONAL AIDS CONTROL ORGANIZATION
5	BLOOD TRANSFUSION TECHNICAL MANUAL	DIRECTOR GENERAL HEALTH SERVICES
6	NATIONAL GUIDE BOOK ON BLOOD DONOR MOTIVATION	DIRECTOR GENERAL HEALTH SERVICES
7	GUIDELINES TO QUALITY SYSTEMS	YOGINI PATEL AND K BHARGAVA

8	BLOOD TRANSFUSION SERVICES –A PRACTICAL MANUAL ON TECHNICAL AND CLINICAL ASPECTS	KABITA CHATTERGEE
9	CLINICAL USE OF BLOOD	WORLD HEALTH ORGANIZATION
10	BLOOD COMPONENT PREPARATION	CHANDRA VISHWANATHAN AND M V KAMATH

COURSE NAME : POST GRADUATE DIPLOMA IN BLOOD BANK TECHNOLOGY AND MANAGEMENT

COURSE CODE : BB

SEMESTER : FIRST

SUBJECT TITLE : IMMUNOHEMATOLOGY

SUBJECT CODE : 8013

TEACHING AND EXAMINATION SCHEME:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER	TH	TEST	PR	OR	TW
04	-	06	03	80	20	50#	-	50@

Rationale

The principles of Blood grouping, antibody screening, cross mating and criteria for blood compatibility in various conditions have wide

Applications in Transfusion Medicine. Meticulous and sequential learning of these processes minimizes or eliminates transfusion complications and , forms one of the indispensable bases for Transfusion Medicine.

Objective

- 1) To understand application of Immunohematology.
- 2) To impact the knowledge of various transfusion complications.

Detail Contents

Sr. No	Title	Hours	Marks
1	Introduction to Blood Group and Rh system	5	7
2	Daily Quality Control of ABO , Rh D Blood Group Regents & Preparation of Red Cell Suspensions and Papain cystein	5	7
3	Sample reception –labeling and entry, BO Group, Rh D and Du Typing, Antigen Typing – Indirect, Direct Anti-globulin	5	7
4	Test, Reading, Grading and Recording Results	5	7
5	Antibody Identification, Antibody Titration	5	7
6	Labeling of Blood Bags and Blood Components	5	6
7	Selection of units for cross matching, Rack Set up, Saline	5	6
8	Cross match, Saline Replacement for Rouleaux, Enzyme Cross-match, Immediate-Spin Cross-match, Pre-warm Technique,	5	8
9	Anti-globulin Cross-Match	6	5

10	Transfusion Reaction Work-up	6	10
11	Issue of Blood and Blood Components	6	5
12	Issue of Factor VIII Deficient Plasma to NPFC, Disposal of Reactive Bags, its components, non-reactive buffy coat units and reports in Red Cell Laboratory	6	5
TOTAL		64	80

PRACTICAL:

Name of the Experiment

1. Preparation of Red Cell Suspensions and daily Quality Control of ABO & Rh D Preparation of Papain cystein and Blood Group Regents
2. Performing ABO Blood Group
3. Performing Antigen Typing – Indirect
4. Performing Direct Anti-globulin Test
5. Performing Antigen Typing – Direct
6. Reading, Grading and Recording Results
7. Performing Antibody Identification
8. Performing Antibody Titration
9. Performing Anti-globulin Cross-Match
10. Study of Labelling of Blood Bags and Blood Components
11. Study of Storage of Blood and Blood Components
12. Study of Inventory of Blood Bags and Blood Components
13. Study of Selection of units for cross matching
14. Study of Testube Rack Set up
15. Performing Saline Cross-match
16. Performing Saline Replacement for Rouleaux
17. Performing Enzyme Cross-match
18. Performing Immediate-Spin Cross-match
19. Performing Pre-warm Technique
20. Performing Transfusion Reaction Work-up
21. Issue of Blood and Blood Components and Issue of Factor VIII Deficient Plasma to National Plasma Fractionation Centre
22. Bilirubin Testing
23. Disposal of Reactive Bags, its components, non-reactive buffy coat units
24. Reports in Red Cell Laboratory

REFERENCE BOOKS:

SR. NO	NAME OF THE BOOKS	AUTHOR
1	WHO GUIDELINES TO TRANSFUSION MEDICINE	WORLD HEALTH ORGANIZATION
2	AABB TECHNICAL MANNUAL	AMERICAN ASSOCIATION OF BLOOD BANKS
3	DRUGS AND COSMATICS ACT1940	VIJAY MALLIK
4	NACO STANDERDS	NATIONAL AIDS CONTROL ORGANIZATION
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**SECOND
SEMESTER**

COURSE NAME : POST GRADUATE DIPLOMA IN BLOOD BANK TECHNOLOGY AND MANAGEMENT

COURSE CODE : BB

SEMESTER : SECOND

SUBJECT TITLE : REGULATORY AFFAIRS

SUBJECT CODE : 8014

TEACHING AND EXAMINATION SCHEME:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER	TH	TEST	PR	OR	TW
02	-	-	03	80	20	-	-	-

Rationale

The principles of FDA, DGHS and National Standards in Transfusion Medicine have wide applications in many branches of Transfusion Medicine. Regulatory acts, therefore, forms one of the indispensable bases for most of the Transfusion Medicine

Objective

- 1) To understand application of basic regulatory clauses in Transfusion Medicine.
- 2) To impact the knowledge regarding regulatory rules to be followed in Transfusion Medicine.

Detail Contents

SR. NO.	TOPIC	HOURS	MARKS
1	Documentation in Transfusion Medicine Scope, terms and definitions in Transfusion Medicine, Quality Policy, Management requirements, Organization and management, Quality management system-Regulatory Rules –FDA, NACO, DGHS, Bio Waste Disposal, Document control, Review of contracts, Examination by referral laboratories, External services and supplies, Advisory services, Resolution of complaints, Identification and control of nonconformities, Corrective action, Preventive action, Continual improvement, Quality and technical records, Internal audits, Management review, Computerisation and Hospital Transfusion Committee.	6	20
2	Technical requirements Personnel, Accommodation and environmental conditions, Laboratory equipment, Pre-examination procedures, Examination procedures, Assuring quality and examination procedures, Post examination procedures, Reporting of results, Work sheets, registers, forms and formats, Demonstration of Quality check and trouble shooting	6	10

3	Standard Operating Procedures- Donor room, Quality Assurance, Red Cell Serology, Transfusion Transmitted Diseases, Component laboratory, Blood Bank Records, Administrative Protocols, Regulatory Acts	8	10
4	Legal and Ethical aspects FDA Rules, DGHS Regulations, NACO Standards, Bio hazard Waste Disposal Act, Ethics committee, National blood policy and recent advances in the policy-focus on Quality Systems	12	40
TOTAL		32	80

REFERENCE BOOKS:

SR. NO	NAME OF THE BOOKS	AUTHOR
1	WHO GUIDELINES TO TRANSFUSION MEDICINE	WORLD HEALTH ORGANIZATION
2	AABB TECHNICAL MANNUAL	AMERICAN ASSOCIATION OF BLOOD BANKS
3	DRUGS AND COSMATICS ACT1940	VIJAY MALLIK
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COURSE NAME : POST GRADUATE DIPLOMA IN BLOOD BANK TECHNOLOGY AND MANAGEMENT

COURSE CODE : BB

SEMESTER : SECOND

SUBJECT TITLE : TRANSFUSION TRANSMITTED INFECTIONS AND BIOHAZARDS

SUBJECT CODE : 8015

TEACHING AND EXAMINATION SCHEME:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER	TH	TEST	PR	OR	TW
04	-	08	03	80	20	50#	-	50@

Rationale

- 1) The principles of TTD Serology and factors affecting the quality of reports
- 2) Safe blood transfusion

Objective

- 1) To understand application To understand application of basic principles serology
- 2) To impact the knowledge regarding Laboratory diagnosis and quality assurance in common infectious diseases.

Detail Contents:

Sr. No.	Topic	HOURS	MARKS
1	Basic Principles of Elisa	8	8
2	Universal precautions –Bio waste Management rules from Ministry of environment control	8	8
3	Sample Receiving – TTI, M.P. Staining, VDRL Test For syphilis, Bilirubin Testing and SGPT	6	8
4	Washing of Elisa Plate –Manual technique, procedure to read the optical density of different Elisa	6	8
5	Anti HCV, Anti HIV and HbsAg,P24 antigen and Anti HBc - Semi automated technique Testing	6	8
6	Operational procedure of Abbott- fully automated testing-TTD.	6	8
7	Western Blot Test	6	8
8	PCR	6	8
9	Discard of Blood Units and Documentation of records	6	8
10	Malaria and VDRL testing	6	8
Total		64	80

PRACTICALS:**Name of the Practical**

1. Study of Sample Receiving - TTI
2. Performing M.P. Staining
3. Performing VDRL Test For Syphilis
4. Procedure for Washing of Elisa Plate
5. Procedure for reader to read the optical density of different Elisa tests run
6. Performing Anti HCV Testing
7. Performing Anti HIV Testing
8. Performing HBsAg Testing
9. Procedure of Abbott AxSYM Plus for analysis of different types of Enzyme Immuno-assays.
10. Performing Western Blot Test
11. Performing PCR
12. Study of ECI Technique

REFERENCE BOOKS:

SR. NO	NAME OF THE BOOKS	AUTHOR
1	WHO GUIDELINES TO TRANSFUSION MEDICINE	WORLD HEALTH ORGANIZATION
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**COURSE NAME : POST GRADUATE DIPLOMA IN BLOOD BANK TECHNOLOGY
AND MANAGEMENT**

COURSE CODE : BB

SEMESTER : SECOND

SUBJECT TITLE : TOTAL QUALITY MANAGEMENT

SUBJECT CODE : 8016

TEACHING AND EXAMINATION SCHEME:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER	TH	TEST	PR	OR	TW
04	-	06	03	80	20	50#	-	50@

Rationale

The principles of implementation of quality assurance in various aspects of Transfusion Medicine

Objective

- 1) To provide optimal concentration and value for minimal volume of transfusion.
- 2) To impart the knowledge of quality control , analytical methods and it's inferences
- 3) ISO 15189 Standards

Detail Contents:

Theory	Total Quality Systems	Hours	Marks
1	Quality Assurance Hb &PCV, Antisera	8	12
2	Quality Assurance - Temperature Records, Sterility Testing	8	12
3	Quality Assurance Blood Components	8	12
4	Cryoprecipitate-AHF, Fibrinogen,, Red Cell and WBC contamination	10	18
5	Quality Control of Cell Washer - Washing Procedure	8	3
6	Central Monitoring System (Temperature) CMS	4	3
7	Calibration of all BB Instruments &Equipment Maintenance	6	5
8	Internal Audit Protocols	12	15
Total		64	80

PRACTICALS

Total Quality Systems
Testing Hb & PCV, Antisera
Monitoring of Temperature Records & Sterility Testing
Quality Assurance Blood Components
Testing of Cryoprecipitate-AHF, Fibrinogen,, Red Cell and WBC contamination
Monitoring of Cell Washer - Washing Procedure
Central Monitoring System (Temperature) CMS
Calibration of all Blood Bank Instruments & Equipment Maintenance like Laboratory Centrifuge, Blood Storage Fridge-4 Degrees Centigrade, Deep Fridge Negative 40 Degrees Centigrade, Laminar Air Flow, Quick Thawing Bath 8 /37 Degrees Centigrade, Platelet Agitator

Internal Audit Protocols:

- Management requirements
- Organization and management
- Quality management system
- Document control
- Review of contracts
- Examination by referral laboratories
- External services and supplies
- Advisory services

Resolution of complaints

- Identification and control of nonconformities
- Corrective action
- Preventive action
- Continual improvement
- Quality and technical records
- Internal audits
- Management review
- Technical requirements
- Personnel
- Accommodation and environmental conditions
- Laboratory equipment
- Pre-examination procedures
- Examination procedures
- Assuring quality and examination procedures
- Post examination procedures
- Reporting of results
- Annexure A List of documents
- Annexure B List of equipment calibration
- Annexure C List of Standard operating procedures (SOPs)
- Annexure D – List of records
- Annexure E – List of Text Books

REFERENCE BOOKS:

SR. NO	NAME OF THE BOOKS	AUTHOR
1	WHO GUIDELINES TO TRANSFUSION MEDICINE	WORLD HEALTH ORGANIZATION
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COURSE NAME : POST GRADUATE DIPLOMA IN BLOOD BANK TECHNOLOGY AND MANAGEMENT

COURSE CODE : BB

SEMESTER : SECOND

SUBJECT TITLE : DEVELOPMENT OF LIFE SKILLS

SUBJECT CODE :

TEACHING AND EXAMINATION SCHEME:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER	TH	TEST	PR	OR	TW
03	-	02	-	-	-	-	-	50@

Rationale

This subject is classified under human science subject. It is intended to develop the abilities of the students to work in a group, manage groups, search the required information in the group and manage the task in group effectively and efficiently.

Objective

- 1) To provide optimal concentration and value for minimal volume of transfusion.
- 2) To impact the knowledge of quality control , analytical methods and it's inferences
- 3) Biohazard waste management and records in Transfusion Medicine.

Detail Contents:

Sr. No.	Title	Hours
1	Leadership and society	5
2	INTER PERSONAL RELATION Sources of conflict, Resolution of conflict, Ways to enhance interpersonal relations.	5
3	Frustration:- Causes & Remedies	5
4	Oral communication:-	5
5	Listening skill:- Active Listening, Kinds of listening, Barriers to good listening.	5

6	Working in Teams UNDERSTAND AND WORK WITHIN THE DYNAMICS OF A GROUPS. TIPS TO WORK EFFECTIVELY IN TEAMS, ESTABLISH GOOD RAPPOR, INTEREST WITH OTHERS AND WORK EFFECTIVELY WITH THEM TO MEET COMMON OBJECTIVES, TIPS TO PROVIDE AND ACCEPT FEEDBACK IN A CONSTRUCTIVE AND CONSIDERATE WAY , LEADERSHIP IN TEAMS, HANDLING FRUSTRATIONS IN GROUP.	5
7	Stress Management In Group:- Region for stress development. Study of group behavior towards stress development & method to control it.	5
8	Ethics	5
9	SWOT Analysis – Concept, How to make use of SWOT.	8
Total		48

REFERENCE BOOKS:

Implementation Strategy

1. Only Licenced Blood Banks With Component Labs Are Eligible To Apply
2. Since The Subject Is Practical Oriented, More Emphasis Should Be Given On Clubbing The Theory Topics With Practical
3. Blood Bank And Laboratory Should Be Equipped To Accommodate The Batch Of Students, So That They Get More Practice
4. Internet Facility Should Be Properly Managed Under The Supervision Of Concerned Teacher
5. Field Visit/ Report To The Hi-Tech Blood Banks And Blood Drives Should Be Supervised And Evaluated By Subject Teacher

List of Assignment:

- 1) SWOT analysis:- Analyse yourself with respect to your strength and weaknesses, opportunities and threats. Following points will be useful for doing SWOT.
 - a) Your past experiences,
 - b) Achievements,
 - c) Failures,
 - d) Feedback from others etc.
- 2) Form a group of 5-10 students and do a work for social cause e.g. tree plantation, blood donation, environment protection, camps on awareness like importance of cleanliness in slump area, social activities like giving cloths to poor etc.(One activity per group)
- 3) Deliver a seminar for 10-12 minutes using presentation aids on the topic given by your teacher.
- 4) Watch/listen an informative session on social activities. Make a report on topic of your interest using audio/visual aids. Make a report on the programme
- 5) Conduct an interview of a personality and write a report on it.
- 6) Discuss a topic in a group and prepare minutes of discussion. Write thorough description of the topic discussed

Note: - Please note that these are the suggested assignments on given contents/topic. These assignments are the guide lines to the subject teachers. However the subject teachers are free to design any assignment relevant to the topic. The **term work** will consist of any eight assignments.

MINI PROJECT ON TASK MANAGEMENT. DECIDE ANY TASK TO BE COMPLETED IN A STIPULATED TIME WITH THE HELP OF TEACHER. WRITE A REPORT CONSIDERING VARIOUS STEPS IN TASK MANAGEMENT.

LEARNING RESOURCES:

Sr. No	Title of the book	Author	Publisher
1	Adams Time management	Marshall Cooks	Viva Books
2	Basic Managerial Skills for All	E.H. Mc Grath , S.J.	Pretice Hall of India, Pvt Ltd
3	Body Language	Allen Pease	Sudha Publications Pvt. Ltd.
4	Creativity and problem solving	Lowe and Phil	Kogan Page (I) P Ltd
5	Decision making & Problem Solving	by Adair, J	Orient Longman
6	Develop Your Assertiveness	Bishop , Sue	Kogan Page India
7	Make Every Minute Count	Marion E Haynes	Kogan page India
8	Organizational Behavior	Steven L McShane and Mary Ann Glinow	Tata McGraw Hill
9	Organizational Behavior	Stephen P. Robbins	Pretice Hall of India, Pvt Ltd
10	Presentation Skills	Michael Hatton (Canada – India Project)	ISTE New Delhi
11	Stress Management Through Yoga and Meditation		Sterling Publisher Pvt Ltd .
12	Target setting and Goal Achievement	Richard Hale ,Peter Whilom	Kogan page India
13	Time management	Chakravarty, Ajanta	Rupa and Company
14	Working in Teams	Harding ham .A	Orient Longman
15	Organisational Behavior	Fred Luthans	--
16	Learning to learn	Kenneth a kiewra, Nelson F. Dubois	--
17	Basic managerial skills for all	E. H. Megrath	--
18	Independent study techniques	P. D. Kulkarni & B. B. Sharama	--

INTERNET ASSISTANCE

1. <http://www.mindtools.com>
2. <http://www.stress.org>
3. <http://www.ethics.com>
4. <http://www.coopcomm.org/workbook.htm>
5. <http://www.mapfornonprofits.org/>
6. <http://www.learningmeditation.com> <http://bbc.co.uk/learning/courses/>

Mandatory Blood Bank Instruments required for PG BBTM Course

Blood Bank Equipments required for PG BBTM course

Test tubes, racks, Auto pippets 25,50,100,1000UL

UPS-For all machines

Laboratory CENTRIFUGE

MICROSCOPE

INCUBATOR-37 Degrees centigrade

BLOOD COLLECTION MONITOR

BLOOD STORAGE FRIDGE-4 Degrees centigrade

DEEP FRIDGE Negative 40 Degrees centigrade

LAMINAR AIR FLOW

QUICK THAWING BATH 8 /37 Degrees centigrade

PLATELET AGITATOR

PLATELET INCUBATOR 22 Degrees centigrade

MICROPLATE WASHER

MICROPLATE READER

WEIGHING BALANCE

TUBE SEALERS

DRY BATH-37 Degrees centigrade

AUTOCLAVE

ROTATORY SHAKER

MICROSCOPE

CRYOFUGE-Cold b bag centrifuge

OVEN

Three part Hematology Analyzer

BLOOD BANK REGISTERS, FORMS & FORMATS. mandatory for FDA

FACULTY QUALIFICATION & EXPERIENCE REQUIREMENT

MD PATHOLOGY_3 years as BB In charge or MD Transfusion Medicine

BB Sr Tech/Tech Supervisors-8 years/5years respectively in Blood bank

Post Graduate Scientists -5 years in Immunohematology and /or related fields

Demonstrators for Practicals

BSc, PG DMLT/PG BBTM –One year - Blood bank experience.