THE TAMIL NADU DR. M.G.R MEDICAL UNIVERSITY, CHENNAI

Dated: 08.08.2013

FIRST, SECOND & FINAL YEAR MBBS DEGREE COURSE - SCHEME OF PRACTICAL EXAMINATION FOR AUGUST 2013.

FIRST MBBS EXAMINATION

PRACTICAL SCHEME

THE TAMIL NADU DR .M .G .R MEDICAL UNIVERSITY, CHENNAI

First MBBS Examinations

Guidelines for Practical and Viva Voce examinations

ANATOMY

PRACTICALS 40 marks

Histology	**: 10 marks**
Gross Anatomy	**: 10 marks**
Discussion	**: 8 marks**
OSPE	**: 12 marks**

Histology: 10 marks

Spotters 10 x 1 marks = 10 marks

(Histology General 4 marks; Paper I 3 marks; Paper II 3 marks = 10 marks)

Gross Anatomy: 10 x 1 = 10 marks

Spotters 10 x 1 marks = 10 marks

a) Upper Limb - 1

b) Lower Limb - 1

c) Abdomen - 2

d) Pelvis & Perevium - 1

e) Thorax - 1

f) Head and neck - 3

g) Brain - 1

Discussion 2 x 4 marks = 8 marks

(one from Paper- I and one from Paper - II)

OSPE - 6 x 2 = 12 marks

(2 from Paper I and 2 from Paper II, Embryology +Genetics=1,

Radiology +Osteology =1)

VIVA 20 marks

Osteology	6 marks
Radiology	4 marks
Surface Marking	6 marks
Embryology	4 marks

Internal Assessment : 20 marks (Practical 15 + Record 5)
(5 assessments need to be conducted thro'out the academic year)

PHYSIOLOGY

PRACTICALS - 40 marks

Haematology	**: 12 marks**
Clinical Examination	**: 16 marks**
OSPE	**: 12 marks**

I) Hematology - a) Major experiment 8 marks

b) Minor experiment 4 marks

Clinical Examination 16 marks

(For Cardiovascular system and / or Respiratory system and / or Nervous system)

OSPE : 12 marks (6 x 2 marks)

VIVA : (20 marks)

General Physiology, Blood, Muscle, Digestive system - 6 marks

Endocrinology, Reproduction, excretory system - 4 marks

Cardiovascular system, Respiratory system - 4 marks

Central nervous system and Special senses - 6 marks

Internal Assessment : 20 marks (Practical 15 + Record 5)
(5 assessments need to be conducted thro'out the academic year)

Ia) Hematology major experiments:

1. Total leucocyte count

2. Preparation of **peripheral blood smear** and examination of the same**; Differential count**

3. Eosinophil count

It is strongly recommended that total WBC count and Absolute eosinophil count should not be done using pipettes which need mouth-pipetting. This is an extremely unsafe procedure, even if one uses one's own blood. The rubber tubings used for mouth pipetting are not sterilized. (Students do not get to use the same rubber tubing every time).

Use of glass WBC pipettes (or RBC pipettes) that come with the hemocytometer also leads to dilution errors which could be avoided when using autopipettes. Details about the use of autopipettes are given in the following website: https://sites.google.com/site/physiologycmcvellore/documents

Ib) Hematology minor experiments:

1. Erythrocyte Sedimentation Rate – Westegren method is recommended. Disposable ESR tubes with autofilling option should be used (eg ESRITE kits). The practice of letting students fill Westegren tubes with mouth pipetting of blood must be strongly condemned and abolished.

2. Packed Cell Volume – Macrohematocrit method requires Wintrobe's tubes and filling the same without air bubbles can be cumbersome. Microhematocrit method using heparinised capillary tubes will be less messy. This however requires a microcentrifuge which may be procured at least in the coming year.

3. Blood groups

4. Bleeding time; Clotting time

Deletion of experiment using Sahli's hemoglobinometer: This is the other experiment which requires mouth pipetting. Autopipettes can deliver the said volume, but the pipette tips are too large for the Hemoglobinometer tube. The experiment may be done away with because the coloured standards fade quickly and the test would give erroneously high values for Hb. The better test for anemia work-up would be PCV, which could preferably be done by the microhematocrit method using smaller volumes of blood.

II a): Cardiovascular system:

Effect of posture on blood pressure and heart rate

Effect of mild and submaximal exercise on blood pressure and heart rate

Examination of cardiovascular system

III a): Respiratory system:

Recording of lung volumes by spirometry

Effect of posture on vital capacity

Recording of forced expiratory volumes (Timed vital capacity)

Examination of respiratory system

Stethography – recording of respiratory movements with a stethograph

Effects of hyperventilation and voluntary breath-holding

Effect of hyperpnea on breath-holding time

Iva): Nervous system:

Examination of sensory system (Test the integrity of the posterior columns, pain pathways).

Examination of motor system

Examination of deep reflexes

Examination of superficial reflexes

Examination of cranial nerves III, IV and VI.

Examination of V nerve

Examination of VII nerve

Examination of VIII nerve

Examination of IX to XII nerves

Examination of the eye: visual aquity, visual field, colour vision, pupillary reflexes

Examination of smell and taste

Cerebellar function tests

IIb, IIIb and IV b: Clinical problems and cases:

Clinical problems on: Different types of Edema, circulatory shock (various types of shock), cardiac failure, hypertension – essential and secondary

Obstructive and restrictive respiratory diseases; Respiratory failure type I and II

Cerebellar lesions, Parkinson's disease, Brown-sequard syndrome, transection of spinal cord, classical hemiplegia, UMN lesions, LMN lesions, Peripheral neuropathies, motoneuron diseases, myopathies, diseases of neuromuscular junctions - myasthenia gravis, OP poisoning

Endocrine disorders- Acromegaly, gigantism, hypo and hyperthyroidism, Cushing's syndrome

Diabetes mellitus, Addison's disease, Conn's syndrome, secondary hyperaldosteronism; hypo and hyper parathyroidism, prolactinomas, pituitary tumors

Peptic ulcer, pancreatitis, liver failure, malabsorption syndromes, diarrhoeal diseases and fluid supplementation, paralytic ileus

OSPE stations: (examples only; not an exhaustive list)

Aspects of clinical examinations:
Demonstration of general examination of the subject
Recording of blood pressure
Examination of jugular venous pulse
Demonstration of knee jerk (or ankle jerk/biceps jerk/triceps jerk/supinator jerk)

Demonstration of superficial reflexes

Demonstration of Plantar reflex

Demonstration of testing of muscle tone in (for eg) the flexor of elbow:
Demonstration of grading of power in (for eg) quadriceps muscles.
Demonstration of examination of sensory system in the upper half of body in specific areas that represent the dermatomes
Demonstration Rinne's and Weber's tests
Lung percussion to demonstrate liver dullness
Examination of papillary reflexes

Acid-base balance – Recognition of simple acid-base disorders from lab values – Respiratory acidosis and alkalosis, metabolic acidosis and alkalosis and compensatory phenomena; Major causes for the simple disorders. Calculation of anion gap; significance of anion gap in the classification of metabolic acidosis.

Electrolyte analysis: Normal electrolyte values; Recognition of hyper and hyponatremia, hyper and hypokalemiPa, hypo and hypercalcemia from lab values; Causes for the alterations and features of each conditions.

Arterial blood gas analysis: Recognition of normal ABG values, respiratory acidosis, types I and II respiratory failure; Major causes of types I and II respiratory failure.

Excretion: Renal failure; Nephrotic syndrome, renal causes of hypertension, Calculation of renal clearance;

ECG: Reading a normal ECG. Some common problems as identified on ECG (examples: Prolonged PR interval, pathological Q wave, Tall tented T waves, ST segment elevation and depression).

BIOCHEMISTRY

Practicals: 40 marks

Major Experiment	**: 10 marks**
Minor Experiment	**: 10 marks**
Charts / Suggest investigation	**: 8 marks**
OSPE	**: 12 marks**

Major experiment involving Quantitative estimation of common blood analytes: **(10 marks)**

Structuring of marks for the major experiment:

a) Case history to be given; Student to be asked to write down provisional diagnosis and relevant investigations for the case

b) Reference ranges for the relevant parameters

c) Principles and procedure of the estimation of the analyte chosen for estimation

d) Student to be asked to carry out an estimation of one specific and relevant analyte – accuracy of test result

e) Discussion of the clinical condition and metabolism of the analyte estimated

Minor experiment: Qualitative -- 10 marks

Charts / Suggest investigation -- 8 marks

(Laboratory values of biochemical parameters relevant to the case (eg. Diabetic history with GTT/ Liver disorder with LFT etc..)

Electrophoretic / chromatogram pattern.

OSPE -- 6 x 2 = 12 marks (Six stations-Two performance, Four-Response stations)

VIVA -- 20 marks

Internal Assessment : 20 marks (Practical 15 + Record 5)
(5 assessments need to be conducted thro'out the academic year)

Suggested Division of topics :

I. Carbohydrates – Chemistry & metabolism, Cell, Biological Oxidation, Oxidative phosphorylation, TCA cycle

II. Proteins – Chemistry & metabolism, Enzymes, Plasma , Function tests, Xenobiotics, Tumor markers, Oncogenes, Hormones, Hemostasis and Immunity.

III. Lipids – Chemistry & metabolism, Vitamins, Nutrition, Porphyrins, Hemoglobin,Jaundice,

IV. Nucleic acid chemistry & metabolism, Molecular Biology , Water , Electrolytes and Acid- Balance.

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SECOND MBBS EXAMINATION

PRACTICAL SCHEME

THE TAMIL NADU DR .M .G .R MEDICAL UNIVERSITY, CHENNAI

SECOND M.B.B.S. EXAMINATIONS

GUIDELINES FOR CLINICAL / VIVA VOCE EXAMINATIONS

SUBJECT: PHARMACOLOGY (PRACTICALS 25 Marks)

Practical I	**: 15 marks**
Practical II	**: 5 marks**
OSPE	**: 5 marks**

	NO. OF CASES	TIME	MAX
PRACTICAL – I			
1. Spotters	5	20	5
2. Prescription Writing	1	10	2
3. Prescription Audit	1	10	2
4. Clinical problem solving exercises (Therapy oriented problems of drug Adverse reaction and interaction of Commonly used durgs)	1	10	2
5. Dosage calculation	1	5	2
6. Pharmaco economic problem	1	5	2

			15

PRACTICAL – II

1. Toxicology	1	10	2 ½
2. Clinical Pharmacology	1	20	2 ½
Assessment			

			5

OSPE - 5 x 1			5
VIVA			**15**

Internal Assessment : 15 marks (Practical 10 + Record 5)
(5 assessments need to be conducted thro'out the academic year)

Topics:

I) General Principles

Neuro effector junction and drugs action at synaptic

Ocular Pharmacology

Drugs acting on Central Nervous System

Topics:

II) 1. Auacoids

2. Diuretics and other agents affecting renal Conservation of water
3. Drugs acting on cardio - vascular system including blood
4. Drugs acting on respiratory system
5. Therapeutic gases
6. Drugs affecting gastrointestinal function

Topics

III) 1. Chemotherapy

2. Dermatological Pharmacology
3. Drugs used for immunomodulation

Topics:

IV) 1. Endocrine Pharmacology

2. Enzymes in therapy
3. Vitamins
4. Toxicology

OSPE EXAMPLES

a) To demonstrate how to give an IV & M SC injection
b) To prepare for administration of a Test Dose
c) To demonstrate an inhalers use
d) To demonstrate instillation of drops – eye, nose, ear, etc.,

Assignment includes

1. Symposium / Seminar
2. Short Project Work
3. Problem Based Learning
4. Quiz on prescribed topics.

Pathology (PRACTICALS 25 Marks)

Practicals Examinations: Time 8.30 a.m. to 1.00 p.m.

No.	Topic of Practical Exams	No of Cases	Time Allotted	Maximum Mark Allotted
1	Clinical Interpretation Skills. Two detailed case histories with Lab reports of Histopathology, Cyto-pathology, Hematology and or Autopsy findings to be given and discussed	2	40mts	3
2	Spotters (6Histopathology Slides and 4 Gross specimens) to be given with a question pertinant and related to the issue to be asked for the student to answer.	10	20mts	3
3	Hematology Slides. 4 Hematology slides with detailed case history to be given and the student should describe the slide and make a diagnosis.	4	20mts	2
4	Histopathology and Cytology Slides: 3 Histopathology and 3 Cytology slides with detailed case history to be given and the student should describe the slide and make a diagnosis.	6	30mts	3

5	Grossing of Specimen: with detailed case history to be given and the student should describe the specimen and make a impression	5	10mts	3
6	Clinical Pathology Exams – Urine Examination – A sample of urine to be provided with a brief history and student should make an assessment of the physical and one abnormal chemical findings of the urine & discuss	1	20mts	3
7	Blood – DC + Hemoglobin: A sample of blood & Unstained slide to be provided and student should make an DC of the slide and estimate HB concentration & discuss	1	40mts	3
	TOTAL		3Hours	20

OSPE 5

25

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5. Viva Voce & OSPE Examinations: Time 2.00pm to 5.00pm

1	Viva Voce (1 Internal examiner) a. General Pathology & Heamatology b. Systemic Pathology	2 Stations	5mts each	15
2	Internal Assessment (5 assessments need to be conducted thro'out the academic year)			15 (Practical 10 Record 5)

SUBJECT : **MICROBIOLOGY (PRACTICALS 25 MARKS)**

	NO. OF CASES	TIME	MAXIMUM
PRACTICAL			
1. Gram Staining	1	20 min.	3
2. Sputum for AFB	1	20 min.	3
3. Immuno Serology	1	10 min.	3
4. Identification of Bacterial / Fungal culture	1	10 min.	3
5. Parasitology	1	10 min.	3
6. Spotters	10	10 min.	5

			20
OSPE			**5**

			25

VIVA Time: 2.00 p.m. to 5.00 p.m. = 15 marks

a) General & Systemtic Bacteriology (7 ½ marks)

b) Virology, Mycology and Parasitology (7 ½ marks)

Internal Assessment : 15 marks (Practical 10 + Record 5)
(5 assessments need to be conducted thro'out the academic year)

FORENSIC MEDICINE (PRACTICALS 30 MARKS)

Practical	**: 25 marks**
OSPE	**: 5 marks**

PRACTICAL -I

	NO.OF CASES	TIME	MAX
MAJOR EXERCISE (ANY ONE)			
1. Examination of **injure**d person/ {} Cadaver/ Photograph {}			
2. Examination of Cluster of Bones {}			
3. Assessment of Age by Physical and {} Dental Examination {}	1	20min.	9
4. Assessment of Age by Examination {} of Cluster of X- rays {}			
5. Examination of an individual and {} **Issue of 'Drunkenness Certificate'**.{}			

PRACTICAL – II (MINOR EXERCISE)

Examination of the foetus, and

1. Assement of age of given foetus	1	10min.	2
2. Sexual offence case examination	1	5min.	2
3. Viscera Packing	1	5min.	3

4. Issue of Medio Legal Certificates/Clinical	1	5min.	3
5. **P.M. Certificate interpretation**	1	5min.	3
6. Spotters	1	10min.	3

(Weapon, Poisonus plant,Pathology Specimen,

Poison in a bottle, Forensic Specimen

25

OSPE **5**

30

VIVA - Time 2. 00 p.m. to 5.00 p.m **10 marks**

Internal Assessment : 10 marks (Practical 5 + Record 5)

(5 assessments need to be conducted thro'out the academic year)

Evaluation of the Skills acquired during the "course"

5 Skills – 5 Stations

1. Stature Estimation

2. Photograph Interpretation

3. Blood /Body Fluids / clue materials - Collection, Packing and forwarding.

4. Medico Legal Document Analysis

5 .Injury and Weapon – Interpretation

FINAL MBBS (PART I & PART II) EXAMINATION

PRACTICAL SCHEME

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY, CHENNAI.

SCHEME OF PRACTICAL EXAMINATION

FINAL MBBS PART I

COMMUNITY MEDICINE

PRACTICALS 30 marks

Clinico Social Case	45 minutes	1 X 12 marks	= 12
Epidemiological Exercise	45 minutes	2 X 4 marks	= 8
Spotters	10 minutes	5 X 1 marks	= 5
OSPE	20 minutes	5 X 1 marks	= 5

			30

VIVA : 10 marks

Internal Assessment : 20 marks (Practical 15 + Record 5)

(5 assessments need to be conducted thro'out the academic year)

SCHEME OF PRACTICAL EXAMINATION

FINAL MBBS PART I

OPHTHALMOLOGY – 30 marks

		Marks
Long Case	1 X 15 =	15
Short Case	2 X 5 =	10
OSCE / Recent Advances	=	5
TOTAL MARKS		30

VIVA : 10 marks

Internal Assessment : 10 marks (Practical 5 + Record 5)

(5 assessments need to be conducted thro'out the academic year)

PRACTICAL SCHEME FOR FINAL M.B.B.S.(Part-I)

OTO-RHINO-LARYNGOLOGY

Practical – 30 marks

Clinical Examination:

	Case	Duration	Maximum
Long Case	1	30 minutes	15 marks
Short Case	2	30 minutes	10 marks
		Total	25 marks

OSCE Recent Advances 5 marks

Total 30 marks

VIVA : 10 marks

Internal Assessment : 10 marks (Practical 5 + Record 5)

(5 assessments need to be conducted thro'out the academic year)

THIRD (FINAL) M.B.B.S. PART- II EXAMINATIONS

SUBJECT : **MEDICINE**

Practical : 100 marks

	NO. OF CASES	TIME	MAXIMUM
CLINICAL			
1. Long Case (including case Sheet writing)	**1x40 marks**	**45 mins**	**40**
2. Short Case	**1x20 marks**	**10 mins**	**20**
3. Spotters	**2x10 marks**	**5 mins each**	**20**
OSCE including two Recent Advances	**5x4 marks**		**20**

Total			**100**

VIVA : 20 marks

Internal Assessment :30 marks (Practical 20 + Record 10)

(5 assessments need to be conducted thro'out the academic year)

SCHEME OF PRACTICAL EXAMINATION

FINAL MBBS (PART II)

GENERAL SURGERY

GENERAL SURGERY– 65 Marks

ORTHOPAEDICS – 35 Marks

TOTAL Marks : 100

GENERAL SURGERY– **65 Marks**

LONG CASE (1)	–	45 Minutes	25 Marks
SHORT CASE (2)	–	40 Minutes	30 Marks .
OSCE	–	10 Minutes	10 Marks .
TOTAL		**95 Minutes**	**65 Marks**

ORTHOPAEDICS- **35 Marks**

SHORT CASE 2 X 15		– 40 Minutes	30 Marks
OSCE	1	- 5 Minutes	5 Marks
TOTAL		**45 Minutes**	**35 Marks**

VIVA : 20 marks

Internal Assessment : 30 marks (Practical 20 + Record 10)

(5 assessments need to be conducted thro'out the academic year)

SCHEME OF PRACTICAL EXAMINATION

FINAL MBBS (PART II)

OBSTETRICS & GYNAECOLOGY AND FAMILY WELFARE

Practical : 30 marks

Clinical		Max. Marks
1. Long Case – Obstetrics	1 (30 Minutes)	15
2. Short Case – Gynaecology	2 x 5 (30 Minutes)	10
OSCE		5
1. Charts		
2. Spotter		
3. Counselling		
4. Recent Advances		
5. Slides		

	Total	30

VIVA : 30 marks (including record of delivery cases)

Internal Assessment : 30 marks (Practical 20 + Record 10)

(5 assessments need to be conducted thro'out the academic year)

PRACTICAL SCHEME FOR FINAL M.B.B.S.(Part-II)

PAEDIATRICS INCLUDING NEONATOLOGY

Practical : 30 marks

Clinical Examination:

	Case	Duration	Maximum
Long Case	1	35 minutes	13 marks
Short Case	2(2x3 marks)	20 minutes	6 marks
Spotters	2 (2x3 marks)	20 minutes	6 marks
		Total	25 marks

OSCE

5 stations x 1 mark each 5 marks

Total 30 marks

VIVA : 10 marks

Internal Assessment : 10 marks (Practical 5 + Record 5)
(5 assessments need to be conducted thro'out the academic year)