THE TAMIL NADU Dr.M.G.R.MEDICAL UNIVERSITY, CHENNAI-600 032.

FINAL M.B.B.S. DEGREE COURSE (NON-SEMESTER) REGULATIONS – 2005

CONTENTS

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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY CHENNAI

REGULATIONS FOR THE BACHELOR OF MEDICINE AND BACHELOR OF SURGERY DEGREE COURSE

In exercise of the powers conferred by Section 44 of the Tamil Nadu Dr. M.G.R. Medical University, Chennai Act 1987 (Tamil Nadu Act 37 of 1987) the Standing Academic Board of the Tamil Nadu Dr. M.G.R. Medical University hereby makes the following regulations.

SHORT TITLE AND COMMENCEMENT

These Regulations shall be called "REGULATIONS FOR THE THIRD M.B.B.S. DEGREE COURSE (NON-SEMESTER) OF THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI".

These regulations are applicable to the students who are admitted to the First MBBS degree course from the academic year 2005-2006 onwards and promoted to III MBBS Degree Course .

These regulations are subject to modification as made by the Standing Academic Board from time to time.

I. GENERAL OBJECTIVES AND TEACHING APPROACH :

1. Graduate Medical curriculum is oriented towards training students to undertake the responsibilities of a general practitioner who is capable of looking after the preventive, promotive, curative and rehabilitative aspects of Medical care.

2. With a wide range of career opportunities available today a graduate has a wide choice of career opportunities. The graduate training should be broad based and provide the essential knowledge and skills required for basic health care in our country.

3. To undertake the responsibilities of various service situations, it is essential to provide adequate placement training tailored to the needs of such services. To avail of opportunities and engage in professional activities the graduate shall endeavour to acquire basic training in different aspects of medical care.

4. The importance of the community aspects of health care and of rural health care services is to be emphasized by exposure to such experiences in all the three phases of graduate medical education and training. This has to be further intensified by providing exposure to field practice areas and training during the internship period. The aim of the period of rural training during internship is to enable the fresh graduates to function effectively under such settings.

5. The educational experience should emphasize health and community orientation instead of only disease and hospital orientation or being concentrated on curative aspects.

6. Enough experience must be provided for self learning. The methods and techniques that would ensure this must become a part of the teaching – learning process.

7. The medical graduate of modern scientific medicine shall endeavour to become of functioning independently in both urban and rural environments. He / She shall endeavour to master the fundamental aspects of the subjects taught and all common problems of health and disease avoiding unnecessary details of specialization.

8. The importance of social factors in relation to the problem of health and disease should receive proper emphases through out the course. To achieve this purpose the educational process should also be community based rather than only hospital based. The importance of population control and family welfare planning should be emphasized throughout the period of training.

9. Adequate emphasis is to be placed on cultivating logical and scientific habits of thought, clarity of expression and independence of judgement, ability to collect and analyse information and to correlate the facts.

10. The educational process should be placed in a historical background as an evolving process and not merely as an acquisition of a large number of disjointed facts without a proper prospective. The history of Medicine with reference to the evolution of medical knowledge both in this country and in the rest of the world should form a part of this process.

11. Lectures alone are generally not adequate as a method of training and a means of transferring information and are even less effective at skill development and in generating the appropriate attitudes. Every effort should be made to encourage the use of active methods related to demonstration first hand experience. Students shall be encouraged to learn in small groups through peer interaction and to gain maximal experience through contact with patients and the communities in which the patients live. While the curriculum objectives often refer to areas of scientific knowledge, they are best taught in a setting of clinical relevance with hands on experience for the students to assimilate this knowledge and make it a part of their own working skills.

12. The Graduate medical education in clinical subjects should be based primarily on coaching in the wards and in outpatient and emergency departments as well as within the community including peripheral health care institutions. The wards and out-patient departments should be suitably planned to provide training to graduates in small groups.

13. Clinics should be organized in small groups of preferably not more than 10 students so that a teacher can give personal attention to each student with a view to improving his skill and competence in handling of patients.

14. Proper records of the work should be maintained which will form a basis for the student's internal assessment. They should be available to the inspectors at the time of inspection of the college by the Medical Council of India.

15. Maximal efforts have to be made of encourage integrated teaching between traditional subject areas using a problem based learning approach starting with clinical or community cases and exploring the

relevance of various preclinical and paraclinical disciplines in both understanding and resolving a problem. Every attempt must be made to avoid compartmentalization of disciplines and to achieve both horizontal and vertical integration throughout the M.B.B.S. Course.

16. Every attempt is to be made to encourage students to participate in group discussions and seminars to enable them to develop personality, character, expression and other faculties which are necessary for a medical graduate to function either in solo practice or as a team member / leader when he begins his independent career. A discussion group should not have more than 20 students.

17. Faculty members should avail of modern educational technology while teaching the students. To attain this objective Medical Education Units / Departments should be established in all medical colleges for faculty development and providing learning resource material to teachers.

18. To derive maximum advantage out of this revised curriculum the vacation period of students in one calendar year should not exceed one month during the 41/2 years of Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) Degree Course.

II. COURSE OF STUDY

1. **Duration :** Every M.B.B.S. student shall undergo a period of certified study extending over 4 1/2 academic years followed by one year of Compulsory Rotating Resident Internship. After completing the first two phases of the course comprising a minimum period of 2 ½ academic years, the student shall commence the Third Phase of the Course. The Third M.B.B.S. consists of two academic years and is divided into two parts of one year each.

2. **Working Days :** Each academic year shall consist of approximately 240 teaching days. Each day shall comprise of 8 college working hours including one hour interval. The clinical posting shall be done in the forenoon session. Rest of the teaching hours should be divided between didactic lectures, clinical demonstrations, seminars, symposia, group discussions, etc., in various subjects.

3. **Curriculum :** During phase III of the M.B.B.S. course - the Clinical subjects of Medicine, Paediatrics, Surgery, Ophthalmology, Otorhinolaryngology, and Obstetrics & Gynaecology are taught besides community medicine.

Part I :

At the end of one year of study in phase III, the candidate shall be examined in three subjects namely Ophthalmology, Otorhinolaryngology, and Community Medicine in the part I examination of III M.B.B.S.

Part II :

At the end of 3 ½ years of study in phase II and phase III, the candidate shall be examined in four subjects namely Medicine, Surgery, Obstetrics & Gynaecology and Paediatrics in the part II examination of III M.B.B.S.

The details of the curriculum and syllabi prescribed for the subjects of the III M.B.B.S. degree course are as specified in these regulations.

4. **Record Note Books :** Every student must maintain a record of the practical / clinical work assigned to him / her in the record note books. These shall be submitted periodically to the respective Professors. At the end of the course, the practical / clinical case record note books shall be submitted to the heads of the departments who shall evaluate and include the marks in the Internal Assessment. Records need not be submitted at the University practical examination.

In respect of failed candidates, the marks awarded for records at the first attempt may be carried over to the next examination attempt.

If a candidate desires, he/ she may be permitted to improve on the performance by submission of fresh record note books.

5. **Integration :** Each of the clinical departments shall provide integrated teaching calling on pre-clinical, para-clinical and other clinical departments to join in exposing the students to the full range of disciplines relevant to each clinical area of study. Problem oriented approach shall be emphasized.

6. **Teaching Schedule for clinical subjects** (Phases II and III).

A. THEORY CLASSES :

Didactic lectures, demonstrations and seminars etc. in addition to clinical postings as under. The Clinical lectures should be held from 4th Semester onwards. Lectures in Community Medicine, E.N.T. and Ophthalmology shall be conducted in III M.B.B.S. Part – I.

❖ General Medicine	:	300 Hours.
❖ Paediatrics	:	100 Hours.
❖ T.B. and Chest	:	20 Hours.
❖ Psychiatry	:	20 Hours.
❖ Skin and S.T.D.	:	30 Hours.
❖ Community Medicine	:	50 Hours.
❖ Anaesthesia	:	20 Hours.
❖ General Surgery	:	300 Hours.
❖ Orthopaedics (Including Physical Medicine)	:	100 Hours.
❖ Ophthalmology	:	100 Hours.
❖ E.N.T.	:	70 Hours.
❖ Radiology	:	20 Hours.
❖ Dentistry	:	10 Hours.
❖ Obstetrics & Gynaecology Inclusive of Family Welfare	:	300 Hours.

NOTE:

This period of training is the approximate minimum suggested. Adjustments may be made as required depending on availability of time. Extra time available may be devoted to other sub-specialities.

This period of training does not include the University examination period.

B. CLINICAL POSTINGS :

The clinical posting shall be for 3 hours daily during the forenoons.

At the beginning of the clinical course, i.e. on entry into Phase II, the whole batch shall be given an introductory course in clinical methods of 2 weeks each in Medicine and Surgery.

Subsequently in each of the 7 semesters (half years) of the 31/2 year clinical course (i.e. Semesters 3, 4 and 5 in II M.B.B.S., 6 and 7 in III M.B.B.S. Part I and 8 and 9 in III M.B.B.S. part II), the students shall be posted in small batches by rotation in various clinical departments as per the chart below :

PERIOD OF CLINICAL POSTINGS IN WEEKS

SUBJECTS	**3rd Semester**	**4th Sem.**	**5th Sem.**	**6th Sem.**	**7th Sem.**	**8th Sem.**	**9th Sem.**	**Total Weeks**
General*** Medicine	6	-	2	-	4	6	6	24
Paediatrics	-	2	-	2	2	4	-	10
T.B. & Chest Diseases	-	2	-	-	-	-	-	2
Skin & S.T.D.	-	2	-	2	-	2	-	6
Psychiatry	-	-	4	-	-	-	-	4
Radiology*	-	-	-	-	2	-	-	2
General**** Surgery	6	-	4	-	2	6	6	24
Anaesthesiology	-	-	-	-	-	-	2	2
Orthopaedics**	-	-	4	4	-	-	2	10
Ophthalmology	-	4	-	4	2	-	-	10
Ear, Nose & Throat	-	4	-	4	-	-	-	8
Obst. & Gynae. Including Family Welfare Planning *****	2	4	4	-	4	4	6	24
Community Medicine	4	4	-	4	-	-	-	12

Casualty	-	-	-	2	-	-	-	2
Dentistry	-	-	-	-	2	-	-	2
Total (in weeks)	**18**	**22**	**18**	**22**	**18**	**22**	**22**	**142**

NOTE : Clinical methods in Medicine & Surgery for whole class will be for 2 weeks each respectively at the start of 3rd Semester.

* The posting includes training in Radio Diagnosis and Radio-therapy where existent.

** This posting includes exposure to Rehabilitation & Physiotherapy.

*** This posting includes exposure to Laboratory Medicine & Infectious diseases.

**** This posting includes exposure to dressing.

***** This includes Maternity Training & Family Medicine and the 3rd Semester posting shall be in Family Welfare Planning.

III. INTERNAL ASSESSMENT

1. III MBBS PART I (ENT,OPHALMOLOGY & COMMUNITY MEDICINE : **

Two tests for Part I Internal Assessment viz. one test during the period of clinical posting and another test shall be conducted before the University Examinations. The Internal Assessment Marks shall be submitted to the University within 15 days after the exams. Assignments completed by candidates as home work or vacation work may also be considered.

The aggregate of Final Internal Assessment Marks shall be submitted during first week of January/July .

** 31st SAB dt: 29.06.2006

2. III MBBS PART II (MEDICINE, SURGERY, OBSTETRICS & GYNAECOLOGY AND PAEDIDATRICS: *

Three tests for Part II Internal Assessment within the period of two years viz. one test shall be conducted during first year and another two tests shall be conducted during second year. The Internal Assessment Marks shall be submitted to the University within 15 days after the exams. Marks awarded for maintenance of records should be included in the internal assessment.

The aggregate of Final Internal Assessment Marks shall be submitted during first week of January/July.

3. A failed candidate in any subject should be provided an opportunity to improve his / her internal assessment marks by conducting a minimum of two examinations each in theory and practical separately and the average be considered for improvement.

4. The internal assessment marks awarded both in written and clinical separately should be submitted to the University endorsed by the Head of the institution atleast fifteen days prior to the commencement of the theory examinations.

5. A candidate should obtain a Minimum of 35%** of marks in internal assessment in a subject to be permitted to appear for the University examination in that subject.

IV. UNIVERSITY EXAMINATIONS

1. COMMENCEMENT OF EXAMINATION: ***

a. August 1st / February 1st .
b. Theory examinations not to be held on Saturdays & Sundays. If the date of commencement of the examination falls on a public holiday, the next working day will be the date of commencement of examination.

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* 31st SAB dt: 29.06.2006
*XXVI SAB dt. 16-12-2003 / *** XXIX SAB dt:05.08.2005

2. TIMING OF EXAMINATIONS :

III M.B.B.S. Part I examination shall be conducted at the end of one academic year of study in phase III.

III M.B.B.S. Part II examination shall be conducted at the end of two academic years of study in phase III.

3. EXEMPTION IN PASSED SUBJECTS :

Candidates who fail in an examination but pass in one or more individual subjects shall be exempted from re-examination in the passed subjects.

4. CARRY OVER OF FAILED SUBJECTS :

a. A student who fails in the II M.B.B.S. examination at the end of phase II shall be permitted to carry the failed subjects to phase III of the M.B.B.S. course but shall not be allowed to appear in III M.B.B.S. Part I examination unless he / she passes all the subjects of the II M.B.B.S. examination. Appearing for III M.B.B.S. Part I examination is compulsory before entering Part II of Phase III i.e., the final year of the course.

b. Passing in III M.B.B.S. Part I examination is not compulsory before entering for Part II training; however passing of III M.B.B.S. Part I examination is compulsory for being eligible to appear for III M.B.B.S. Part II examination.

5. REVALUATION OF ANSWER PAPERS :

There is no provision for revaluation of answer papers. However, retotalling is allowed in the failed subjects.

Classification Of Successful Candidates - Deleted from 31st SAB dated: 29.6.2006

VI. ATTENDANCE REQUIRED FOR ADMISSION TO EXAMINATION

1. No candidate shall be permitted to any one of the parts of III M.B.B.S. Examinations unless he / she has attended the course in the subject for the prescribed period in an affiliated institution recognized by this University and produce the necessary certificate of study, attendance and progress from the Head of the Institution.

2. A candidate is required to put in a minimum of 75%* attendance in both theory and practical / clinical classes separately in each subject before admission to the examination.

3. Attendance earned by the student in theory and practical / clinical classes separately in each subject shall be certified by the respective heads of the departments and forwarded by the head of the institution so as to reach the University atleast fifteen days prior to the commencement of the theory examinations.

4. A candidate lacking in the prescribed attendance in any one subject in the first appearance shall be denied admission to the entire examinations (Part I or Part II as the case may be).

5. Any candidate who does not appear for an examination due to lack of attendance shall be permitted to appear at the next exam session if he puts in a minimum of 75% attendance in the extended period of study.

6. Failed candidates who are not promoted to the next phase of study are also required to put in a minimum of 75% attendance during the extended period of study before appearing for the next examination.

VII. REGULATIONS FOR CONDONATION OF LACK OF ATTENDANCE

There shall be no condonation of lack of attendance for the course.

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*XXVI SAB dt. 16-12-2003.

VIII. RE-ADMISSION AFTER BREAK OF STUDY

A separate Regulation Book is available for all the U.G. / P.G. Courses of this University, for the candidates admitted from the academic year 2003-04 onwards.

IX. MIGRATION / TRANSFER OF CANDIDATES

Migration from one Medical College to another Medical College is not permitted during the Third M.B.B.S. degree course.

X. FIXATION OF DURATION FOR COMPLETION OF COURSE :*

The duration for completion of the course shall be fixed as double the time of the course and the students have to pass within the said period; otherwise, they have to get fresh admission.

This will apply to the students admitted from the academic year 2003-04 onwards.

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*XXV SAB dt. 25-06-2003.

Syllabus for III M.B.B.S. Part – I

OPHTHALMOLOGY – Paper–1 (80 marks)

Departmental Objectives :-

At the end of training in the subject of Ophthalmology, a MBBS student should be able to :

Identify the abnormal conditions of the eye.

Diagnose various eye diseases which are most prevalent in the country.

Manage various eye conditions like conjunctivitis, stye, chalazion and foreign body.

Recognise and give medical treatment of anterior segment diseases.

Identify the national objectives and be an active participant in the National Programme for Prevention and Control of Blindness.

Recognise the ophthalmic manifestations of systemic diseases.

COURSE CONTENTS

MUST KNOW :

1) Aetiology, clinical features and treatment of conjunctival infections, allergies, pterygium, xerosis and trachoma.

2) Aetiology, clinical features, complications and treatment of corneal ulcers, keratomalacia and other scleral and corneal inflammations.

3) Basic principles of keratoplasty, eye donation and corneal blindness.

4) Aetiopathogenesis and complications of ectropion, entropion, ptosis, lagophthalmos, symblepharon and lid inflammations.

5) Aetiology, clinical features and treatment of lacrimal sac infections and causes of epiphora.

6) Classification, clinical features, diagnosis and treatment of various forms of congenital and senile cataract.

7) Classification, aetiology, clinical features, complications and management of various forms of uveitis.

8) Classification, aetiology, clinical features and management of various glaucomas.

9) Differential diagnosis of 'Red eye'.

10) Classification, clinical features and treatment of various refractive errors and presbyopia.

11) Types of blindness and their causes.

12) Objectives of National Programmes of Prevention and Control of Blindness, Trachoma Control Programme and vision 2020.

13) Aetiology, clinical features and treatment of common retinal disorders including vascular occlusions, inflammation and detachment.

14) Differentiate senile cataract and Open Angle Glaucoma.

15) Determine visual activity.

16) Test colour vision.

17) Use of Ophthalmoscope.

18) Examine anterior segment of eye.

19) Distant direct ophthalmoscopy for diagnosis of cataract.

DESIRABLE TO KNOW :

1) Types of ocular trauma, clinical features, complications and management including sympathetic ophthalmia.

2) Aetiology, clinical features and management of optic nerve disorders including differentiation of papilloedema and optic neuritis.

3) Aetiology, clinical features, and management of orbital diseases; common causes of proptosis.

4) Ocular manifestation of systemic diseases including diabetes, hypertension, tuberculosis, leprosy, anaemia, AIDS and pregnancy – induced hypertension.

5) Ocular side effects of systemic drugs.

6) Aetiology, clinical features and principles of treatment of vitreous diseases e.g., haemorrhage, degeneration, liquefaction, endophthalmitis.

7) Recent advances in ophthalmology – types and scope of lasers, intraocular lens implantation.

8) Determine field of vision.

9) Take conjunctival swab.

10) Remove extraocular foreign body.

11) Perform epilation of cilia.

12) Incise and drain lid abscess.

NICE TO KNOW :

1) Ocular manifestations of common neurological disorders.

2) Aetiology, symptoms, diagnosis and principles of treatment of strabismus.

Clinical Posting:

4 weeks in II MBBS
6 weeks in Prefinal MBBS
Preceeding University Examination.

First 4 Weeks: Basic sciences related to ophthalmology like ocular, Anatomy, Physiology, Biochemistry, Neurology, Examination Technique and orientation to Minor O.T.

Next 6 Weeks: Clinical Ophthalmology, including ward & Theatre postings Community ophthalmology.

EVALUATION :

INTERNAL ASSESSMENT :* **40 marks**

Theory	20 marks
Clinical	20 marks
Total	40 marks

OPHTHALMOLOGY ***

	No. of Questions	Marks
Essay	2 x 15 =	30
Short Notes	10 x 5 =	50
Short Answers	10 x 2 =	20
	Total =	100
CLINICAL:		
Long Case	1 x 20 =	20
Short Case	2 x 10 =	20
		40
VIVA		20
Instrument	6 marks	
Refraction	6 marks	
Comm.Oph.	4 marks	
Sys.Oph.	4marks	
		160
Internal Assessment		40
		200

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* XX SAB dated:18-08-2000;

*** 38th Meeting of the Standing Academic Board held on 19.11.2009 with effect from February 2010 examination.

Guidelines for Clinical & Viva :

1) In all the subjects of III M.B.B.S Part-I, the No. of candidates examined per day shall not normally exceed 30.
2) There shall be Four examiners (2 External & 2 Internal) to conduct the Clinical & Viva Examinations.
3) For Viva : Two sets of examiners shall examine separately on different portions of the Syllabus.

MARKS QUALIFYING FOR A PASS :

50% in Theory	-	40 / 80
50% in University clinical including viva	-	40 / 80
35% in Internal Assessment	-	14 / 40
Total 50% aggregate	-	100 / 200

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SYLLABUS FOR THIRD MBBS PART-I

OTORHINOLARYNGOLOGY – Paper-2 (80 marks)

Departmental Objectives:

At the end of the course, the student will be able to:

Diagnose and manage the common ENT diseases and emergencies.

Adopt the rational use of commonly used drugs, keeping in mind their adverse reactions.

Suggest common investigative procedures and interpret their results.

COURSE CONTENTS

I. EAR

MUST KNOW :

1) Bacterial flora, specific antibiotic therapy of upper respiratory infection.

2) Surgical anatomy: external, middle and inner ear.

3) Physiology of hearing and vestibular function.

4) Examination of the Ear: Tuning fork test: hearing assessment in children – broad outline; referred pain in the ear.

5) Deafness: types and causes.

6) Diseases of the external ear: perichondritis; otitis external; cerumen; foreign body.

7) Diseases of the middle ear: acute and chronic suppurative otitis media.

8) Audiometry – pure tone; Impedence, Peadiatric Audiometry functional examination of inner ear.

9) Nonsuppurative otitis media.

10) Facial nerve.

11) Deaf mutism.

12) Complications of otitis media: Mastoiditis (acute and chronic); lateral sinus thrombosis; labyrinthitis; otogenic brain abscess; mastoidectomy – Principles.

DESIRABLE TO KNOW :

1) Otosclerosis; Cholesteatoma.

2) Vestibule, caloric test, positional nystagmus test.

3) Meniere's disease.

4) Brainstem Audiometry – Cochlear implants.

II. NOSE AND PARANASAL SINUSES

MUST KNOW :

1) Surgical anatomy and physiology of the nose and paranasal sinuses.

2) Symptoms of nasal diseases.

3) Methods of examination of the nose and paranasal sinuses.

4) Diseases of the nasal septum: deviation of nasal septum and principles of management; polyp of the septum.

5) Epistasis and foreign bodies in nose. - CSF Rhinorrhoea

6) Nasal allergy – nasal polyposis.

7) Inflammation of the nose: furunculosis of vestibule of the nose, acute rhinitis.

8) Inflammatory diseases of paranasal sinuses: acute and chronic maxilary sinusitis, frontal sinusitis. Ethmoidal sinusitis and complications.

9) Atrophic rhinitis, rhinosporidiosis, rhinoscleorma.

10) Nasal Septum Perforations.

DESIRABLE TO KNOW :

1) Outline of management of benign and malignant tumors or nose and paranasal sinuses.

2) Endoscopic sinus surgery.

III. PHARYNX

MUST KNOW :

1) Anatomy of the pharynx – methods of examination – Nasopharynx Oropharynx and Laryngopharynx.

2) Diseases of the pharynx: adenoids; acute and chronic pharyngitis; diphtheric pharyngitis; acute follicular tonsillitis and differential diagnosis: chronic tonsillitis; tonsillectomy – indication; peritonsillar abscess; retropharyngeal abscess.

3) Dysphagia including acid ingestion management.

4) Oesophageal Diverticulum.

DESIRABLE TO KNOW :

1) Broad outline of management of juvenile angiofibroma, and malignant tumors of oropharynx.

2) Submucus Fibrosis.

IV. LARYNX

MUST KNOW :

1) Anatomy and functions of the larynx and methods of examination.

2) Hoarseness of voice; stridor; differential diagnosis of respiratory obstruction and its management including Paralysis of Vocalcords.

3) Inflammatory lesions of the larynx. eg: acute laryngitis.

4) Vocal cord nodules; laryngeal diphtheria.

5) Benign and malignant tumors of larynx: classification and management.

6) FB larynx and trachea.

7) Tracheostomy.

DESIRABLE TO KNOW :

Tuberculosis of the larynx and differential diagnosis.

SKILLS

1. Be able to use auroscope, nasal speculum, tongue depressor; tuning fork and head mirror.

2. Conduct CPR (Cardiopulmonary resuscitation) and first aid in newborns, children and adults including endotracheal intubation.

3. Maintain airway (endotracheal intubation / tracheostomy / cricothyroidotomy).

4. Perform syringing of ear.

5. Do nasal packing for epistaxis.

EVALUATION :

INTERNAL ASSESSMENT : * **40 marks**

Theory	20 marks
Clinical	20 marks
Total	40 marks

***** XX SAB dated 18-08-2000.

PATTERN OF EXAMINATIONS:

THEORY : ONE PAPER OF THREE HOURS DURATION-100 marks.

PATTERN OF QUESTION PAPER :***

E.N.T.

	No. of Questions	Marks
Essay	2 x 15 =	30
Short Notes	10 x 5 =	50
Short Answers	10 x 2 =	20
	Total =	100
CLINICAL:		
Long Case	1 x 20 =	20
Short Case	2 x 10 =	20
	Total =	40
	VIVA	20
X-ray	6 marks	
Instrument	6 marks	
Viva	8 marks	
		160
Internal Assessment		40
		200

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3) For Viva : Two sets of examiners shall examine separately on different portions of the Syllabus.

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MARKS QUALIFYING FOR A PASS :

50% in Theory	-	40 / 80
50% in University clinical including viva	-	40 / 80
35% in Internal Assessment	-	14 / 40
Total 50% aggregate	-	100 / 200

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SYLLABUS FOR THIRD MBBS PART-I

COMMUNITY MEDICINE – 2 Papers – 120 Marks each

Departmental Objectives :

Aim of teaching by the department is directed towards achievement of the goal of "Health for All". Towards this end, by the completion of his / her training, the M.B.B.S. student should be :

Aware of the physical, social, psychological, economic and environmental aspect of health and disease.

Able to apply the clinical skills to recognize and manage common health problems including their physical, emotional and social aspects at the individual and family levels and deal with medical emergencies at the community level.

Able to define and manage the health problems of the community he / she serves. To achieve this, he / she shall learn to :

a. Organise elementary epidemiological studies to assess the health problems in the area. For this, he/she should be able to design a study, collect data, analyse it with statistical tests, make a report and be able to participate in a health information system.

b. Prioritise the most important problems and help formulate a plan of action to manage them under National Health Programme guidelines including population control and family welfare programme. He/She should be able to assess and allocate resources, implement and evaluate the programmes.

c. Demonstrate knowledge of principles of organizing prevention and control of communicable and non-communicable diseases.

d. Organise health care services for special groups like mothers, infants, under-five children and school children.

e. Organise health care in case of calamities.

Able to work as an effective member of the health team.

Able to coordinate with and supervise other members of the health team and maintain liaison with other agencies.

Able to plan and implement health education programme.

Able to perform administrative functions of health centers.

Able to promote community participation especially in areas of disease control, health education and implementation of national programmes.

Aware of the national priorities and the goals to be achieved to implement primary health care.

COURSE CONTENTS

COMMUNITY MEDICINE – PAPER-I

I. CONCEPTS IN HEALTH

MUST KNOW :

1) Definition of health.

2) Determinants of health.

3) Characteristics of agent, host and environmental factors in health and disease and the multifactorial aetiology of disease.

4) Various levels of prevention and modes of intervention with appropriate examples.

5) Indices used in measurement of health.

6) Health situation in India : demography, mortality and morbidity profile and the existing facilities in health services.

NICE TO KNOW :

1) Appreciation of health as a relative concept.

2) Disease classification: international classification of diseases.

II. EPIDEMIOLOGY

MUST KNOW :

1) Use of basic epidemiological tools to make a community diagnosis.

2) Epidemiology : Definition, concept and role in health and disease.

3) Definition of the terms used in describing disease, transmission and control.

4) Natural history of a disease and its application in planning intervention.

5) Modes of transmission and measures for prevention and control of communicable and non-communicable diseases.

6) Definition, calculation and interpretation of the measures of frequency of diseases and mortality.

7) Common sampling techniques, simple statistical methods for the analysis, interpretation and presentation of data, frequency distribution, measures of central tendency, measures of variability.

8) Need and uses of screening tests.

9) Accuracy and clinical value of diagnostic and screening tests (sensitivity, specificity, predictive values).

10) Planning and investigation of an epidemic of a communicable disease in a community setting.

DESIRABLE TO KNOW :

Principle sources of epidemiological data.

Various types of epidemiological study designs.

NICE TO KNOW :

1) Institution of control measures and evaluation of the effectiveness of these measures.

2) Application of computers in epidemiology.

III. BIOSTATISTICS

MUST KNOW :

1) Sampling.

2) Collection, classification and presentation of statistical data.

3) Analysis and interpretation of data.

4) Obtaining information, computing indices (rates and ratio) and making comparisons.

5) Applying test of significance.

NICE TO KNOW :

1) The scope and use of biostatistics.

2) Use of statistical tables.

IV. ENTOMOLOGY

MUST KNOW :

1) Role of vectors in the causation of diseases.
2) Clinical features of and mode of transmission of common vector borne diseases (Malaria, Filaria dengue, Jap. B. Encephalitis, Kala-azar).

3) Methods of vector control.

DESIRABLE TO KNOW :

Advantages and limitations of each method of vector control.

NICE TO KNOW :

Mode of action, dose and application cycle of commonly used insecticides.

V. ENVIRONMENTAL SANITATION

MUST KNOW :

1) Concept of safe and wholesome water.

2) Requirement of sanitary sources of water (sanitary well).

3) Sources, health hazards and control of environmental pollution.

4) Standards of housing and the effect of poor housing on health.

DESIRABLE TO KNOW :

1) Methods of purification of water with stress on chlorination of water- large scale and small scale purification.

2) Disposal of solid waste and liquid waste both in the context of urban and rural conditions in the country.

3) Problems in the disposal of refuse, sullage and sewage.

4) Concepts of safe disposal of human and animal excreta.

5) Influence of physical factors – like heat, humidity, cold, radiation smoke and noise – on the health of the individual and community.

NICE TO KNOW :

1) Various biological standards.

2) Physical, chemical standards; tests for assessing quality of water.

3) Hospital waste management.

4) Animal excreta.

VI. EPIDEMIOLOGY OF SPECIFIC DISEASES

The specific objectives of selected communicable diseases of public health importance for which National Disease Control / Eradication Programmes have been formulated are described here. For other diseases, the individual teacher would formulate the objectives while drawing the lesson plans. The idea of formulating objectives for a few diseases is to highlight their importance and to emphasis certain learning outcomes.

Poliomyelitis, Infective hepatitis, ARI, Tuberculosis, Leprosy, Malaria, Filariasis, Kala Azar, STDs HIV & AIDS, Diarrhoeal diseases, Hypertension, Coronary heart disease, Blindness, Mental Health, Diabetics, special emphasis on emerging and reemerging infectious diseases.

MUST KNOW :

1) Extent of the problem, epidemiology and natural history of the disease.

2) Relative public health importance of a particular disease in a given area.

3) Influence of social, cultural and ecological factors on the epidemiology of the disease.

4) Control of communicable and non-communicable diseases:

   a) Case definition, Diagnosing and management (laboratory and treatment).

   b) Principles of planning, implementing and evaluating control measures for the diseases at the community level bearing in mind the relative importance of the disease.

5) Discuss prevention issues with regards to 5 levels of prevention.

6) National Programmes.

VII. OCCUPATIONAL HEALTH

MUST KNOW :

1) Employees State Insurance Scheme.

2) Identification of the physical, chemical and biological hazards to which workers are exposed while working in a specific occupational environment.

3) Preventive measures against these diseases including accident prevention.

DESIRABLE TO KNOW :

Various legislations in relation to occupational health.

NICE TO KNOW :

Diagnostic criteria of various occupational diseases.

COMMUNITY MEDICINE – PAPER-II

VIII. NUTRITION

MUST KNOW :

1) Common sources of various nutrients.

2) Nutritional assessment of individual.

3) Common nutritional disorders : protein energy malnutrition, Vitamin-A deficiency, anaemia, iodine deficiency disease, fluorosis, food toxins diseases and their control and management.

4) National programmes in nutrition.

DESIRABLE TO KNOW :

1) Special nutritional requirement according to age, sex, activity, physiological condition.

2) Assessing the nutritional status of the family and the community by selecting and using appropriate methods such as: anthropometry, clinical, dietary, laboratory techniques.

3) Diet for individuals and families and special groups.

4) Food hygiene and food fortification.

NICE TO KNOW :

Laboratory techniques.

IX. GENETICS AND COMMUNITY HEALTH

MUST KNOW :

Role of genetics in health and preventive measures in inherited disorder.

DESIRABLE TO KNOW :

Population genetics.

NICE TO KNOW :

1) Genetic predisposition in common disorders.

2) Preventive and social measures – Eugenics, genetic counselling.

X. SOCIOLOGY AND COMMUNITY HEALTH

MUST KNOW :

Social factors influencing health and disease.

DESIRABLE TO KNOW:

Assessment of socio-economic status.

NICE TO KNOW :

1) Concepts in sociology.

2) Poverty and social security.

XI. HEALTH EDUCATION

MUST KNOW :

1) Effective communication with individuals, family and community using tools and techniques of information, education and communication.

a) Barriers to effective communication.

b Principles, methods and evaluation of health education.

c) Methods of health education – their advantages and disadvantages.

d) Selection and use of appropriate media (simple audio-visual aids) for effective health education.

XII. DEMOGRAPHY & FAMILY PLANNING

MUST KNOW :

1) Definition of Demography.

2) Population Pyramid.

3) Stages of the demographic cycle and their impact on the population.

4) Definition, calculation and interpretation of demographic indices like birth rate, death rate, growth rate, fertility rates, etc.

5) Definition of Family Planning, Different family planning methods and their advantages and shortcomings. Recent advances in contraception.

6) Medical Termination of Pregnancy Act.

7) National Family Welfare Programme.

DESIRABLE TO KNOW :

1) Reasons for rapid population growth in India.

2) Need for population control measures and the National Population Policy.

XIII. MATERNAL AND CHILD HEALTH (MCH)

MUST KNOW :

1) Magnitude and causes of maternal morbidity.

2) Concepts of 'high risk' and 'MCH Package', Child survival and Safe Motherhood, Integrated Child Development Scheme and other existing regional programmes – RCH I & RCH II, IMNCI.

3) Under-5 : Morbidity, mortality, high risk and care (perinatal, infant and child).

4) Monitoring of growth and development and use of Road to Health Chart and under 5 clinic.

5) Organisation, implementation and evaluation of programmes for mothers and children as per National Programme guidelines; supervising health personnel; maintaining records; performing a nutritional assessment; promoting breast feeding.

6) Immunization programmes, immunization schedules and cold chain.

DESIRABLE TO KNOW :

Need for specialized services for these groups.

NICE TO KNOW :

Local customs and practices during pregnancy, child birth and lactation.

XIV. SCHOOL HEALTH

MUST KNOW :

1) Objectives and activities of the School Health Programme.

2) Participation of the teachers in the school health programme including maintenance of records; defining healthful practices; early detection of abnormalities.

XV. COMMUNITY GERIATRICS

MUST KNOW :

1) Health of the elderly and preventive measures (e.g., Osteoporosis).

2) Care of elderly in organized and unorganized sectors and role of various health care provider including family.

DESIRABLE TO KNOW :

Economic and psychosocial needs of the aged.

XVI. URBAN HEALTH

MUST KNOW :

1) Reasons for Urban Health becoming an issue.

2) Special health problems in urban areas e.g., homelessness.

3) Organization of health services in urban areas including slums.

XVII. MENTAL HEALTH

MUST KNOW :

1) Community Mental health services.

2) Alcoholism, drug dependence – Epidemiological factors and prevention.

DESIRABLE TO KNOW :

Importance of Mental Health.

XVIII. HEALTH PLANNING AND MANAGEMENT

MUST KNOW :

1) Salient features of the National Health Policy.

2) Process of health care delivery in India :

   - the health systems and health infrastructure at Centre, State and District levels;

   - the inter – relationship between community development block and Primary Health Centre;

   - the organization, function and staffing pattern of First Referral Unit/Community Health Centers, Primary Health Centres and sub-centre;

   - the job descriptions of health supervisor (male and female), health workers, village health guide, anganwadi workers, traditional birth attendants;

   - the activities of the health team at the primary health centre.

3) Management techniques : Define and explain principles of management; explain the three broad functions of management (planning, implementation and evaluation) and how they relate to each other (Planning cycle).

4) Appreciate the need for International Health Regulations and Disease surveillance.

5) Disease management.

6) Concepts in Health Economics – including cost effectiveness, cost benefit.

7) Health for all, PHC concepts, principles & element.

8) HEALTH COMMITTEES: Bhore, Srivastava, Mudaliar.

DESIRABLE TO KNOW :

1) UNICEF, WHO.

2) HEALTH COMMITTEE: National Rural Health Commission (NRHM)

3) Five year plans.

NICE TO KNOW :

1) Constitutional provisions for health in India : Enumerate the three major divisions of responsibilities and functions (concerning health) of the Union and the State Governments.

2) Appreciate the role of National and International Voluntary Agencies in health care delivery.

XIX. OTHER SPECIAL GROUPS

MUST KNOW :

Adolescent.

DESIRABLE TO KNOW :

1) Tribal health.

2) Children with special needs.

NICE TO KNOW :

1) Child guidance clinics.
2) Juvenile delinquency.

SKILLS

PART – I : GENERAL SKILLS :

MUST KNOW :

1) Conduction of a clinico-social evaluation of the individual in relation to social, economic and cultural aspects; educational and residential background; attitude to health, disease and to health services; the individual's family and community.

2) Recognise common health problems of the community.
3) Apply elementary principles of epidemiology in carrying out simple epidemiological studies in the community.
4) Carry out health education effectively for the community.

NICE TO KNOW :

1. Assist in management of common health problems of the community.

2. Work as a team member in rendering health care.

PART – II : SKILLS IN RELATION TO SPECIFIC TOPICS :

1. Communication –

MUST KNOW :

1) The student should be able to communicate effectively with family members at home.

2) Patients at clinics or at home.

DESIRABLE TO KNOW :

Carry out health education for individuals, family or a group

NICE TO KNOW :

Communicate effectively with peers at scientific forums.

2. Team Activity -

DESIRABLE TO KNOW :

Work as a member of the health team in planning and carrying out field work like school health.

3. Environmental Sanitation -

MUST KNOW :

1) Chlorination of water; estimate the chlorine demand of water.

2) Estimate the residual chlorine of water.

DESIRABLE TO KNOW :

Collect water samples for microbiological evaluation.

4. Communicable and Non-communicable diseases -

MUST KNOW :

1) Eliciting clinico-social history and examination of the patient diagnosis and treatment. (It is already a part of general skills).

2) Fixing, staining and examining smears – peripheral blood smear for malaria and filariasis, sputum for AFB; slit skin smears for leprosy; Hb estimation; urine and stool examination. (This is more relevant under Microbiology & Clinical pathology).

3) Assessing the severity and / or classifying dehydration in diarrhoea, upper respiratory tract infection, dog bite, leprosy, tuberculosis.

4) Adequate and appropriate treatment and follow-up of leprosy, tuberculosis, malaria, filariasis, rabies, upper respiratory tract infections, diarrhoea and dehydration.

5) Advice on the prevention and prophylaxis of common diseases like tuberclosis, HIV/AIDS vaccine preventable diseases, tetanus, malaria, filariasis, rabies, cholera, typhoid, intestinal parasites.

DESIRABLE TO KNOW :

Take necessary steps in / disease outbreak / epidemics / natural disasters – investigation of epidemic, food poisoning; notification; organizing medical care following disasters.

5. Maternal and Child Health -

MUST KNOW:

i) Antenatal – examination of the mother; application of the risk approach in antenatal care.

ii) Intranatal – conducting a normal delivery; early recognition of danger in intranatal period; referral of cases requiring special care.

iii) Postnatal – assessment of the mother and new born, advice on appropriate family planning method; promotion of breast feeding; advice on weaning.

iv) Assessment of growth and development of the child – use of the 'road to health' card; recording important anthropometric assessments of the child; giving immunization to the child; identifying high risk infants.

6. Statistics -

MUST KNOW :

1) Application of sampling techniques.

2) Apply appropriate tests of significance to make a correct inference.

3) Simple analysis and presentation of data.

7. Nutrition -

MUST KNOW :

1) Community survey and clinical diagnosis of nutritional deficiencies : - Vitamin A deficiency (more skills in Ophthalmology).

2) Diagnosis Malnutrition.

3) Plan and recommend a suitable diet for the individuals and families bearing in mind local availability of foods, economic status.

DESIRABLE TO KNOW :

1) Conducting a diet survey.

2) Community survey for Iodine deficiency.

8. Occupational Health -

DESIRABLE TO KNOW :

Medical examination of workers. (skills obtained during internship).

NICE TO KNOW :

1) Assessment of a work site.

2) Recommendation in improving work sites.

9. Health care of the Community – (skills obtained only during internship)

DESIRABLE TO KNOW :

1) Ensuring community participation in health care.

2) Arranging intersectoral coordination where necessary.

3) Working in liaison with other agencies involved in health care in various National Health Programmes.

10. Health Management – (skills only during internship)

MUST KNOW :

Be an effective team member.

DESIRABLE TO KNOW :

1) Guide and train workers.

2) Supervision of workers and programmes.

11. Family Planning :- Advice on appropriate methods (during internship).

12.Managerial :- Organise antenatal and under-five clinic (during internship).

EVALUATION :

INTERNAL ASSESSMENT :* 80 marks

Theory	40 marks
Practical	40 marks
Total	80 marks

PATTERN OF EXAMINATIONS: ***

THEORY :

TWO PAPERS OF THREE HOURS DURATION – 100 MARKS EACH

Paper I shall cover those topics of the syllabus serially numbered from I to VII under course contents.

Paper II shall cover those topics of the syllabus which are serially numbered from VIII TO XIX under course contents.

COMMUNITY MEDICINE (2 Papers) Each 100 marks

	No. of Questions	Marks
Essay	2 x 15 =	30
Short Notes	10 x 5 =	50
Short Answers	10 x 2 =	20
	Total =	100

PRACTICAL: I

Clinical Social Case Discussion	50

PRACTICAL: II

Epidemiological Exercises	4 x10= 40
Spotters & Specimen	5 x 2 = 10
VIVA	20
	120
Internal assessment	80

Grand Total

Theory 100 x 2	200
Practical	120
I.A.	80

	400

PRACTICAL EXAMINATION : **60 marks**

Practical I	:	30 marks
Clinical Social case discussion		
Practical II	:	
Epidemiological exercises (2x10): 20 marks		
Spotters & Specimen (5x2) : 10 marks		
	---	30 marks

	Total :	60 marks

VIVA ……..		**20 marks**

Guidelines for Practical Examination :

1) In all the subjects of III M.B.B.S Part-I, the no. of candidates examined per day shall not normally exceed 30.
2) There shall be Four examiners (2 External & 2 Internal) to conduct the Clinical & Viva Examinations.
3) For Viva : Two sets of examiners shall examine separately on different portions of the Syllabus.

MARKS QUALIFYING FOR A PASS :

50% in Theory	-	120/240
50% in Practical including viva	-	40 / 80
35% in Internal Assessment	-	28 / 80
Total 50% aggregate	-	**200/400**

***** XX SAB held on 18-08-2000.

******* 38th Meeting of the Standing Academic Board held on 19.11.2009 with effect from February 2010 examination.

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Syllabus for III M.B.B.S. Part – II

MEDICINE

Departmental Objectives :-

At the end of the clinical postings in General Medicine, the medical student should :

- be able to evaluate each patient as a person in society and not merely as a collection of organ systems.

- have developed an interest in and care for all types of patients.

- recognise differences between normal and abnormal behaviour.

- be able to discern the hopes and fears of patients which inevitably underlie the symptom complexes and know how to handle these emotions, both in the patient and in others.

- possess sound knowledge of common diseases, their clinical manifestations and natural history.

- elicit a good clinical history and physical findings, elucidate the clinical problems based on these and discuss the differential diagnosis.

- requisition relevant laboratory tests and perform common side lab procedures.

- be familiar with common imaging techniques, their advantages, disadvantages and indications; be aware of radiation hazards and measures to protect therefrom.

- outline the principles of management of various diseases, including the medical and surgical procedures available.

- describe the mode of action of commonly used drugs, their doses, side effects, toxicity, indications, contraindications and drug interactions.

- have an open attitude to the newer developments in medicine to keep abreast of new knowledge.

- diagnose and provide competent initial care to medical emergencies.

- refer medical problems to secondary and tertiary care at appropriate times.

- recognize the problems arising in patients of AIDS.

- have an understanding of the art of medicine involving communication with patients, demonstration of empathy, reassurance, patient education and an understanding of the patient's socio-economic circumstances in relation to management.

- learn to be adaptable to new ideas and new situations where resources may be limited.

- possess knowledge to perform certain procedures.

- understand the ethical and legal implications of one's medical decisions.

COURSE CONTENTS

I. CLINICAL METHODS IN THE PRACTICE OF MEDICINE

MUST KNOW :

1) Clinical approach to the patient : The art of medicine, doctor-patient relationship, communication skills and doctor's responsibilities.

2) Clinical approach to disease and care of patient; Diagnostic possibilities based on interpretation of history, physical findings and laboratory investigations and principles of rational management.

II. COMMON SYMPTOMS OF DISEASE

MUST KNOW :

1) Pain : Pathophysiology, clinical types, assessment and management.

2) Fever : Pathophysiology of heat regulation, its disturbances, clinical types, clinical assessment and management.

3) Cough, expectoration and haemoptysis.

4) Dyspnoea, tachypnoea, and cyanosis.

5) Common urinary symptoms including dysuria, oliguria, nocturia, polyuria, incontinence and enuresis.

6) Oedema and anasarca.

7) Shock and cardiovascular collapse.

8) Cardiac murmurs, functional and organic, and Palpitation.

9) Anorexia, nausea and vomiting.

10) Constipation and diarrhoea.

11) Haematemesis, malena and haematochezia.

12) Jaundice and hepatomegaly.

13) Abdominal swelling and ascites.

14) Weight loss and weight gain.

15) Fainting, syncope and seizures, headache, dizziness and vertigo.

16) Paralysis, movement disorders and disorders of gait.

17) Coma and other disturbances of consciousness.

18) Pallor and bleeding.

19) Enlargement of lymph nodes and spleen.

20) Joint pains and pain in the extremities and back.

III. NUTRITION / EXPOSURE TO PHYSICAL AND CHEMICAL AGENTS

MUST KNOW :

1) Nutrition in clinical medicine and dietary management :

    i. Nutritional requirements.

    ii. Protein calorie malnutrition in adults.

    iii. Obesity.

    iv. Vitamin deficiency and excess.

2) Fluid and electrolyte balance; acidosis and alkalosis in particular relevance to vomiting, diarrhoea, uraemia and diabetic ketoacidosis.

3) Poisonings : Phenobarbitone, organophosphorous compounds, sedative / hypnotic and others common in the locality.

4) Acute and chronic effects of alcohol and their management.

5) Venoms, stings, insect bites : Poisonous snakes, insects and scorpions.

6) Disturbances of temperature : Heat stroke, heat exhaustion and cold exposure.

7) Drowning, electrocution and radiation hazards.

IV. INFECTIONS

MUST KNOW :

1) Approach to infectious diseases – diagnostic and therapeutic principles.

2) General principles of rational use of antibiotics and other chemotherapy against the following :

   i. Common gram positive infections.

   ii. Common gram negative infections.

   iii. Enteric fever.

   iv. Cholera, gastroenteritis, food poisoning and dysentery.

   v. Influenza and other common viral respiratory infections.

   vi. Rabies.

   vii. Tetanus.

   viii. Herpes simplex and herpes zoster.

   ix. Amoebiasis and worm infestations.

   x. Malaria, filariasis.

   xi. Common exanthemata.

   xii. HIV infection and infections in the immunocompromised conditions.

   xiii. Common sexually transmitted diseases.

   xiv. Common fungal infections.

   xv. Viral encephalitis.

xvi. Tuberculosis.

xvii. Leprosy.

xviii. Brucellosis.

xix. Leptosposis.

DESIRABLE TO KNOW :

1) Leishmaniasis.

2) Infectious mononucleosis.

V. HAEMATOLOGY

MUST KNOW :

1) Definition, prevalence, aetiological factor, pathophysiology, pathology, recognition, investigations and principles of treatment of :

    i. Anaemias : Iron deficiency, megaloblastic and common haemolytic anaemias (thalassemia, sickle cell and acquired haemolytic).

    ii. Common bleeding disorders (thrombocytopenia and haemophilia).

    iii. Agranulocytosis and aplastic anaemia.

2) Leukaemias.

3) Lymphomas.

4) Blood group and transfusion : Major blood group systems and histocompatibility complex, concepts of transfusion and component therapy; indications for transfusion therapy, precautions to be taken during Blood transfusion, hazards of transfusion and safe handling of blood and blood products.

VI. RESPIRATORY SYSTEM

MUST KNOW :

1) Physiology and diagnostic methods : Sputum examination, X-ray chest, pulmonary function tests and bronchoscopy.

2) Upper respiratory infections.

3) Pneumonias.

4) Bronchiectasis and lung abscess.

5) Bronchial asthma and tropical eosinophilia.

6) Chronic obstructive airway disease and cor pulmonale.

7) Acute and chronic respiratory failure.

8) Diseases of pleura : pleural effusion, empyema, pneumothorax.

9) Pulmonary tuberculosis.

10) Neoplasms of lung.

11) Common occupational lung diseases.

VII. CARDIOVASCULAR SYSTEM

MUST KNOW :

1) Physiology & Clinical symptomatolgy, E.C.G., X-ray chest and ECHO with reference to common cardiovascular diseases.

2) Coronary artery disease.

3) Rheumatic fever and rheumatic heart disease.

4) Infective endocarditis.

5) Hypertension and hypertensive heart disease.

6) Acute and chronic heart failure.

7) Common congenital heart diseases in adolescents and adults : ASD, VSD, PDA, TOF and Coarctation of Aorta.

8) Common cardiac arrhythmias.

9) Acute and chronic pericarditis, pericardial effusion and cardiac tamponade.

DESIRABLE TO KNOW :

1) Common aortic diseases; peripheral vascular disease : arterial and venous.

VIII. GASTROINTESTINAL TRACT

MUST KNOW :

1) Stool examination.

2) Acid peptic disease.

3) Malabsorption syndrome.

4) Acute and chronic hepatitis.

5) Cirrhosis of liver.

6) Abdominal tuberculosis.

7) Panereatitis.

DESIRABLE TO KNOW :

1) Inflammatory bowel disease and irritable bowel syndrome.

2) Endoscopy and radiology in reference to common gastrointestinal diseases.

IX. EMERGENCY MEDICINE

MUST KNOW :

1) Cardiopulmonary resuscitation.
2) Acute pulmonary oedema.
3) Hypertensive emergencies.
4) Diabetic ketoacidosis and hypoglcaemia.
5) Status epilepticus.
6) Acute severe bronchial asthma.
7) Shock.
8) Acute myocardial infarction.
9) Upper GI bleed and hepatic coma.
10) Diagnosis and management of comatose patient.
11) Management of poisoning.

X. NERVOUS SYSTEM

MUST KNOW :

1) Cerebrovascular diseases.
2) Meningitis : Viral, bacterial and tuberculosis.
3) Peripheral neuropathy.
4) Epilepsy.
5) Extrapyramidal diseases.
6) Common compressive and noncompressive spinal cord syndromes.

7) Motor system disease.

8) Myasthenia gravis.

9) Common myopathies in India.

10) Degenerative, nutritional and metabolic diseases of the nervous system.

XI. URINARY SYSTEM

MUST KNOW :

1) Acute renal failure.

2) Chronic renal failure.

3) Glomerulonephritis and nephrotic syndrome.

4) Urinary tract infections / pyelonephritis.

5) Tubulointerstitial diseases and toxic nephropathies.

XII. CONNECTIVE TISSUE DISORDERS

MUST KNOW :

1) Rheumatoid arthritis.

2) Degenerative joint disease including cervical spondylosis.

3) Systemic lupus erythematosus, systemic sclerosis and other collagen vascular diseases.

DESIRABLE TO KNOW :

1) Gout.

XIII. ENDOCRINES

MUST KNOW :

1) Diabetes mellitus.

2) Hypo and hyperthyroidism; iodine deficiency disorders.

3) Cushing's syndrome and Addison's disease; Hyperalosteronism.

4) Pituitary disorders : Gigantism, Acromegaly and Sheehan's syndrome.

5) Calcium and phosphorus metabolism : Parathyroid and metabolic bone disease.

XIV. GERIATRICS

DESIRABLE TO KNOW :

1) Presentation of diseases in the elderly; Identification of common diseases.

2) Diet for the aged; Management of Nutritional disorders.

3) Acute medical problems – infections, dehydration, acute confusional states.

4) Osteoporosis; Degenerative joint diseases; effects of immobility – prevention of contracture and bedsores.

5) Neurological disturbances – management & rehabilitation.

XV. DERMATOLOGY

MUST KNOW :

1) Diseases caused by nutritional and environmental factors.

2) Infective disorders : Pyodermas, Common Viral and Fungal infections.

3) Infestations : Scabies, Pediculosis.

4) Allergic disorders : Urticaria, Atopic dermatitis, and contact dermatitis.

5) Common drug reactions and eruptions : Erythema multiforme, Toxic epidermal necrolysis and Exfoliative dermatitis.

6) Dermatitis and Eczema.

7) Alopecia and Hirsutism.

8) Sebaceous glands : Structure and Function; Acne, Seborrhoeic dermatitis, Other diseases; Pityriasis capitis.

9) Sweat glands : Structure, Function and Diseases; Miliaria, Hyperhidrosis.

10) Leprosy : Classification, Pathology, Clinical features, Diagnosis, Reactions, Management, Deformities and Control Programme.

11) Psoriasis.

12) Lichen Planus.

13) Sexually Transmitted Diseases : Genital ulcerative diseases, Genital discharge diseases.

14) Dermatological therapy.

DESIRABLE TO KNOW :

Vesiculobullous Diseases : Pemphigus, Pemphigiod and Dermatitis herpetiforms.

NICE TO KNOW :

Melanocyte, Pigment metabolism and disorders of pigmentation; Icthyosis.

XVI. PSYCHIATRY

MUST KNOW :

1) Classification of the different types of psychoses; differences between psychoses and neuroses; difference between functional and organic psychoses.

2) Clinical features, diagnosis and management of : Schizophrenia; Bipolar mood disorder and depression; Anxiety disorders and hysteria; Dementia; Alcoholism; Substance abuse.

3) Clinical recognition and initial therapy of psychiatric emergencies.

DESIRABLE TO KNOW :

1) Eliciting a detailed psychiatric history and conducting a mental status examination; defining, eliciting and interpreting psychopathological symptoms and signs.

2) Concepts underlying normal and abnormal human behaviour; principles of learning, memory, personality and intelligence; psychopathology (behavioural sciences).

3) Psychogeriatrics.

NICE TO KNOW :

1) Historical aspects of the diagnosis and treatment of mental illness; concept of mental health Vs mental illness; classificatory system currently in use in psychiatry.

2) Clinical features, diagnosis and management of psychiatric disorders of childhood and adolescence.

3) Personality disorders.

XVII. RADIODIAGNOSIS

MUST KNOW :

1) Respiratory system : Diagnosis of common conditions like tuberculosis, consolidation, pleural effusion, pneumothorax, lung abscess, collapse, bronchogenic carcinoma and mediastinal masses; Differential diagnosis of mediastinal masses; indications for bronchography, tomography and CT scans.

2) Cardiovascular system : Normal topography of heart, cardiomegaly; Common rheumatic heart diseases and pericardial effusion.

3) Gastrointestinal system : Diagnosis of acute abdominal conditions like intestinal obstruction and perforation; Indications and contraindications for Barium studies; Differential diagnosis of calcification and stones on plain X-ray; Diagnosis of gastric ulcer / duodenal ulcer / cancer stomach / oesophageal cancer on Barium studies.

4) Skeletal System : Diagnosis of common fractures, caries spine, osteomyelitis, nutritional deficiencies like rickets, common bone tumours and diseases of joints.

5) Excretory System : Identification of renal calculi; Contrast studies.

SKILLS

1. Obtain a proper relevant history and perform a humane and thorough clinical examination including internal examinations (per – rectal and per – vaginal) and examinations of all organs / systems in adults.

2. Arrive at a logical working diagnosis after clinical examination.

3. Order appropriate investigations keeping in mind their need, relevance and cost effectiveness.

Plan and institute a line of treatment which is need based, cost effective and appropriate for common ailments taking into consideration :-

a. Patient,
b. disease,
c. Socio-economic status,
d. Institutional / Governmental guidelines.

4. Recognize situations which call for urgent or early treatment at secondary and tertiary centers and make a prompt referral of such patients after giving first aid or emergency treatment.

5. Assess and manage fluid / electrolyte and acid-base imbalance.

6. Interpret abnormal biochemical laboratory values of common diseases.

7. Interpret skiagrams of common diseases.

8. Identify irrational prescriptions and explain their irrationality.

9. Interpret serological tests such as VDRL, ASLO, Widal, HIV, Rheumatoid factor, Hepatitis and TORCH infections.

10. Demonstrate empathy and humane approach towards patients, relatives and attendants.

11. Demonstrate interpersonal and communication skills befitting a physician in order to discuss the illness and its outcome with patient and family.

12. Write a complete case record with all necessary details.

13. Write a proper discharge summary with all relevant information.

14. Write a proper referral note to secondary or tertiary centres or to other physicians with all necessary details.

15. Assess the need for and issue proper medical certificates to patients for various purposes.

16. Adopt universal precautions for self protection against HIV and hepatitis and counsel patients.

17. Perform skin sensitivity tests for drugs and serum.

18. Record and interpret an ECG and be able to identify common abnormalities like myocardial infarction and arrhythmias.

19. Start i.v. line and infusion.

20. Do venous cutdown.

21. Give intradermal / SC / IM / IV injections.

22. Insert and manage a C.V.P. line.

23. Conduct CPR (Cardiopulmonary resuscitation) and first aid in newborns, children and adults including endotracheal intubation.

24. Pass a nasogastric tube.

25. Pass a stomach tube and do stomach wash.

26. Administer enemas.

27. Do lumbar puncture.

28. Do pleural / peritoneal tap.

29. Aspirate liver abscess.

30. Catheterise bladder in both males and females.

31. Relieve tension pneumothorax by inserting a needle.

32. Administer O_2 by mask, catheter and O_2 tent and be able to handle O_2 cylinder.

33. Insert flatus tube.

34. Provide first aid to patients with peripheral vascular failure and shock.

35. Manage acute anaphylactic shock.

36. Manage diarrhoeas / dysenteries; Assess dehydration; prepare and administer oral rehydration therapy (ORT).

37. Manage emergencies of drowning.

38. Manage common poisoning.

39. Manage acute pulmonary oedema and left ventricular failure.

40. Manage acute severe bronchial asthma.

41. Do emergency management of epilepsy and status epilepticus.

42. Do emergency management of comatose patients regarding airway, positioning, prevention of aspiration and injuries.

43. Manage hyperpyrexia.

44. Perform skin scrapings and do a KOH preparation for fungus infections.

45. Prepare slit skin and nasal smear for lepra bacilli.

46. Do staining for STD Cases.

47. Do psychiatric evaluation and recognize common psychiatric illnesses.

48. Use of questionnaires in psychology.

49. Use of intelligence tests.

50. More emphasis on HIV.

51. Emphasis on Tropical Medicine.

52. Emphasis on National Programme like Malaria, RNTCP, DOTs, & ART etc.,

EVALUATION :

INTERNAL ASSESSMENT :* **160 marks**

Theory	60 marks
Record	20 marks
Total (Theory & Record)	80 marks
Clinical	80 marks
Total I.A.	160 marks

PATTERN OF EXAMINATIONS:

THEORY :

Two Papers of three hours duration 100 marks each.
Paper I – General Medicine.

Paper II – General Medicine
(including Psychiatry, Dermatology,
S.T.D., Tuberculosis & Chest Diseases).

PATTERN OF QUESTION PAPER : **

Essay Questions	-	2 x 15 Marks	= 30 Marks
Short Notes	-	10 x 5 Marks	= 50 Marks
Short Answer Questions	-	10 x 2 Marks	= 20 Marks
		Total =	100 Marks

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* XXV SAB held on 25-06-2003.

** MCQ's withdrawn from August 2008 onwards – 35th SAB held on 20.5.2008

PRACTICAL EXAMINATION……. **120 marks**

It should consist of :

1. Long Case - One	60 marks
2. Short Case - One	30 marks
3. Spotter – Two	30 marks
Total :	120 marks

VIVA …… **20 marks**

Charts……..……..	5 marks
Instruments ……	5 marks
X-ray …….	5 marks
Drug/ECG/CT/VSG…	5 marks
Total	20 marks

GUIDELINES FOR CLINICAL AND VIVA

In all subjects of III M.B.B.S. Part II, the number of candidates examined daily in clinical and viva shall not normally exceed 24.

Clinical I	-	One Long case	-	1 hour	60 marks
Clinical II	-	One Short case	-	15 min.	30 marks
		Two Spotters	-	15 min.	30 marks
				Total	120 marks

There shall be four Examiners working as two pairs to conduct the examination for two batches of students.

Viva Voce I – Specimens, drugs, instruments, X-rays, ECG/CT/VSG.

Viva Voce II – Charts and Theory.

Two pairs of Examiners shall conduct the Viva Examination.

MARKS QUALIFYING FOR A PASS

50% in Theory Written	-	100/200
50% in University Clinical	-	60/120
Viva ……..	-	--/20
35% in Internal Assessment Theory & Record…… 28/80 Clinical …….. 28/80		
------	=	56/160
Total 50% aggregate	=	250/500

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SYLLABUS FOR III M.B.B.S. PART-II

SURGERY

A. GENERAL SURGERY

Departmental Objectives :

At the end of the training, the undergraduate student should be able to :

a) Diagnose and appropriately treat common surgical ailments.

b) Identify situations calling for urgent or early surgical intervention and refer at the optimum time to the appropriate centers.

c) Requisition and interpret basic relevant investigations.

d) Provide adequate Pre and Post operative and follow up care of surgical patients.

e) Counsel and guide patients and relatives regarding need, implications and problems of surgery in the individual patient.

f) Develop adequate and right attitude in dealing with surgical problems of patients.

g) Provide emergency resuscitative measures in acute surgical situations including trauma.

h) Organise and conduct relief measures in situations of mass casualities.

i) Effectively participate in the National Health Programmes especially the Family Welfare Programme.

j) Discharge effectively medico-legal and ethical responsibilities.

k) Perform simple routine surgical procedures.

COURSE CONTENTS

1. GENERAL PRINCIPLES

MUST KNOW :

1) Wound Healing and Management; Scars: Hypertrophic scar and keloid; First aid management of severely injured.

2) Asepsis, antisepsis, sterilization.

3) Surgical sutures, knots, drains, bandages and splints.

4) Surgical infections and rational use of antibiotics : Causes of infection, prevention of infection, common organisms causing infection.

5) Boils, cellulitis, abscess, necrotising fasciitis.

6) Tetanus and Gas gangrene : Prevention and treatment.

7) Chronic specific infections : Tuberculosis, Filariasis, Leprosy.

8) Antibiotic therapy.

9) AIDS and Hepatitis B.

10) Surgical aspects of diabetes mellitus.

11) Bites and stings.

12) Universal Precautions.

DESIRABLE TO KNOW :

1) Hospital infection.

2) Mechanisms and management of missile, blast and gunshot injuries.

3) Organ transplantation : Basic Principles.
4) Nutritional support to surgical patients.

II. RESUSCITATION

MUST KNOW :

1) Fluid and Electrolyte balance.

2) Shock : Aetiology, Pathophysiology and Management.

3) Blood Transfusion : Indications and hazards.

4) Common post operative complications.

III. COMMON SKIN AND SUBCUTANEOUS CONDITIONS

MUST KNOW :

1) Sebaceous cyst, dermoid cyst, lipoma, Haemangioma, Neurofibroma, pre-malignant conditions of the skin, Basal cell carcinoma, squamous cell carcinoma, Naevi and malignant melanoma.

2) Sinuses and fistulae.

3) Pressure sores : Prevention and management.

IV. ARTERIAL DISORDERS

MUST KNOW :

Acute arterial obstruction : diagnosis and initial management; types of gangrene; diagnosis of chronic arterial insufficiency with emphasis on Buerger's disease, atherosclerosis; Investigation in case of arterial obstruction.

DESIRABLE TO KNOW :

Amputations.

NICE TO KNOW :

Vascular injuries : Basic principles of management.

V. VENOUS DISORDERS

MUST KNOW :

1. Varicose veins : diagnosis and management; deep venous thrombosis; diagnosis, prevention, principles of therapy; thrombophlebitis.

VI. LYMPHATICS AND LYMPH NODES

MUST KNOW :

Diagnosis and principles of management of lymphangitis, lymphedema, acute and chronic lymphadenitis; cold abscess; lymphomas; surgical manifestations of filariasis.

VII. BURNS

MUST KNOW :

Causes, prevention and first aid management; Pathophysiology; assessment of depth and surface area, fluid resuscitation.

DESIRABLE TO KNOW :

Skin cover; prevention of contractures.

VIII. SCALP, SKULL AND BRAIN

MUST KNOW :

Wounds of scalp and their management.

DESIRABLE TO KNOW :

Recognition, diagnosis and monitoring of patients with head injury including unconsciousness; Glasgow coma scale; recognition of acute cerebal compression.

XI. ORAL CAVITY, JAW, SALIVARY GLANDS

MUST KNOW :

1) Cleft lip and palate; Leukoplakia; retention cysts; ulcers of the tongue.

2) Features, diagnosis and basic principles of management of carcinoma lip, buccal mucosa and tongue, prevention and staging of oral carcinomas.

3) Salivary Glands: Acute sialoadenitis, neoplasms: diagnosis and principles of management.

DESIRABLE TO KNOW :

Epulis, cysts and tumors of jaw; maxillofacial injuries; salivary fistulae.

X. NECK

MUST KNOW :

1) Branchial cyst; cystic hygroma.

2) Cervical lymphadenitis : Non specific and specific, tuberculosis of lymph nodes, secondaries in neck.

3) Thoracic outlet syndrome : diagnosis.

XI. THYROID GLAND

MUST KNOW :

Thyroid : surgical Anatomy, Physiology, investigations of thyroid disorders; types, clinical features, diagnosis and principles of management of goitre, thyrotoxicosis and malignancies; thyroglossal cyst and fistula.

DESIRABLE TO KNOW :

Thyroiditis, Hypothyroidism.

XII. PARATHYROID AND ADRENAL GLANDS

DESIRABLE TO KNOW :

Clinical features and diagnosis of hyperparathyroidism, adrenal hyperfunction / hypofunction.

XIII. BREAST

MUST KNOW :

1) Surgical anatomy; nipple discharge; acute mastitis, breast abscess; mammary dysplasia; gynaecomastia; fibroadenomas.

2) Assessment and investigation of a breast lump.

3) Cancer breast : diagnosis, staging, principles of management.

XIV. THORAX

DESIRABLE TO KNOW :

1) Recognition and treatment of pneumothorax, haemothorax; pulmonary embolism; prevention / recognition and treatment; flail chest; stove in chest; postoperative pulmonary complications.

2) Principles of management of pyothorax; cancer lung.

XV. HEART AND PERICARDIUM

NICE TO KNOW :

Scope of cardiac surgery.

XVI. OESOPHAGUS

MUST KNOW :

Dysphagia : Causes, investigations and principles of management.

NICE TO KNOW :

Cancer Oesophagus : Principles of management.

XVII. STOMACH AND DUODENUM

MUST KNOW :

Anatomy, Physiology; Congenital hypertrophic pyloric stenosis; Aetiopathogenesis, diagnosis and management of : peptic ulcer, cancer stomach; upper gastrointestinal haemorrhage with special reference to bleeding varices and duodenal ulcer.

XVIII. LIVER

MUST KNOW :

Clinical features, diagnosis and principles of management of : Amoebic liver abscess, hydatid cyst and portal hypertension.

DESIRABLE TO KNOW :

Surgical anatomy; primary and secondary neoplasms of liver.

XIX. SPLEEN

MUST KNOW :

Splenomegaly : causes, investigations and indications for splenectomy; splenic injury.

XX. GALL BLADDER AND BILE DUCTS

MUST KNOW :

Anatomy, Physiology and investigations of biliary tree; clinical features, diagnosis, complications and principles of management of cholelithiasis and cholecystitis; obstructive jaundice.

NICE TO KNOW :

Carcinoma gall bladder, choledochal cyst.

XXI. PANCREAS

MUST KNOW :

Acute pancreatitis : clinical features, diagnosis, complications and management.

DESIRABLE TO KNOW :

Chronic pancreatitis, cancer pancreas.

XXII. PERITONEUM, OMENTUM, MESENTERY AND RETROPERITONEAL SPACE

MUST KNOW :

Peritonitis : causes, recognition and principles of management intraperitoneal abscesses.

DESIRABLE TO KNOW :

Laparascopy.

XXIII. SMALL AND LARGE INTESTINES

MUST KNOW :

1) Diagnosis and principles of treatment of : Intestinal amoebiasis, tuberculosis of intestine, carcinoma colon; lower gastrointestinal haemorrhage.

2) Ulcerative colitis, Premalignant conditions of large bowel.

3) Intestinal Obstruction : Types, aetiology, diagnosis and principles of management; paralytic ileus.

4) Acute Abdomen : Causes, approach, diagnosis and principles of management.

5) Appendix : Diagnosis and management of acute appendicitis, appendicular lump and abscess.

XXIV. RECTUM

MUST KNOW :

Carcinoma of rectum : diagnosis, clinical features and principles of management : indications and management of colostomy.

DESIRABLE TO KNOW :

Prolapse of rectum.

XXV. ANAL CANAL

MUST KNOW :

1) Surgical anatomy – Clinical features and management of : fissure, fistula in ano, perianal and ischiorectal abscess and haemorrhoids; Diagnosis and referral of anorectal anomalies.

2) Anal carcinoma.

XXVI. HERNIAS

MUST KNOW :

Clinical features, diagnosis, complications and principles of management of : umbilical, inguinal and femoral hernia.

DESIRABLE TO KNOW :

Epigastric hernia; omphalitis; umbilical fistulae; burst abdomen and ventral hernia.

XXVII. GENITO-URNIARY SYSTEM

MUST KNOW :

1) Symptoms and Investigations of the urinary tract.

2) Investigation of renal mass; diagnosis and principles of management of urolithiasis, hydronephrosis, pyonephrosis, perinephric abscess and renal tumours.

3) Renal tuberculosis.

4) Causes, diagnosis and Principles of management of haematuria, anuria and acute retention of urine.

5) Benign prostatic hyperplasia; diagnosis and management.

6) Diagnosis and principles of management of Phimosis, paraphimosis and carcinoma penis.

7) Diagnosis and principles of treatment of undescended testis, torsion testis, hydrocoele, haematocoele, pyocoele, epididymoorchitis and testicular tumours.

8) Varicocele.

DESIRABLE TO KNOW :

1) Carcinoma prostate.

2) Principles of management of urethral injuries.

SKILLS

1. Obtain a proper relevant history and perform a humane and thorough clinical examination including internal examinations (per-rectal and per-vaginal) and examinations of all organs / systems in adults and children.

2. Arrive at a logical working diagnosis after clinical examination.

3. Order appropriate investigations keeping in mind their relevance (need based) and cost effectiveness.

4. Plan and institute a line of treatment which is need based, cost effective and appropriate for common ailments taking into consideration :

    a. Patient,
    b. Disease,
    c. Socio-economic status,
    d. Institutional / Governmental guidelines.

5. Recognize situations which call for urgent or early treatment at secondary and tertiary centres and make a prompt referral of such patients after giving first aid or emergency treatment.

6. Demonstrate empathy and humane approach towards patients, relatives and attendants.

7. Develop a proper attitude towards patients, colleagues and other staff.

8. Demonstrate interpersonal and communication skills befitting a surgeon in order to discuss the illness and its outcome with patient and family.

9. Establish rapport and talk to patients, relatives and community regarding all aspects of medical care and disease.

10. Write a complete case record with all necessary details.

11. Write a proper discharge summary with all relevant information.

12. Write a proper referral note to secondary or tertiary centres or to other surgeons with all necessary details.

13. Assess the need for and issue proper medical certificate to patients for various purposes.

14. Maintain an ethical behaviour in all aspects of medical practice.

15. Appreciate patient's right to privacy.

16. Obtain informed consent for any examination / procedure.

17. Be able to do surface marking of common superficial arteries, veins, nerves and viscera.

18. Assess and manage fluid / electrolyte and acid base imbalance.

19. Adopt universal precautions for self protection against HIV and hepatitis and counsel patients.

20. Start i.v. line and infusion in adults, children and neonates.

21. Do venous cutdown.

22. Give intradermal / S.C. / I.M. / I.V. injection.

23. Insert and manage a C.V.P. line.

24. Conduct C.P.R. (Cardiopulmonary resuscitation) and first aid in newborns, children and adults including endotracheal intubation.

25. Pass a nasogastric tube.

26. Pass a stomach tube and do stomach wash.

27. Perform vasectomy.

28. Perform circumcision.

29. Perform reduction of paraphimosis.

30. Do Proctoscopy.

31. Do injection and banding of piles.

32. Incise and drain superficial abscesses; do dressing.

33. Manage superficial wounds and do suturing of superficial wounds & wound toilet.

34. Remove small cutaneous / subcutaneous swellings.

35. Control external haemorrhage.

36. Catheterise bladder in both males and females.

37. Perform nerve blocks like infiltration, digital, pudendal, paracervical and field block.

38. Relieve tension pneumothorax by inserting a needle.

39. Insert flatus tube.

40. Provide first aid to patients with peripheral vascular failure and shock.

41. Assess degree of burns and administer emergency management.

B. ORTHOPAEDICS

Departmental Objectives :-

At the end of the training, the student should be able to :

Describe the aetiology, pathophysiology, principles of diagnosis and management of common orthopaedic problems including emergencies.

COURSE CONTENTS

I. TRAUMA

DESIRABLE TO KNOW :

1) General principles in diagnosis, first aid and treatment methods of closed fractures and open fractures, open reduction including principles of internal fixation and external fixation, their complications. Preservation of amputated parts before transfer.

2) General principles of diagnosis and management of non-unions and delayed unions.

II. DIAGNOSIS, FIRST AID AND REFERRAL OF

MUST KNOW :

1) Fracture clavicle.

2) Anterior dislocation of shoulder.

3) Fracture femur neck, trochanter and shaft.

4) Haemarthrosis, traumatic synovitis.

5) General principles of management of hand injuries.

6) Polytrauma.

7) Complications of fracture : Fat embolism, Ischaemic contracture, myositis ossificans, osteodystrophy.

DESIRABLE TO KNOW :

1) Fracture proximal end, shaft, supracondylar, and internal condylar humerus.

2) Posterior dislocation of elbow.

3) Fracture shaft of radius and ulna.

4) Fracture of distal radius.

5) Traumatic dislocation of hip.

6) Fracture patella.

7) Fracture shaft tibia and fibula.

8) Injury to muscles and ligaments (shoulder arc syndrome, tennis elbow, ankle sprain).

9) Peripheral nerve injuries.

10) Spinal injuries.

11) Fracture of olecranon.

12) Monteggia fracture dislocation.

III. INFECTIONS OF BONES AND JOINTS

Diagnosis and Principles of Management :-

MUST KNOW :

1) Osteomyelitis : Pyogenic, tubercular, fungal (Madurafoot), syphilitic and parasitic infection of bone.

2) Arthritis : Septic and tubercular.

3) Tuberculosis of the spine.

DESIRABLE TO KNOW :

Leprosy – Principles of corrective surgery.

IV. TUMOURS

Diagnosis and Principles of Management :-

MUST KNOW :

1) Benign lesions : Multiple exostosis, Enchondroma, Osteoid osteoma, Simple bone cyst, Osteochondroma.

2) Malignant lesions : Osteosarcoma, Ewing's sarcoma, Giant cell tumour, Chondrosarcoma and Secondary deposits.

V. DEGENERATIVE DISEASES

Diagnosis and Principles of Management :-

DESIRABLE TO KNOW :

1) Osteoarthritis.

2) Spondylosis.

3) Degenerative disc diseases.

VI. CONGENITAL ANOMALIES

Diagnosis and Principles of Management :-

DESIRABLE TO KNOW :

1) Congenital dislocation hip.

2) Congenital talipes equinovarus.

3) Pes Planus.

VII. BONE DYSPLASIA

Diagnosis and Principles of Management :-

NICE TO KNOW :

1) Osteogenesis imperfecta.

2) Achondroplasia.

VIII. NEURO-MUSCULAR DISORDERS

Diagnosis and Principles of Management :-

DESIRABLE TO KNOW :

1) Post-polio residual Paralysis.

2) Cerebral palsy.

IX. OSTEOCHONDROSES

Diagnosis and Principles of Management :-

DESIRABLE TO KNOW :

Perthe's disease.

X. DEFORMITIES

MUST KNOW :

1) Scoliosis – diagnosis and referral.

2) Genu Varum and Valgum – diagnosis.

XI. PREVENTIVE ORTHOPAEDICS

XII. BASIC PRINCIPLES OF PHYSIOTHERAPY, OCCUPATIONAL THERAPY AND ORTHOTICS / PROSTHETICS

NICE TO KNOW :

1) Physiatric evaluation of common neurological diseases.

2) Physiatric evaluation of common orthopaedic conditions.

3) Principles of Cardiopulmonary Rehabilitation.

DESIRABLE TO KNOW :

1) Principles of Exercise therapy, Electrotherapy and Occupational therapy.

2) Principles of Orthotics and Prosthetics.

SKILLS

1. Obtain a proper relevant history, and perform a humane and thorough clinical examination in adults and children including neonates.

2. Arrive at a logical working diagnosis after examination.

3. Plan and institute a line of treatment which is need based, cost effective and appropriate for common ailments.

4. Recognise situations which call for urgent or early treatment at secondary and tertiary centres and make a prompt referral of such patients after giving first aid or emergency treatment.

5. Be able to do surface marking of common superficial arteries, veins, nerves and viscera.

6. Interpret skiagrams of common fractures and dislocations.

7. Apply skin traction.

8. Apply figure of 8 bandage for fracture clavicle.

9. Apply POP slabs / casts and splints.

10. Transport safely victims of accidents including those with spinal injury.

11. Reduce Colle's fracture.

12. Reduce shoulder dislocation.

13. Reduce tempero-mandibular joint dislocation.

14. Perform nerve blocks like infiltration, digital, pudendal, paracervical and field block.

C. RADIOTHERAPY

Departmental Objectives :-

At the end of the training in Radiotherapy, the student should be able to :

1) Exhibit awareness of the principles of radiotherapy, the radio-responsiveness of various tumours and management of common cancers like cervical, breast and oral cancers.

2) Refer for further consultation at appropriate time without delay.

3) State general complications of irradiation and their management.

4) List common chemotherapeutic drugs for cancer and their toxicity.

5) Implement health education programmes regarding prevention and early diagnosis of tobacco related cancers, cervical cancers and breast cancers.

6) Know the general outlines of use of radio-isotopes in diagnosis and therapy.

COURSE CONTENTS

MUST KNOW :

1) Physical principles of radiotherapy.

2) Principles of cancer chemotherapy.

3) Prevention of cancer.

4) Early diagnosis of cancer.

5) Principles of nuclear medicine.

6) Radio-responsiveness of various tumours.

7) Common radiation reactions and management.

8) Radio-isotopes in diagnosis and therapy.

D. ANAESTHESIOLOGY

Departmental Objectives :

At the end of the training, the student should be able to :

Perform cardio-pulmonary resuscitation with the available resources and transfer the patient to a bigger hospital for advanced life support.

Set up intravenous infusion.

Clear and maintain airway in an unconscious patient.

Administer oxygen correctly.

Perform simple nerve block.

Exhibit awareness of the principles of administration of general and local anaesthetics.

COURSE CONTENTS

MUST KNOW :

1) Cardiopulmonary resuscitation (C.P.R.) – basic and advanced, including use of simple ventilators.

2) Anatomy of upper airway; sites of respiratory obstruction and management of airway in an unconscious patient.

3) The pharmacology of local anaesthetics, their use and how to perform simple nerve blocks like,

   - Infiltration anaesthesia.
   - Digital block.
   - Ankle block.
   - Pudendal and paracervical blocks.

DESIRABLE TO KNOW :

1) Various methods of oxygen therapy and its indications.

2) Management of complication of regional anaesthesia.

3) The principles of administration of general anaesthetics.

SKILLS

1. Start i.v. line and infusion in adults, children and heonates.

2. Do venous cutdown.

3. Insert and manage a C.V.P. line.

4. Conduct C.P.R. (Cardiopulmonary resuscitation) and first aid in newborns, children and adults including endotracheal intubation.

5. Do lumbar puncture.

6. Perform nerve blocks like infiltration, digital, pudendal, paracervical and field block.

7. Administer O_2 by mask, catheter and O_2 tent and be able to handle O_2 cylinder.

EVALUATION:

INTERNAL ASSESSMENT :* **160 marks**

Theory	60 marks
Record	20 marks
Total (Theory & Record)	80 marks
Clinical	80 marks
Total I.A.	160 marks

PATTERN OF EXAMINATIONS :

THEORY :

Two Papers of three hours duration 100 marks each :

Paper I –	Section A :	General Surgery.
	Section B :	Orthopaedics.
Paper II –	Section A :	General Surgery.
	Section B :	Anaesthesiology, Dentistry & Radiology.

PATTERN OF QUESTION PAPER : **

Essay Questions	-	2 x 15 Marks	= 30 Marks
Short Notes	-	10 x 5 Marks	= 50 Marks
Short Answer Questions	-	10 x 2 Marks	= 20 Marks
		Total =	100 Marks

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* XXI SAB held on 28-2-2001

** MCQ's withdrawn from August 2008 onwards – 35th

GUIDELINES FOR CLINICAL AND VIVA

In all subjects of III M.B.B.S. Part – II, the number of candidates examined daily in clinical and viva shall not normally exceed 24.

CLINICAL :-

Clinical – I (General Surgery)		
One Long case	1 hour	60 marks
Clinical – II Two short cases	30 mts	40 marks
(One General Surgery + One ortho)		
Two Spotters	30 mts	20 marks
(One General Surgery + One ortho)		----------
Total		120 marks

Four Examiners: Three General Surgery, One Ortho (One Professor of General Surgery; One Prof. of Ortho from the same Institution) + two external examiners for General Surgery

VIVA 20 marks

MARKS QUALIFYING FOR A PASS

50% in Theory Written	-	100/200
50% in University Clinical	-	60/120
Viva	-	- /20
35% in Internal Assessment		
Theory & Record…… 28/80		
Clinical …….. 28/80		
------	-	56/160
Total 50% aggregate	=	250/500

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III M.B.B.S. – PART-II

OBSTETRICS AND GYNAECOLOGY

Departmental Objectives :-

At the end of the training in Obstetrics and Gynaecology, the M.B.B.S. student should be able to :

1) Appreciate the socio-cultural, economic and demographic factors that influence the practice of Obstetrics and Gynaecology.

2) Appreciate the principles of reproductive Anatomy and Physiology.

3) Understand the preconception, antenatal, intranatal and postnatal factors including drugs that affect the mother and foetus.

4) Recognise the changes and adaptation that occur in the mother during pregnancy, labour and puerperium.

5) Impart antenatal care, detect deviations from normal pregnancy and refer risk cases appropriately.

6) Manage normal labour, recognise the factors that may lead to complications and refer such cases appropriately.

7) Institute primary treatment in Obstetrics and Gynaecological emergencies.

8) Resuscitate and take adequate care of the newborn.

9) Assist couples with infertility and those requiring contraception.

10) Know the aetiopathology and management of menstrual abnormalities.

11) Know about the benign and malignant tumours of the genital tract and appreciate the need for screening and prevention.

12) Recognise the importance of infections and other diseases of the genital tract and give appropriate treatment.

13) Know about the displacements of genital tract and injuries.

14) Understand the implications of medicolegal and ethical issues concerning the speciality.

15) Acquire communication, decision making and managerial skills.

16) Acquire skills to perform Obstetrical and Gynaecological examinations and certain minor investigations and therapeutic operative procedures.

COURSE CONTENTS

A. OBSTETRICS

I. BROAD PERSPECTIVES

MUST KNOW :

1) Vital statistics, birth rate, maternal mortality, perinatal and neonatal mortality, live birth, still birth, abortion, period of viability including definitions of all the above.

II. ANATOMY OF THE FEMALE REPRODUCTIVE TRACT

MUST KNOW :

1) Basic Anatomy : Relationship to other pelvic organs. Applied Anatomy as related to Obstetric and Gynaecological surgery.

III. PHYSIOLOGY OF CONCEPTION

MUST KNOW :

1) Gametogenesis.

2) Ovulation, menstruation, fertilization and implantation.

IV. DEVELOPMENT OF FOETUS AND PLACENTA

MUST KNOW :

1) Basic embryology, factors influencing foetal growth and development; anatomy of placenta.

NICE TO KNOW :

Teratogenesis, placental barrier.

V. DIAGNOSIS OF PREGNANCY

MUST KNOW :

Clinical features; differential diagnosis; principles underlying the pregnancy tests.

DESIRABLE TO KNOW :

Immunological tests and their interpretation; ultrasonogram.

VI. MATERNAL CHANGES IN PREGNANCY

MUST KNOW :

1) Genital tract, cardiovascular system and haematology.

2) Respiratory and gastrointestinal system.

VII. ANTENATAL CARE

MUST KNOW :

1) Objectives of antenatal care; assessment of period of gestation; detect abnormality with the help of gravidogram; clinical monitoring of maternal and foetal well-being; detect normal foetal pelvic relation (obstetrical palpation); advise regarding nutrition; prescribing in pregnancy; immunization against tetanus; basic investigations.

2) Foetal well-being : biophysical monitoring; pelvic assessment.

VIII. COMPLICATIONS OF EARLY PREGNANCY

MUST KNOW :

1) Abortions : Definition, Types, Causes; Management of incomplete, inevitable abortion.

2) Ectopic Pregnancy : Clinical features; differential diagnosis of acute abdomen; principles of surgical management; causes and conservative management of ectopic pregnancy.

3) Hyperemesis Gravidarum : Aetiopathology; Impact on maternal and foetal health; principles of management.

4) Gestational Trophoblastic Tumours : Clinical features; differential diagnosis; principles of management; follow up; Laboratory investigations and ultrasonography.

IX. ANTEPARTUM HAEMORRHAGE

MUST KNOW :

1) Classification; clinical features; differential diagnosis; principles of management.

2) Aetiopathology; ultrasonography; complications and management.

X. ABNORMAL PRESENTATIONS AND CONTRACTED PELVIS

MUST KNOW :

1) Causes, salient features; principles of management of occipito-posterior, face and brow presentation;

2) Obstructed labour : definition, clinical features, prevention; mechanism of breech delivery.

XI. MULTIPLE PREGNANCIES

MUST KNOW :

1) Clinical features; diagnosis and complications; principles of management; investigations.

2) Causes; management.

XII. PREGNANCY –INDUCED HYPERTENSION

MUST KNOW :

1) Definition; early detection; investigations; principles of management of pregnancy – induced hypertension and eclampsia.

2) Aetiopathology; differential diagnosis of convulsions in pregnancy; complications of eclampsia.

XIII. ANAEMIA IN PREGNANCY

MUST KNOW :

Aetiology; classification; diagnosis; investigations; adverse effects on the mother and foetus; management during pregnancy and labour.

XIV. OTHER MEDICAL DISORDERS LIKE HEART DISEASE / DIABETES MELLITUS AND URINARY TRACT INFECTION

MUST KNOW :

1) Clinical features; early detection; effect of pregnancy on the disease and impact of the disease on pregnancy.

2) Complications of the diseases.

XV. NORMAL LABOUR

MUST KNOW :

1) Physiology; mechanism in occipito-anterior presentation.

2) Monitoring – Partogram; conduct of labour; pain relief.

XVI. MANAGEMENT OF THIRD STAGE OF LABOUR

MUST KNOW :

1) Complications : predisposing factors; prevention; management of atonic post partum haemorrhage.

2) Management of injuries to the lower genital tract.

XVII. UTERINE DYSFUNCTION

DESIRABLE TO KNOW :

Classification; recognition of uterine dysfunction; principles of induction and acceleration of labour.

XVIII. FOETAL DISTRESS AND FOETAL DEATH

MUST KNOW :

Clinical features; causes; diagnosis; principles of management; prevention.

XIX. HAEMOLYTIC DISEASE INCLUDING Rh ISO IMMUNISATION

MUST KNOW :

Mechanism; Prophylaxis; foetal complications.

XX. PUERPERIUM

MUST KNOW :

Physiology; clinical features; complications : recognition and principles of management; prevention of puerperal sepsis.

XXI. BREAST FEEDING

MUST KNOW :

Physiology of lactation; care of breasts; counselling regarding breast feeding; mastitis and breast abscess.

XXII. CARE OF NEWBORN

MUST KNOW :

Assessment of maturity; detect asphyxia; principles of resuscitation; common problems.

XXIII. MEDICAL TERMINATION OF PREGNANCY

MUST KNOW :

1) Legal aspects; indications; methods; complications.

2) Management of complications.

XXIV. CONTRACEPTION

MUST KNOW :

Various methods and devices; selection of patients; counselling of couples; side effects; failures and complications.

XXV. OPERATIVE OBSTETRICS

MUST KNOW :

Indications and steps of operation : Caesarean section; assisted breech delivery.

DESIRABLE TO KNOW :

1) Indications, technique and complications for episiotomy, vaccum extraction; low forceps, instrumental evacuation; menstrual regulation.

2) External cephalic version; cervical cerclage; intra-amniotic instillation.

XXVI. POST-CAESAREAN PREGNANCY

MUST KNOW :

Risks; identification of scar dehiscence.

B. GYNAECOLOGY

I. VAGINAL DISCHARGE - PHYSIOLOGICAL & PATHOLOGICAL

MUST KNOW :

Aetiology; characteristics; clinical recognition; investigation; treatment of common causes; genital hygiene.

II. ABNORMAL & EXCESSIVE MENSTRUAL BLEEDING

MUST KNOW :

Definitions; classification of causes; clinical features; principles of investigation; diagnosis and management.

III. AMENORRHOEA

MUST KNOW :

Causes; principles of management.

IV. DYSFUNCTIONAL UTERINE BLEEDING

MUST KNOW :

Aetiopathology; classification; clinical aspects and diagnosis; principles of investigation and management.

DESIRABLE TO KNOW :

Hormone therapy; management options.

V. FERTILITY AND INFERTILITY

MUST KNOW :

Causes in male and female; Physical examination of both female and male partners; essential investigations and interpretation.

DESIRABLE TO KNOW :

Management options; principles of Assisted Reproductive Technology (ART).

VI. ENDOMETRIOSIS & ALLIED STATES

MUST KNOW :

1) Aetiopathology; clinical features; principles of investigation and management.

2) Implications on health and fertility.

VII. GENITAL INJURIES & FISTULAE

DESIRABLE TO KNOW :

Causes; prevention; clinical features; principles of management.

VIII. GENITAL INFECTIONS

MUST KNOW :

1) STD, AIDS and Pelvic Tuberculosis.

2) Infections affecting individual organs.

3) Aetiology; Pathology; clinical features; differential diagnosis; principles of basic investigation; medical therapy.

DESIRABLE TO KNOW :

Long term implications; surgical management.

IX. DISPLACEMENTS OF UTERUS

MUST KNOW :

Genital Prolapse : Aetiology; clinical features; differential diagnosis; principles of management; preventive aspects.

X. BENIGN TUMOURS OF PELVIC ORGANS

MUST KNOW :

Ovarian and Uterine tumours : Types; Aetiopathology; clinical features; differential diagnosis; principles of management.

XI. MALIGNANCY OF GENITAL TRACT

MUST KNOW :

1) Cancer cervix uteri : Aetiopathology; clinical features; screening procedures; investigations; diagnosis; principles of management.

2) Epidemiological aspects.

DESIRABLE TO KNOW :

Management options.

XII. OPERATIVE GYNAECOLOGY

MUST KNOW :

1) Indications, technique and complications : Dilatation and Curettage (D & C); Fractional curettage; cervical biopsy.

2) Indications and steps of abdominal hysterectomy; surgery for ovarian tumours; vaginal surgery for utero-vaginal prolapse.

DESIRABLE TO KNOW :

Laparoscopy; colposcopy; hysteroscopy; management of postoperative complications.

SKILLS

1. Obtain a proper relevant history and perform a humane and thorough clinical examination including internal examinations (per – rectal and per – vaginal) in adults and children.

2. Arrive at a logical working diagnosis after examination.

3. Order appropriate investigations keeping in mind their need, relevance and cost effectiveness.

4. Plan and institute a line of treatment which is need based, cost effective and appropriate for common ailments taking into consideration :

   a. Patient.
   b. Disease.
   c. Socio-economic status.
   d. Institutional / Governmental guidelines.

5. Recognise situations which call for urgent or early treatment at secondary and tertiary centres and make a prompt referral of such patients after giving first aid or emergency treatment.

1. Demonstrate interpersonal and communications skills befitting a physician in order to discuss the illness and its outcome with patient and family.

2. Determine gestational age.

3. Maintain an ethical behaviour in all aspects of medical practice.

4. Obtain informed consent for any examination / procedure.

5. Motivate colleagues, community and patients to participate actively in national health programmes.

6. Write a complete case record with all necessary details.

7. Write a proper discharge summary with all relevant information.

8. Write a proper referral note to secondary or tertiary centres or to other physicians with all necessary details.

9. Assess the need for and issue proper medical certificates to patients for various purposes.

10. Organise antenatal, postnatal, well-baby and other clinics.

11. Plan and manage health camps such as family welfare camp.

12. Adopt universal precautions for self protection against HIV and hepatitis and counsel patients.

13. Do and examine a wet film of vaginal smear for Trichomonas and fungus.

14. Take a pap smear.

15. Take punch biopsy or cervix.

16. Conduct normal vaginal delivery.

17. Do artificial rupture of membranes.

18. Perform and suture episiotomies.

19. Apply outlet forceps.

20. Do post partum tubectomy.

21. Perform MTP in the first trimester and be able to do evacuation in incomplete abortion.

22. Insert and remove IUCD.

23. Be able to diagnose and provide emergency management of antepartum and postpartum haemorrhage.

TOPICS FOR INTEGRATED TEACHING

1. Family Planning.

2. Embryology – integrated foetal growth and development.

3. Acute abdomen.

4. Care of newborn.

5. Prescribing in pregnancy.

6. Nutrition & Anaemia in pregnancy.

7. Physiological changes.

8. Neonatal resuscitation problems.

EVALUATION

INTERNAL ASSESSMENT :* **160 marks**

Theory	60 marks
Record	20 marks
Total (Theory & Record)	80 marks
Clinical	80 marks
Total I.A.	160 marks

PATTERN OF EXAMINATIONS :

THEORY : Two Papers of three hours duration 100 marks each.

Paper I – Obstetrics including Social Obstetrics.

Paper II – Gynaecology and Family Welfare.

PATTERN OF QUESTION PAPER : ****

Essay Questions	-	2 x 15 Marks	= 30 Marks
Short Notes	-	10 x 5 Marks	= 50 Marks
Short Answer Questions	-	10 x 2 Marks	= 20 Marks
		Total =	100 Marks

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* XXV SAB held on 25-06-2003.

** MCQ's withdrawn from August 2008 onwards – 35th SAB held on 20.5.2008

PRACTICAL EXAMINATION……. **100 marks**

Viva – voce : 40 marks
(Objective Structural Clinical Examination).

There shall be two pairs of Examiners for two batches of students.

Clinical – I : Obstetrics – One long case – 1 hr.	50 marks
Clinical – II : Gynaecology – One long case – 1 hr.	50 marks
Total	100 marks
Viva – I : Obstetrics	20 marks
Viva – II : Gynaecology and Family Welfare	20 marks
Total	40 marks

The number of candidates examined daily in Clinical & Viva shall not normally exceed 24.

MARKS QUALIFYING FOR A PASS

50% in Theory written	-	100/200
50% in University Clinical	-	50/100
Viva	-	-/40
35% in I.A. : Theory + Record : 28/80 Clinical : 28/80	-	56/160
Total 50% aggregate	=	**250/500**

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III M.B.B.S. PART-II

PAEDIATRICS (Including Neonatology)

Departmental Objectives :

The objectives of training the undergraduate students in Paediatrics is to ensure that at the end of the training he / she will be able to :

Diagnose and appropriately treat common paediatric and neonatal illnesses.

Identify paediatric and neonatal illnesses and problems that require secondary and tertiary care and refer them appropriately.

Advise and interpret relevant investigations.

Counsel and guide patient's parents and relatives regarding the illness, the appropriate care, the possible complications and the prognosis.

Provide emergency cardiopulmonary resuscitation to new borns and older children.

Participate in the National programmes effectively.

Diagnose and effectively treat acute paediatric and neonatal emergencies.

Discharge medico – legal and ethical responsibilities.

Perform routine investigative and therapeutic procedures.

Motivate parents to consent for a diagnostic autopsy as well as for Invasive procedures.

COURSE CONTENTS

I. VITAL STATISTICS & NATIONAL CHILDHOOD AND ADOLESCENT PROGRAMMES

MUST KNOW :

1) Introduction to Paediatrics with special reference to age related disorders.

2) Definition of mortality rates and ratios : infant, perinatal, maternal, and neonatal.

3) Causes and prevention of infant, perinatal and neonatal mortality.

4) ICDS and IMNCI.

DESIRABLE TO KNOW :

National programmes on maternal and child health, RCH – I and RCH – II Programmes.

II. GROWTH AND DEVELOPMENT

MUST KNOW :

Anthropometric and developmental assessment, normal and abnormal growth and development patterns, interpretation of growth curves and road to health chart.

DESIRABLE TO KNOW :

Psychological and behavioural problems. Approach to a child with growth retardation and short stature.

III. NUTRITION

MUST KNOW :

1) Normal requirements of protein, carbohydrate, fat, minerals, vitamins and trace elements for newborns, children, pregnant and lactating mothers.

2) Exclusive breast feeding, advantages of breast feeding, infant feeding, weaning diets, planning of preterm nutrition, therapeutic diet chart.

3) Recognition and treatment of nutritional deficiency disorders.

DESIRABLE TO KNOW :

1) Protein energy malnutrition : classification, causes, management including that of complications.

2) National Nutritional and other child health and welfare programmes.

3) Management of problems related to lactation failure.

4) Hyper – vitaminosis.

IV. IMMUNISATION

MUST KNOW :

1) National Immunisation programmes.

2) Polse polio programme.

3) Vaccines and vaccine – preventable diseases.

4) Principles of immunisation.

5) Vaccine preservation and cold chain.

6) Indications, contra-indications, adverse reaction and complications.

7) Investigations and reporting of vaccine preventable diseases.

8) Other newer vaccines– Haemophilus Influenza type b, pneumococcal, meningococcal, Varicella vaccine, Hepatitis A & B., Rubella vaccine, Influenza virus vaccine.

V. INFECTIOUS DISEASES

MUST KNOW :

1) Natural history, clinical course, signs, symptoms, investigations, management and prevention of common bacterial, viral, parasitic and fungal infections with special reference to vaccine preventable diseases.

2) Tuberculosis, mumps, rubella.

3) Typhoid, chicken pox and other common childhood exanthematous diseases, and parasitic infestations like Giardiasis, Malaria.

4) Intestinal Helminthiasis.

5) Bacterial : Typhoid
Tuberculosis

6) Viral : Chicken Pox, Mumps, Common Childhood exanthematous Fevers like measles.

7) Others : Giardiasis
Amoebiasis
Malaria
Leptospirosis - Rubella
- Paediatric HIV
- Dengue viral Fever.

DESIRABLE TO KNOW :

1) Kala Azar,

2) Filariasis.

3) Brucellosis.

VI. CENTRAL NERVOUS SYSTEM

MUST KNOW :

1) Clinical diagnosis, investigations and treatment of acute CNS infections.
2) Meningitis including tuberculosis.
3) Encephalitis.
4) Seizure disorders.
5) Febrile convulsions.
6) Rheumatic Chorea.
7) Infantile hemiplegia.
8) Cerebral palsy.
9) Mental retardation.
10) Hydrocephalus.

DESIRABLE TO KNOW :

1) Post encephalitic sequelae.
2) Post meningitic sequeale.
3) Microcephaly.

NICE TO KNOW :

Degenerative diseases.

VIII. GASTROINTESTINAL SYSTEM

Clinical diagnosis, relevant investigations and management of :

MUST KNOW :

1) Gastro – oesophageal reflux.
2) GI bleeding.
3) Common hepatic disorders : Acute & chronic Hepatitis.
4) Acute and Chronic diarrhea and their complications.
5) Hepatosplenomegaly.

DESIRABLE TO KNOW :

1) Obstructive Jaundice.
2) Portal Hypertension.
3) Abdominal tuberculosis.
4) Acute abdomen including surgical causes and paralytic Ileus.
5) Chronic constipation and rectal bleeding.
6) Budd – Chiari syndrome.
7) Metabolic disorders like Wilson's disease.

NICE TO KNOW :

Short gut syndrome.

VIII. GENITOURINARY SYSTEM

MUST KNOW :

1) Clinical features, investigations, complications and management of acute glomerulonephritis; nephrotic syndrome.
2) Urinary tract infection – acute and recurrent.

3) Acute and chronic renal failure.

IX. CARDIOVASCULAR SYSTEM

MUST KNOW :

1) Clinical features, diagnosis, investigation, prevention and treatment of acute rheumatic fever.

2) Rheumatic heart disease and complications.

3) Recognition of congenital acyanotic and cyanotic heart diseases and management of cyanotic spells.

4) Diagnosis and management of congestive cardiac failure.

DESIRABLE TO KNOW :

1) Prevention, recognition and treatment of bacterial endocarditis.

2) Clinical features, diagnosis, prevention and treatment of pericardial effusion and myocarditis.

X. RESPIRATORY SYSTEM

MUST KNOW :

1) Epidemiology, clinical features, investigation and management of acute respiratory infections of upper and lower tract.

2) Diagnosis and management of acute bronchial asthma, status asthmaticus, chronic suppurative lung diseases, Bronchiectasis, Bronchopnea, Pneumonitis.

3) Diagnosis and appropriate management of foreign body aspiration.

DESIRABLE TO KNOW :

Cystic fibroisis.

XI. ENDOCRINE SYSTEM

MUST KNOW :

1) Clinical recognition, causes, laboratory diagnosis, prevention and management of Hypothyroidism (cretinism).

2) Short Stature.

DESIRABLE TO KNOW :

1) Juvenile diabetes mellitus.

2) CAH (Congenital Adrenal Hyperplasia).

XII. HAEMATOLOGICAL SYSTEM

MUST KNOW :

1) Recognition of clinical features, diagnosis, laboratory investigations and management of Nutritional and Haemolytic Anaemias.

2) Diagnosis and basic investigations of bleeding and coagulation disorders in newborn and older children.

3) Leukaemia.

4) Lymphomas.

XIII. NEONATOLOGY

MUST KNOW :

1) Foetal physiology of normal pregnancy. Identification of antenatal, intrapartum and immediate postnatal risk factors.

2) Definition, Identification and classification of high risk neonate, Neonatal resuscitation, Gestational age assessment and Care of the normal newborn.

3) Infection.

4) Haemorrhagic Disease of Newborn.

5) Respiratory distress syndrome.

6) Breast feeding, Baby friendly initiative and Feeding difficulties.

7) Birth injuries.

8) Anaemia and Jaundice.

9) CHD (Congenital Heart Diseases).

10) Neonatal seizures.

11) Birth asphyxia.

12) Management of meconium aspiration syndrome.

13) Care of the preterm and low birth weight infant : temperature maintenance, feeding, prevention of complications, appropriate method of transfer to tertiary centre.

14) Identification and referral of neonates with congenital malformations like cleft lip, cleft palate, tracheo-oesophagal fistula, diaphragmatic hernia, anorectal anomalies.

15) IHPS.(Infantile Hypertrophic pyloric stenosis.)

DESIRABLE TO KNOW :

1) Management of neonatal problems : Transient metabolic disorders.

2) Minor developmental defects.

3) Infants of diabetic mothers.

XIV. GENETIC DISORDERS

MUST KNOW :

Common Genetic Disorders like down's syndrome.

DESIRABLE TO KNOW :

Genetic Counselling.

XV. EMERGENCY PAEDIATRICS

Clinical features, aetiology, laboratory diagnosis, prevention and management of :

MUST KNOW :

1) Status asthmaticus.

2) Status epilepticus.

3) Acute pulmonary oedema.

4) Hypertensive emergencies.

5) Peripheral circulatory failure due to dehydration, haemorrhage and shock.

6) Cardiac failure.

7) Cyanotic spells, Scorpion and snake envenomation, and Common poisoning including neem oil, castor oil and accidental kerosene ingestion and RTA in Children.

SKILLS

MUST KNOW :

1) Obtain a proper relevant history and perform a humane and thorough clinical examination of all organs / systems in children including neonates.

2) Arrive at a logical working diagnosis after clinical examination.

3) Order appropriate investigations keeping in mind their need, relevance and cost effectiveness.

4) Plan and institute a line of treatment which is need based, cost effective and appropriate for common ailments taking into consideration :

   a. Patient,

   b. Disease,

   c. Soci-economic status,

   d. Institutional / Governmental guidelines.

5. Recognise situations which call for urgent or early treatment at secondary and tertiary centres and make a prompt referral of such patients after giving first aid or emergency treatment.

6. Monitor growth and development of children and differentiate normal from abnormal.

7. Assess and manage fluid / electrolyte and acid – base imbalance.

8. Manage diarrhoeas / dysenteries : Assess dehydration ; prepare and administer oral rehydration therapy (ORT).

9. Detect and institute corrective measures for nutritional deficiency.

10. Write a complete case record with all necessary details.

11. Write a proper discharge summary with all relevant information.

12. Write a proper referral note to secondary or tertiary centres or to other physicians with all necessary details.

13. Organise and give training in first aid.

14. Adopt universal precautions for self protection against HIV and hepatitis and counsel patients.

15. Maintain cold chain for vaccines.

16. Perform and read Mantoux test.

17. Start i.v. line and infusion in children and neonates.

18. Give intradermal / S.C. / I.M. / I.V. injection.

19. Pass a nasogastric tube.

20. Manage hyperpyrexia.

21. Conduct CPR (cardiopulmonary Resuscitation) and first aid in all new borns and children including endotracheal intubation

DESIRABLE TO KNOW :

1) Demonstrate empathy and humane approach towards patients, relatives and attendants.

2) Develop a proper attitude towards patients, colleagues and other staff.

3) Maintain an ethical behaviour in all aspects of medical practice.

4) Organise antenatal, postnatal, new born and other clinics.

5) Motivate colleagues, community and patients to actively participate in national health programmes.

6) Insert and manage a C.V.P. line.

7) All Neonatal procedures including exchange transfusion.

NICE TO KNOW :

Do venous cutdown.

EVALUATION

INTERNAL ASSESSMENT :* **50 marks**

Theory ……	20 marks
Record ……	10 marks
Clinical ……	20 marks
Total	50 marks

UNIVERSITY EXAMINATION PATTERN :

THEORY : One Paper of three hours duration - 100 marks each.

PATTERN OF QUESTION PAPER : **

Essay Questions	-	2 x 15 Marks	= 30 Marks
Short Notes	-	10 x 5 Marks	= 50 Marks
Short Answer Questions	-	10 x 2 Marks	= 20 Marks
		Total =	100 Marks

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* XXV SAB held on 25-06-2003.

** MCQ's withdrawn from August 2008 onwards – 35th SAB held on 20.5.2008

PRACTICAL EXAMINATION……. **80 marks**

One Hour

1 Long Case …….. 40 mts.	:	40 marks
1 Short Case …….. 20 mts.	:	20 marks
2 Spotters ……20 mts. (2x10)		20 marks

Total	:	80 marks

Viva–voce – I : (Instruments, Drugs, X-rays, Vaccines, Nutrition)	:	20 marks
Viva-voce – II : Theory.		

Four examiners shall conduct the examination in two pairs for two batches of students.

Two pairs of Examiners shall conduct the Viva voce Examination.

Maximum No. of candidates examined daily in Clinical & Viva shall not normally exceed 24.

MARKS QUALIFYING FOR A PASS

50% of Theory written	-	50/100
35% in Internal Assessment	-	18/50
50% of University Clinical	-	40/80
Viva voce	-	--/20
Total 50% of aggregate	=	**125/250**

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INTERNSHIP

1. GENERAL OBJECTIVE

Internship is a phase of training wherein a graduate is expected to learn actual practice of medical and health care and acquire skills under supervision so that he / she may become capable of functioning independently.

2. SPECIFIC OBJECTIVES

At the end of the internship training, the student shall be able to :

i. Diagnose clinically common disease conditions encountered in practice and make timely decision for referral to higher level:

ii. Use appropriately the essential drugs, infusions, blood or its substitutes and laboratory services;

iii. Manage all types of emergencies – medical, surgical, obstetric, neonatal and paediatric by rendering primary level care;

iv. Demonstrate skills in monitoring of the National Health Programmes and Schemes, oriented to provide preventive and promotive health care services to the community.

v. Develop leadership qualities to function effectively as a leader of the health team organized to deliver the health and family welfare service in existing socio-economic, political and cultural environment;

vi. Render services to the chronically sick and disabled (both physical and mental) and to communicate effectively with the patient and the community.

3. TIME DISTRIBUTION

Time allocation to each discipline is approximate and shall be guided more specifically by the actual experience obtained. Thus a student serving in a district or taluk hospital emergency room may well accumulate skills in Surgery, Orthopaedics, Medicine, Obstetrics and Gynaecology and Paediatrics during even a single night on duty. Responsible authorities from the medical college shall adjust the experience to maximize the intern's opportunities to practice skills in patient care in rough approximation to the time allocation suggested below :-

Compulsory

Community Medicine	:	2 months
Medicine including 15 days of Psychiatry	:	2 months.
Surgery including 15 days of Anesthesia	:	2 months.
Obstetrics and Gynaecology including Family Welfare Planning	:	2 months.
Paediatrics	:	1 month.
Orthopedics including PMR	:	1 month.
ENT	:	15 days.
Ophthalmology	:	15 days.
Casualty	:	15 days.
Elective Postings (1 x 15 days)	:	15 days.

Subjects for Elective Posting will be as follows:

i. Dermatology and Sexually Transmitted Diseases.
ii. Tuberculosis and Respiratory Diseases
iii. Radio -Diagnosis.
iv. Forensic Medicine
v. Blood Bank
vi. Psychiatry

Note: Structure internship with college assessment at the end of the internship.

4. OTHER DETAILS

i. All parts of the internship shall be done as far as possible in institutions within India, recognized for this purpose by the medical council of India.

ii. Every candidate will be required after passing the final M.B.B.S. examination to undergo compulsory rotational resident internship to the satisfaction of the college authorities and the medical university for a period of 12 months so as to be eligible for the award of the degree of Bachelor of Medicine and Bachelor of Surgery (M.B.B.S.) and full registration with the Medical Council.

iii. The University shall issue a provisional M.B.B.S. pass certificate on passing the final examination.

iv. The State Medical Council will grant provisional registration to the candidate on production of the provisional M.B.B.S. pass certificate. The provisional registration will be for a period of one year. In the event of shortage or unsatisfactory work, the period of provisional registration and the compulsory rotating resident internship may be suitably extended by the appropriate authorities.

v. The intern shall be entrusted with clinical responsibilities under the direct supervision of senior medical officers. They shall not be working independently.

vi. Interns will not issue a medical certificate or a death certificate or a medicolegal document.

vii. In recognition of the importance of hands-on-experience, responsibility for patient care and skill acquisition, internship should be increasingly scheduled to utilize clinical facilities available in the District Hospital, Taluk Hospital, Community Health Centre and Primary Health Centre in addition to the Teaching Hospital.

viii. The internee should commence the internship as per the postings given by the Dean / Principal of the College immediately on the due date without any delay.

ix. The internee should undergo the internship continuously without any break in each speciality and to avoid piecemeal training. The internee should have completed not less than 50% of the internship continuously as per the postings ordered by the Dean / Principal of the college concerned initially without any break. If the internee fulfills the above criteria and had a break in internship for the reasons of marriage / maternity and on genuine medical illness supported with documentary evidence for 90 days and above, necessary condonation proposal along with a processing fee of Rs. 500 /- and condonation fee of Rs. 1000 /- per year or part thereof shall be sent to this University and orders obtained therefore before permitting the internee to commence the internship <u>from the beginning of the posting</u> in the speciality in which he / she has not completed and discontinued.

x. The following criteria are being fixed for the cases for which the University shall condone the break and to order for redoing the full period of internship :-

a. Late commencement of internship with a break for less than 90 days,

b. If the break is for more than two spells of three months each,

c. Piecemeal completion in each speciality,

d. Not completed the 50% of postings before the break and the break is 90 days and above.

xi. No internship transfer is permissible for the CRRI and training has to be undergone in the same College / Institution or Hospital where they have undergone the course.

Provided that where an intern is posted to District / Sub-Divisional Hospital for training, there shall be a committee consisting of representatives of the College / University, the State Government and the District administration who shall regulate the training of such trainee;

Provided further that for such trainee a certification of satisfactory completion of training shall be obtained from the relevant administrative authorities which shall be countersigned by the Principal / Dean of college.

xii. Adjustment to enable a candidate to obtain training in elective clinical subjects may be made.

xiii. Each medical college shall establish links with one entire district extending out-reach activities. Similarly, Re-orientation of Medical Education (ROME) scheme may be suitably modified to assure teaching activities at each level of district health system which will be coordinated by the Dean of the medical college.

Out of one year, 6 months shall be devoted to learning tertiary care being rendered in teaching hospital / district hospital suitably staffed with well qualified personnel, 3 months of secondary care in a small District or Taluk Hospital / Community Health Centre and 3 months in Primary Health care out of which 2 months should be in Primary Health Centre with full attention to the implementation of National Health Programmes at the Community level. One month of primary care training may be in the form of preceptorship with a practicing family physical or voluntary agency or other primary health care provider.

xiv. One year’s approved service in the Armed Forces Medical Services, after passing the final M.B.B.S. examination shall be considered as equivalent to the pre – registration training detailed above; such training shall, as far as possible be at the Base / General Hospital.

5. ASSESSMENT OF INTERNSHIP

i. The Intern shall maintain a record of work which is to be verified and certified by the medical teacher under whom he works. Apart from scrutiny of the record of work, assessment and evaluation of training shall be undertaken by an objective approach using situation tests in knowledge, skills and attitude during and at the end of each period of posting. Based on the record of work and periodic assessment the Dean / Principal shall issue a certificate of satisfactory completion of training, following which the University shall award the M.B.B.S. degree or declare him eligible for it. The graduate is then qualified for full registration with the state Medical Council.

ii. Satisfactory completion of each posting shall be determined on the basis of the following :

1. Proficiency of knowledge SCORE 0-10

2. Competency in skills as acquired by :

   a. Performing procedures
   b. Assisting in procedures
   c. Observing procedures SCORE 0-10

3. a. Responsibility, punctuality, initiative; follow – up reports,
   b. Research aptitude,
   c. Capacity to work in a team – Behaviour with colleagues, nursing staff and relationship with paramedical staff; Participation in discussions.
   SCORE 0-10

TOTAL SCORE 0-30

Performance may be graded under each head as follows ;

Poor	/ Below average	/ Average	/ Above average	/Excellent
<3	<5	5 & above	7 & above	9 to 10

An intern shall be required to have a minimum score of 5 in each of the three heads mentioned above failing which the concerned posting shall be taken as unsatisfactory. Each area of unsatisfactory score (below 5) shall result in the repetition of one third of the total period of posting in the concerned subject.

6. ASSESSMENT OF INTERNSHIP

Some guidelines in the implementation of the training programme are given below for each discipline.

(I) COMMUNITY MEDICINE

Interns shall acquire skills to deal effectively with an individual and the community in the context of primary health care. This is to be achieved by hands on experience in the district hospital, taluk hospital and primary health care. The details of training are as under :-

(i) COMMUNITY HEALTH CENTRE / DISTRICT HOSPITAL

1. During this period of internship, an intern must acquire :

   a. Clinical competence for diagnosis of common ailments, use of bed side investigation and primary care techniques.
   b. Gain information on 'Essential drugs' and their usage.
   c. Recognise medical emergencies, resuscitate and institute initial treatment and refer to suitable institution / department.

2. Undergo specific Government of India / Ministry of Health and Family Welfare approved training using Government of India prescribed training manual for Medical Officers in National Health Programmes e.g., child survival and safe mother hood. EPI, CDD, ARI, FP, ANC, Safe delivery, Tuberculosis, Leprosy and others as recommended by the Ministry of Health and Family Welfare :

   a. gain full expertise in immunization against infectious disease.

   b. participate in programmes in prevention and control of locally prevalent endemic diseases including nutritional disorders.

   c. learn skills first hand in family welfare planning procedures.

   d. learn the management of National Health Programmes.

3. Be capable of conducting a survey and employ its findings as a measure towards arriving at a community diagnosis.

4. a. conduct of programmes on health education.

b. gain capabilities of using Audiovisual aids.

c. acquire capability of utilization of scientific information for promotion of community health.

5. Be capable of establishing linkages with other agencies as water supply, food distribution and other environmental / social agencies.

6. Acquire quality of being professional with dedication, resourcefulness and leadership.

7. Acquire managerial skills by delegation of duties to paramedical staff and other health professionals and their supervision.

(ii) TALUK HOSPITAL

Besides acquiring clinical skill in the evaluation of the patient with the environment and initiation of primary care, an intern shall :

1. effectively participate with other members of the health team with qualities of leadership;
2. make a community diagnosis in specific situations such as epidemics and institute relevant control measures for communicable diseases;

3. develop capability for analysis of hospital based morbidity and mortality statistics;

4. use of essential drugs in the community with the awareness of availability, cost and side effects;

5. provide health education to an individual / community on :

   a. tuberculosis.

   b. small family spacing by use of appropriate contraceptives,

   c. applied nutrition and care of mothers and children,

d. Immunization,

e. participation in school health programme.

f. HIV/AIDS.

(iii) PRIMARY HEALTH CENTRE

1. Initiate or participate in Family composite health care (birth to death), Inventory of events;

2. Participate in all the modules on field practice for community health e.g., safe motherhood, nutritional surveillance and rehabilitation, diarrohea disorders, etc.,

3. acquire competence in diagnosis and management of common ailments e.g., malaria, tuberculosis, leprosy, enteric fever, rheumatic heart disease, congestive heart failure, hepatitis, meningitis, acute renal failure etc.,

4. acquire proficiency for Family Welfare Programmes (antenatal care, normal delivery, contraception care of newborn and under five including immunisation).

(II) GENERAL MEDICINE

1. Interns shall acquire the following training during their term :

Acquire competence for clinical diagnosis based on history, physical examination and relevant laboratory investigation and institute appropriate line of management; This would include diseases common in tropics (parasitic, bacterial or viral infections, nutritional disorders, including dehydration and electrolyte disturbances) and system illnesses.

2. The intern shall have assisted as care team in intensive care of cardiac, respiratory, hepatic, neurological and metabolic emergencies.

3. The intern shall be able to conduct the following laboratory investigations:

a. Blood : (Routine haematology smear and blood groups);
b. Urine : (Routine chemical and microscopic);

c. Stool : (for ova / cyst and occult blood);
d. Sputum and throat swab for gram stain or acid fast stain;
e. Cerebrospinal Fluid (CSF) for smear.

4. Conduct following diagnostic procedures :

a. Urethral catheterization; Proctoscopy;
b. Opthalmoscopy; Otoscopy; Indirect laryngoscopy.

5. Therapeutic procedures; Insertion of Ryle's Tube;

Pleural and ascitic tap, CSF tap by lumbar puncture; installing of airway tube, Oxygen administration, etc.

6. Biopsy Procedures :

Liver, Kidney, Skin, Nerve, Lymph node and muscle – biopsy, Bone marrow aspiration; Biopsy of malignant lesions on surface, Nasal / nerve / skin smear for leprosy.

7. a. Familiarity with usage of life saving procedures including use of aspirator, respirator and defibrillator.

b. Competence in interpretation of different monitoring devices such as cardiac monitor, blood gas analysis, etc.

8. Participate as a team member in total health care of an individual including appropriate follow-up and social rehabilitation.

9. Other competencies as indicated in general objectives.

(III) PAEDIATRICS

The details of the skills that an intern shall acquire during his / her tenure in the department of Paediatrics are as follows :

The intern shall be able to :

1. diagnose and manage common childhood disorders including neonatal disorders and acute emergencies (enquiry from parents of sick children), examining a sick child and making a record of information;

2. carry out activities related to patient care such as laboratory work, investigative procedures and use of special equipments. The details are given as under :

    a. diagnostic techniques : (including from femoral vein and umbilical cord) abscess, cerebrospinal fluid, urine, pleura and peritoneum and common tissue biopsy techniques;

    b. techniques related to patient care : immunization, perfusion techniques, feeding procedure, tuberculin testing and breast feeding counselling;

    c. Use of equipment : vital monitoring, temperature monitoring, resuscitation at birth and care of children receiving intensive care;

3. screening of new born babies and those with objective risk factors for any anomalies and steps for preventive measures in future.

4. plan in collaboration, with parents and individual; collective surveillance of growth and development of new born babies, infants and children so that he / she is able to :

    a. recognise growth abnormalities;

    b. recognise anomalies of psychomotor development;

    c. detect congenital abnormalities.

5. Assess nutritional and dietary status of infants and children and organize prevention, detection and follow up of deficiency disorders both at individual and community level such as :

    a. protein – energy malnutrition;

    b. Deficiencies of vitamins especially A, B, C, and D;

    c. Iron deficiency.

6. Institute early management of common childhood disorders with special reference to paediatric dosage and oral rehydration therapy.

7. Participate actively in public health programme oriented towards children in the community.

(IV) GENERAL SURGERY

An intern is expected to acquire following skills during his / her posting :

A. Diagnose with reasonable accuracy all surgical illnesses including emergencies.

B. a. resuscitate a critically injured patient and a sever burns patient,

b. control surface bleeding and manage open wound.

C. a. monitor patients of head, spine, chest, abdominal and pelvic injury;

b. institute first – line management of acute abdomen.

D. a. perform venesection,

b. perform tracheostomy and endotracheal intubation,

c. catheterize patients with acute urinary retention or perform trocar cyctostomy,

d. drain superficial abscesses,

e. suturing of wound,

f. perform circumcision,

g. biopsy of surface tumours,

h. perform vasectomy.

(V) EMERGENCY DEPARTMENT (CASUALTY)

The student intern should be provided adequate experience and trainings to manage the common emergency conditions which are encountered in the casuality department of the hospital. These are :

1. Accident & Trauma – mostly from road traffic accident and industrial hazards causing injury to the soft tissues of the body, fracture of bones, partial or total loss of limbs, injury to the nerves / blood vessels, chest injuries leading to rib fracture with or without pneumothorax or haemothorax, head injuries, crush injuries, etc.

2. Medical emergency conditions – which include acute shock and cardio – respiratory insufficiency, heart attack, cerebrovascular accident, convulsions, acute renal shut down, bronchial asthma with spasmodic bronchitis, acute endocrinal insufficiencies, hyperpyrexia, coma, etc.

3. Surgical emergency conditions – which include acute abdominal conditions like ruptured internal organs / blood vessels, acute appendicitis, pancreatitis, obstructed hernia, torsion, strangulation, urinary obstruction, intestinal obstruction, etc.

4. Intoxication and poisoning with drugs, chemicals, etc., allergic reactions.

5. Burns.

6. Obstetrical and Gynaecological conditions – like normal labour pain, abnormal labour, obstructed labour, spontaneous abortion, bleeding pv in pregnancy, other acute pelvic conditions like torsion, rupture, bleeding, etc.

7. Paediatric conditions like low birth weight, severe dehydration, hyperpyrexia, convulsions, foreign body intrusion in body orifices, epistaxis, colic, etc.

8. Ophthalmic conditions – like injury to eye, raised intraocular pressure, sudden blurring of vision, etc.

9. E.N.T. conditions – like foreign bodies in nose / ear, injury to nose / ear, bleeding from nose / ear, airway obstruction, etc.

10. Miscellaneous conditions – like drowning, snake bites, arthropod bites, electrical injuries, heat stroke, cold injury, blast injury, acute dental conditions, etc.

11. Medico legal conditions – like attempted suicide, homicides, gunshot injury, penetrating injury, etc.

12. Psychiatric conditions – acute states of mental illnesses.

CPR : In addition to the above, during the four weeks of posting in the Casualty / Emergency Department, the intern should be trained in the techniques of Cardio Pulmonary Resuscitation.

(VI) OBSTETRICS AND GYNAECOLOGY

Technical skills that interns are expected to learn :

1. Diagnosis of early pregnancy and provision of antenatal care;

2. Diagnosis of pathology of pregnancy related to :-

   a. abortions;

   b. ectopic pregnancy;

   c. tumours complicationing pregnancy;

   d. acute abdomen in early pregnancy;

   e. hyperemesis gravidarum;

3. Detection of high risk pregnancy cases and suitable advice e.g., PIH, hydramanios, antepartum haemorrhage, multiple pregnancies, abnormal presentations and intra-uterine growth retardation;

4. Antenatal pelvic assessment and detection of cephalopelvic disproportion;

5. Induction of labour and amniotomy under supervision;

6. Management of normal labour, detection of abnormalities, postpartum haemorrhage and repair of perineal tears;

7. To assist in forceps delivery;

8. To assist in caesarean section and postoperative care thereof;

9. Detection and management of abnormalities of lactation;

10. To perform non-stress test during pregnancy;

11. Per speculum, per vaginum and per rectal examination for detection of common congenital, inflammatory, neoplastic and traumatic conditions of vulva, vagina, uterus and ovaries;

12. Medicolegal examination in Gynaecology and Obstetrics;

13. to perform the following procedures :-

    a. Dilatation and curettage and fractional curettage,

    b. Endometrial biopsy,

    c. Endometrial aspiration.

    d. Pap smear collection,

    e. Intra Uterine Contraceptive Device (IUCD) insertion,

    f. Minilap ligation,

    g. Urethral catheterization,

    h. Suture removal in postoperative cases,

    i. Cervical punch biopsy.

14. To assist in major abdominal and vaginal surgery cases in Obstetrics and Gynaecology.

15. To assist in followingup post-operative cases of Obstetrics and Gynaecology such as :-

    a. Colposcopy,

    b. First trimester MTP- procedures including manual vacuum aspiration (MVA).

    c. Second trimester Medical Termination of Pregnancy (MTP) procedures,Emcredyl, Prostaglandine Instillation.

16. To evaluate and prescribe oral contraceptive.

(VII) OTO RHINO LARYNGOLOGY (E.N.T.)

1. Interns shall acquire ability for a comprehensive diagnosis of common Ear, Nose and Throat (E.N.T.) diseases including the emergencies and malignant neoplasms of the head and neck.

2. He / she shall acquire skills in the use of head mirror, Otoscope and indirect laryngoscopy and first line of management of common Ear, Nose and Throat (E.N.T.) problems.

3. He / she shall be able to carry out minor surgical procedures such as

    a. antrum puncture and packing of the nose for epistaxis;

    b. nasal douching and packing of the external canal;

    c. remove foreign bodies from the nose and the ear; syringing of the ear;

    d. Observe or assist in various endoscopic procedures.

    e. Tracheostomy.

4. an intern shall have participated as a team member in the community diagnosis e.g., Chronic Suppurative Otitis Media (CSOM) and be aware of national programme on prevention of deafness.

5. He / she shall possess knowledge of various E.N.T. rehabilitative programmes.

(VIII) OPHTHALMOLOGY

An intern shall be able to :-

1. diagnose and manage common ophthalmological conditions such as :-

   Trauma, Acute conjunctivitis, allergic conjunctivitis, xerosis, entropion, corneal ulcer, iridocyclitis, myopia, hypermetripia, cataract, glaucoma, ocular injury and sudden loss of vision;

2. carry out assessment of refractive errors and advise its correction;

3. diagnose ocular changes in common systemic disorders;

4. perform investigative procedures such as

   Tonometry, syringing, direct ophthalmoscopy, subjective refraction and fluorescein staining of cornea.

5. carry out or assist in the following procedures;

   1. Subconjunctival injection,
   2. Ocular bandaging,
   3. Removal of concretions,
   4. Epilation and electrolysis,
   5. Corneal foreign body removal,
   6. Cauterization of corneal ulcers,
   7. Chalazion removal,
   8. Entropion correction,
   9. Suturing conjuctival tears,

10. Lids repair,

11. Glaucoma surgery (assisted),

12. Enucleation of eye in cadaver,

6. He / she shall have full knowledge of the available methods for rehabilitation of the blind.

(IX) ORTHOPAEDICS

The intern must acquire the knowledge and skills that will enable him / her to diagnose and treat common ailments.

A. Diagnosis : He / she shall have ability to diagnose and suspect presence of fracture, dislocation, acute osteomyelitis, acute poliomyelitis and common congenital deformities such as congenital talipes equinovarus (CTEV) and dislocation of hip (CDH).

B. Therapy : An intern must know –

   a. Splinting (plaster slab) for the purpose of emergency splintage, definitive splintage and post operative splintage and application of Thomas splint;

   b. Manual reduction of common fractures – phalangeal, metacarpal, metatarsal and Colles's fracture;

   c. Manual reduction of common dislocations – interphalangeal, metacarpophalangeal, elbow and shoulder dislocations;

   d. Plaster cast application for undisplaced fractures of arm, forearm, leg and ankle;

   e. Emergency care of a multiple injury patient;

   f. Precautions about transport and bed care of spinal cord injury patients.

C. Counselling : An intern should be able to advice about

(i) Prognosis of poliomyelitis, cerebral palsy, CTEV and CDH;
(ii) Rehabilitation of amputees and mutilating traumatic and leprosy deformities of hand.

D. Surgery : An intern must have observed or preferably assisted at the following operations :

(i) drainage for acute osteomyelitis;
(ii) sequestrectomy in chronic osteomyelitis;
(iii) application of external fixation;
(iv) internal fixation of fractures of long bones.

ELECTIVE POSTINGS

(X) DERMATOLOGY AND SEXUALLY TRANSMITTED DISEASES

An intern must be able to :-

1. conduct proper clinical examination, elicit and interpret physical findings and diagnose common disorders and emergencies.

2. perform simple, routine investigative procedures for making bedside diagnosis, specially the examination of scrapings for fungus, preparation of slit smears and staining or AFB for leprosy patient and for STD cases.

3. take a skin biopsy for diagnostic purpose.

4. manage common disease recognizing the need for referral for specialized care in case of inappropriateness of therapeutic response.

(XI) PSYCHIATRY

An intern must be able to –

1. diagnose and manage common psychiatric disorders,

2. identify and manage psychological reaction and psychiatric disorders in medical and surgical patients in clinical practice and community setting.

(XII) TUBERCULOSIS AND RESPIRATORY DISEASES

An intern after training must be able to :-

1. conduct proper clinical examination, elicit and interpret clinical findings and diagnose common respiratory disorders and emergencies.

2. perform simple, routine investigative procedures required for making bed side diagnosis, specially sputum collection examination for aetiological organism like AFB, interpretation of chest X-rays and respiratory function tests.

3. interpret and manage various blood gas changes and pH abnormalities in various respiratory diseases.

4. manage common diseases recognizing need for referral for specialized care in case of in-appropriateness of therapeutic response.

5. perform common procedures like laryngoscopy, pleural aspiration, respiratory physio-therapy, laryngeal intubation and pneumo-thoracic drianage aspiration.

(XIII) ANAESTHESIOLOGY

After the internship in the department of Anaesthesiology, an interns shall acquire knowledge, skill and attitude to :-

1. perform pre-anaesthetic check up and prescribe preanesthetic medications.

2. perform venepuncture and set up intravenous drip.

3. perform laryngoscopy and endotracheal intubatin.

4. perform lumbar puncture, spinal anaesthesia and simple nerve block.

5. conduct simple general anaesthetic procedures under supervision.

6. monitor patients during anaesthesia and post-operative period.

7. recognize and manage problems associated with emergency anaesthesia.

8. maintain anaesthetic records.

9. recognize and treat complications in post operative period.

10. perform cardio pulmonary resuscitation correctly, including recognition of cardiac arrest.

(XIV) RADIO – DIAGNOSIS

An intern after training must know –

1. All aspects of Emergency Room Radiology like

   a. all acute abdominal conditions,

   b. all acute traumatic condition with emphasis on head injuries,

   c. differentiation between Medical and Surgical Radiological emergencies.

2. Basic hazards and precautions in Radio-diagnostic practices.

(XV) PHYSICAL MEDICINE AND REHABILITATION

An intern is expected to acquire the following skills during his / her internship:-

1. competence for clinical diagnosis based on detailed history and assessment of common disabling conditions like poliomyelitis, cerebral palsy, haemiplegia, paraplegia, amputations, etc.

2. participation as a team member in total rehabilitation including appropriate follow up of common disabling conditions.

3. principles and procedures of fabrication and repair of artificial limbs and appliances.

4. various therapeutic modalities.

5. use of self help devices and splints and mobility aids.

6. familiarity with accessibility problems and home making for the disabled.

7. ability of demonstrate simple exercise therapy in common conditions like prevention of deformity in polio, stump exercise in an amputee, etc.

(XVI) FORENSIC MEDICINE AND TOXICOLOGY

The intern is to be posted in the casualty department of the hospital while attached under Forensic Medicine Department with the following objectives :-

1. to identify medico-legal problems in a hospital and general practice.

2. to identify and learn medico-legal responsibilities of a medical man in various hospital situations.

3. to be able to diagnose and learn management of basic poisoning conditions in the community.

4. to learn how to handle cases of sexual assault.

5. to be able to prepare medico-legal reports in various medico-legal situations.

6. to learn various medico-legal post-mortem procedures and formalities during its performance by police.

(XVII) BLOOD BAND AND TRANSFUSION DEPARTMENT

During the two weeks of elective posting, the intern shall learn –

1. Blood grouping in OAB and Rh systems – typing, cross matching;

2. Selection of blood donor; Screening for diseases;

3. Collection of blood; Separation of blood components;

4. Storage of blood and blood components – changes during storage;

5. Transfusion of blood and blood components;

6. Transfusion reactions – management;

7. Infections spread by transfusion.

PROFORMA – I

ASSESSMENT OF INTERNSHIP
CERTIFICATE OF SATISFACTORY COMPLETION OF POSTING

NAME OF THE COURSE :
MBBS/BDS/BHMS/BAMS/BSMS/BUMS/BPT/BOT

1. (a) Name of the Discipline / Speciality :
   (b) Duration : From ……. to ……..
2. Proficiency of knowledge : Score obtained (0-10) in each level.
3. Competency in skills as acquired by :
   (a) Performing Procedures

   (b) Assisting in Procedures

   (c) Observing Procedures

4. (a) Responsibility, Punctuality :

   (b) Research Aptitude :

   (c) Capacity to work in a team - Behaviour with Colleagues, Nursing staff and relationship with Paramedical staff; Participation in Discussions. :

Total Score obtained out of 30, i.e., @ 10 each

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5. Performance grade obtained :

Poor	-	<3
Below average	-	<5
Average	-	5 and above
Above average	-	7 and above
Excellent	-	9 to 10

Note : An item shall be required to have a minimum score of 5 in each of the three heads mentioned above failing which the concerned posting shall be taken as unsatisfactory. Each area of unsatisfactory score (below 5) shall result in the repetition of one third of the total period of posting in the concerned subject.

Date :
(Office date seal).

Signature of H.O.D./Head of the Institution
(Seal).

PROFORMA – II
FOR RE-ADMISSION AFTER CONDONING THE C.R.R.I. BREAK

1. NAME OF THE STUDENT :

2. NAME OF THE COURSE / PERIOD OF STUDY :

3. NAME OF THE COLLEGE :

4. DATE OF JOINING THE COURSE :

5. DATE OF COMPLETION OF THE COURSE :

6. DATE OF COMMENCEMENT OF C.R.R.I. :

7. DATE OF COMPLETION OF 50% OF C.R.R.I. :

8. DATE OF DISCONTINUANCE OF C.R.R.I. :

9. REASONS FOR THE DISCONTINUANCE OF THE C.R.R.I. :

10. DETAILS OF BREAK OF C.R.R.I. (PREVIOUS BREAK IF ANY, THE DETAILS OF SPELL AND THE PERIOD OF BREAK OF STUDY MAY BE FURNISHED INCLUDING THE PERIOD OF LATE COMMENCEMENT). :

11. WHETHER ANY DISCIPLINARY CASE IS PENDING FOR DISCLOSED i.e., PRODUCING FALSE CERTIFICATES / RAGGING ETC., :

12. IF ANY CORRESPONDENCE WAS MADE IN THE PAST, FURNISH THE COPIES OF RELEVANT RECORDS FOR PERUSAL. :

13. RECOMMENDATION OF THE DEAN/: PRINCIPAL CONCERNED.

CERTIFIED THAT THE DETAILS FURNISHED ABOVE IN RESPECT

OF (Thiru. / Tmt. / Selvi. / ----------

ARE TRUE TO THE BEST OF MY KNOWLEDGE AND FOUND TO BE

CORRECT.

SIGNATURE OF THE DEAN / PRINCIPAL