Faculty of Medicine
Sabaragamuwa University of Sri Lanka

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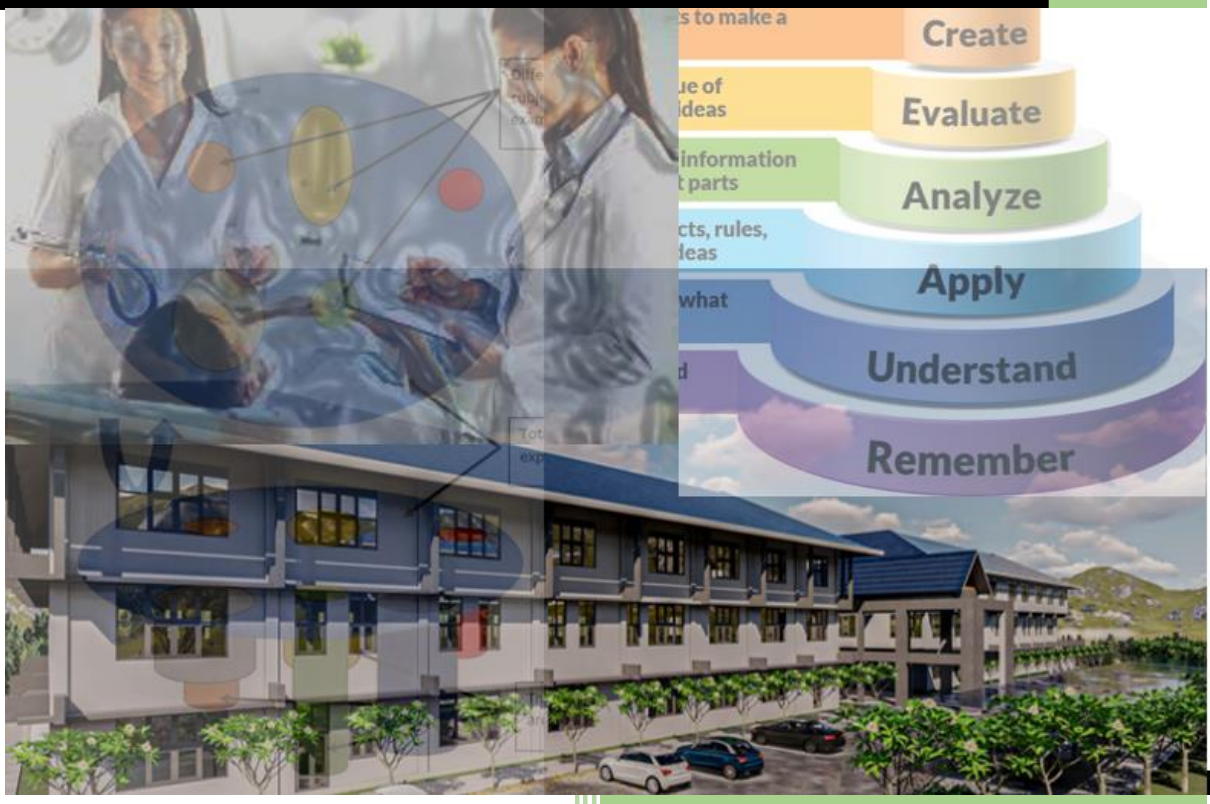
First Edition

ASSESSMENTS IN MEDICINE



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PREFACE

The Department of Medicine, Faculty of Medicine, Sabaragamuwa University of Sri Lanka was established in 2021. The first batch of medical students will face the final MBBS in 2024. This booklet is prepared for medical students, to gain an understanding of the formative and summative assessments that they will encounter, and for trainers and examiners regarding the assessments in medicine in final MBBS.

This booklet will be helpful in minimizing discordance between examiners and students, while improving their knowledge and skills through professional writing, reflective analysis and useful regular feedback during the training.

CONTENTS

CHAPTER 1

INTRODUCTION

'Assessment is the process of forming a judgement about a student's attainment of knowledge, understanding or skills', according to the assessment principles mentioned at StaffNet, University of Manchester in March 2023. Assessments are a part of the curriculum, and they represent a teaching methodology. They help teachers to identify the strengths and weaknesses of the students, and also help students to identify the same on themselves. Teachers could improve their teaching methodologies and the students can improve their learning methodologies through the assessments. When carry out as a continuous process during medical education, assessments could help improve the outcome of the product of the course. There are different forms of assessments that we conduct during the course of MBBS, in the discipline of Medicine, Faculty of Medicine, Sabaragamuwa University of Sri Lana; Formative Assessments, Continuous Assessments and End-of-course Summative Assessments.

Formative Assessments

Formative assessments do not carry marks to the end semester examination and instead are meant to give feedback on the learning that has taken place in a learner, thus, to enhance and ensure their learning activities. The assessments in the pre-professorial clinical appointments typically come under this category. ~~It could take~~ We use a variety of formative assessment methods, such as: Mini Clinical Evaluation Exercises (Mini CEX), short cases, long cases, giving short assignments such as reading up a specific topic, informal questioning, OSCEs (Objective Structured Clinical Examination) and discussions during ward rounds.

Continuous Assessments

Continuous assessments are held to assess the progress of a student in a course. The marks from the continuous assessments for a portion of the marks in medicine at the final MBBS examination. Therefore, continuous assessment is type of Summative Assessment.

Continuous Assessment: End of 4th Year

The students will be assessed based on their clinical work during the 4th year clinical rotations. Every student is required to maintain a workbook detailing the clinical cases that they come across during

their 1st and 2nd clinical medicine appointments and the short appointments. The workbooks would have a minimum of 15 cases recorded. Those should be from 1st and 2nd clinical medicine appointments, and 2-5 cases from each short appointment.

At the end of the 4th year there will be a workbook based interview (viva voce). Here the students are required to submit the completed workbook at the examination to a panel of examiners (usually consisting of two), who will assess the completeness, accuracy, clarity, and quality of the workbook. The examiners are usually the academic members of the department of medicine and the invited clinical teachers of the extended faculty, other university academics or experienced clinicians of the ministry of health.

The questions will be asked to clarify whether the student has actually gained the expected competency, based on the workbook. It is expected that the completed workbooks are not similar to each other and there will be a considerable variation amongst the encounter of cases. However, the core conceptual competency is expected to be gained by each student through their own experience.
The marks are given according to a rubric and the marks will be carried to the final MBBS marks calculation. The Continuous Assessments at End of 4th year will account for 10 marks in the subject of Medicine.

Continuous Assessments: During the professorial appointment

There will be an assessment of performance of ward work, based on the cases allocated to individual students during the professorial appointment.
This will include

- History-taking skills
- Physical examination skills
- Summarizing the clinical evaluation
- Problem identification
- Clinical reasoning
- Formulating comprehensive plan of management
- Patient welfare
- Knowledge related to the illness
- Assessment of communication skills: observed history taking and communication skills
- Structured oral examination focusing on emergencies and ethics

- Objective structured clinical examination (OSCE)

This continuous assessment during the professional appointment in medicine, will be calculated out of 10, and the gained final mark will be carried forward to count for the final year examination in medicine.

Summative Assessments

Summative assessments are used to assess student learning at the conclusion of a specific course, appointment, term of work or year. They are typically given marks and graded. It is used to determine whether students have learned what they were expected to learn during the period of instructions or appointment.

The Medicine assessment at the end of the 5 years (i.e., Final MBBS) will get 80 marks. The other 20 marks for Medicine will be from the two continuous assessments:

The assessment in Medicine at the Final MBBS will consist of

- Written papers
    - Multiple Choice Question (MCQs)
    - Structured Essay Question (SEQ) Paper
- 'Clinicals': Short Cases and Long Cases.

These are dealt with in further details in subsequent chapters. See Chapter 5 and 6

Written Papers

Multiple Choice Question (MCQ) paper

The MCQ paper is the 'Common MCQ examination' conducted by the University Grants Commission. The present format is that there are 20 single best answer questions and 30 true or false type questions. The number of questions allocated to each system/ section (e.g., cardiovascular system, respiratory system) in the common MCQ paper is given in the annexure.

Structured Essay Question (SEQ) Paper

The duration of the SEQ paper is 3 hours. There are 5 SEQs to be answered in 3 hours. The questions included in the SEQ paper usually assess the following main domains.

1. Interpretation of clinical and/ or laboratory findings

2. Knowledge on the management of medical emergencies
3. Integration of knowledge in basic sciences and finer specialties to clinical practice (e.g; Pathophysiology, Pharmacology, Microbiology and Radiology)
4. Comprehensive and Holistic management approach, including ethical issues
5. Epidemiology
6. Prevention, screening and follow-up care

The Clinicals

There are two examination components conducted under the clinical part of the MBBS examination.

- Short cases
- Long case

Short Cases

This part of the examination consists of 4 cases representing the major systems or regions, namely the cardiovascular system, respiratory system, nervous system and abdomen. Occasionally there could be patients with musculoskeletal system and endocrine system as well.

The duration of each case is 7.5 minutes: 5 minutes are allocated for the candidate to perform a physical examination and 2 ½ minutes for the discussion with a pair of examiners.

Candidates will be given specific instructions at each station which will be displayed (e.g., Examine this patient's cardiovascular system). Out of the 7.5 minutes allocated for each case the student will get 5 minutes to examine the patient at a particular station and be interviewed by two examiners for 2.5 minutes. A structured marking sheet will be used to ensure uniformity between examiners. This marking sheet consists of various domains of competencies expected from an undergraduate. Marks are given for

- technique and sequence of examining
- signs elicited
- interpretation of signs
- patient welfare.

Long Case

The candidate will have 40 minutes with patient to take the history, examine, document and to plan out the discussion. The discussion will run for 20 minutes with two (usually) examiners.

Following are common questions that examiners ask at the long case discussion:

- describe the 'history'
- analyse the history
- what are the findings (relevant) in the physical examination
- state a differential diagnosis
- describe and justify the investigations that are requested
- propose management plan
- explain the aetiology and pathogenesis of the disease
- describe the pharmacological basis for the proposed treatment.

Examiners should be aware that candidates are very anxious and should not make unnecessary comments (e.g., 'you should know such basic knowledge'). Do not attempt to teach the student during the assessment.

Breakdown of marks for Medicine

The breakdown of the marks for the different components in medicine in the final MBBS examination is as follows.

- Continuous assessments – 20 marks
    - End of 4th year assessment (10 marks)
    - End of Professorial Appointment (10 marks)
- Multiple Choice Questions (MCQ) paper – 20 marks
- Structured Essay Question (SEQ) paper -20 marks
- Short Case assessments – 20 marks
- Long Case assessments – 20 marks

CHAPTER 2

A GUIDE TO ASSESSMENTS DURING CLINICAL APPOINTMENTS

Clinical teachers are welcome to use a diverse collection of assessments. Several medical schools have begun to use the Mini Clinical Evaluation Exercises (Mini CEX) as a work-place based assessment.

2.1 Mini Clinical Evaluation Exercises (Mini CEX)

It is performed by one clinical teacher with one student in clinical setting. It facilitates formative assessment of core clinical skills. Mini CEX is an assessment of trainee-patient interaction focusing on a specific area such as history taking, a component in examination, clinical reasoning and management. The complete Mini-CEX takes less than 10-15 minutes, but could be extended to even 20-30minutes. The ideal is to conduct several Mini CEXs over the period of training and to give feedback on each occasion.

A Mini-CEX can be performed in any location, at any convenient time and any component in the clinical training. It is an easy and reliable method to assess the clinical performance of a student in a real-world clinical setting. Your questioning could be aimed at a component of the history, component of physical examination, interpretation of investigation findings, a particular aspect of management, communication such as obtaining informed consent, counselling, making a clinical judgement or on the process of clinical reasoning. The key points are to challenge the student with a specific task, observe the task being performed, and finally provide feedback.

1. In history taking the assessor could assess
    a. the accuracy and comprehensiveness of collected information relevant to a symptom
    b. effective use of questions to obtain accurate information
    c. the student's attributes of professionalism such as appropriate response to nonverbal commands, showing empathy, compassion, respect, attention to patient's needs, comfort and confidentiality of information.

2. During physical examination the assessor could
    a. assess the accuracy and logical sequence
    b. observe the proper technique of eliciting physical signs
    c. assess accuracy of interpretation of findings
    d. observe for sensitivity to patient comfort and modesty.

3. When assessing communication with patient/family it could focus on
    a. goals of care
    b. discussion on management of the patient
    c. breaking serious news,
    d. communicating end-of-life care
    e. obtaining informed consent for procedures

Observe the respect, compassion and empathy, establishment of rapport and appropriate response to non-verbal clues.

4. In the assessment of clinical judgement/ reasoning include
    a. synthesis of finding
    b. requesting investigations appropriate for diagnosis
    c. prescribing treatment considering risks and benefits.

5. As overall clinical performance one could assess the time management, efficacy of oral presentation of patient's problem, arrival at differential diagnosis and recommendations on what to do as the next steps.

How to perform a Mini CEX

1. It needs the trainer, student and patient.
2. Student should be given a patient whom trainee is likely to encounter in clinical practice.
3. The task should be some skill that trainee is expected to develop during the respective clinical appointment
4. Explain the task to the student accurately
5. Observe the task and make relevant notes, especially those done well, done poorly and not done at all.
6. You may ask one or two specific questions, such as what is your diagnosis/ differential diagnosis? What is the investigation you request to arrive at a diagnosis?
7. Organize and give your feedback. Use the Sandwich Model to give feedback: State the good points you observed ("Your examination technique was very good'). Then describe mistakes you observed ("You missed the bronchial breathing") and suggestions to improve (You could listen over your own trachea to become familiar with the characteristics of bronchial breathing"). End with a positive note ("You will improve with practice")
8. Document and place your signature on the assessment sheet.

DRAFT FORM

	VERY POOR	POOR	GOOD	VERY GOOD	COMMENTS
History-taking process					
History-taking content					
Differential diagnosis					
Physical examination skills					
Communication skills					
Management					
Patient welfare					
Reflection by the student					

Example 1

This patient is a 46 years old woman presented with acute chest pain for 3 hours. Take a brief history. In the history student can get short history about the chest pain, past history of recurrent episodes, associated, shortness of breath, palpitations sweating, fever, exacerbating and relieving factors and relevant past medical, family and social history.

Here are a few appropriate questions to assess the medical student:

- "Take a brief history and state the likely diagnoses" The student is being observed
- "Why do you consider these diagnoses?"

  "Examine to confirm a diagnosis of heart failure"

Example 2

This 78-year-old patient presented with weakness of both lower limbs after a fall.

Here are a few appropriate questions to assess the medical student:

- "Do a neurological examination of lower limbs to arrive at a diagnosis"
- "Explain the importance of physiotherapy to the patient"
- "Obtain consent for MRI scan of the spine."

CHAPTER 3

A GUIDE TO THE REFLECTIVE LOG, WORKBOOKS AND VIVA IN THE END OF 4TH YEAR

3.1 Assessment based on Workbooks

Main goal of the Workbook is to guide students to be competent in essential skills and learn new knowledge that are outlines as learning outcomes in each of the appointment. Students are expected to organize their classes and do self-studies in order to complete the tasks set out in the Workbook. During each short appoinments, students need to focus on specific case scinarios in more detail to strengthen and to prepare for the Final Year. Students are expected to learn the management plans (i.e. investigation and treatment) in further detail. This includes the management of common emergencies, which are essential clinical topics for an intern medical officer.

Learning tasks and skills acquired that are common to most Medicine based clinical appointments are

1. Clinical skills - to become proficient in history taking, clinical examination (including assessment of vital parameters) and eliciting physical signs and come to a provisional diagnosis or a differential diagnosis, investigation and management .
2. Interpretation of investigation findings
3. Communication skills- Communication with patients, families and the clinical staff, practicing some skills such as informed consent, observation of practice of communicating difficult situations such as breaking serious news, discussions about active management, patient prognosis and terminal care
4. Procedural skills
5. Professional skills- Working relationship with other health care professionals and role model for professional behavior
6. Attitude and ethics
7. Writing a case record
8. Reflective log

In assessment of workbooks, the examiners will check whether the case scenarios, exercises and reflective logs are completed.

3.2 Reflective log

Medical professionals face many challenges during routine clinical practice. They adopt three main strategies

Technical thinking

In technical thinking, the clinician adopts already made solutions, such as treatment protocols.

Critical thinking

In critical thinking, one adapts the thinking to the individual patient and the context. It is a purposeful, reasoned and goal approach.

Reflective practice

In reflective practice the clinician turns back and analyses a situation. One thinks about the clinical encounter, its challenges and strategies adopted to overcome the challenges. Then the clinician reflects and thinks whether things would have been done differently to achieve a better outcome.

It is useful in areas analysing of ill-defined problems of professional practice before, during and after the situation. This is called meta-cognitive processes and helps develop greater understanding of both self and the situation, in order to improve the practice in future encounters, using the experience from the prior encounters.

Reflective practice includes multiple cycles including performing, reviewing and planning to meet future challenges. Individual can analyse the situation during the experience or after the experience. Questions should come to mind are, “What am I doing satisfactorily?”, Why it was successful?”, “Why it was unsuccessful?”, Should I be doing anything differently?”, “How should I do differently?”,

In reflective thinking process, you examine your own thoughts at the beginning revisiting your prior experiences and knowledge. Then you are able to critically analyse the situation as follows

1. Look back the situation or the event that happened
1. Explore our knowledge, feelings, reactions, responses to a situation.
2. Analyse the event or situation in depth and look at the same situation in different perspectives.
2. Gain skills and improve our knowledge understanding gaps in order to make progress both personally and professionally

3. Look at relationship between theory and practice and adopt new skills to manage the situation
4. Develop further self-awareness in order to make a progress as a learner

How to write a reflective log

1. Describe the event. Write what happened more like a story, however being scientific and brief.
2. Analyse the event. Why did it happen? What did you feel? Can you explain the situation with what you have learn so far? Can you explain how you would act the same event in different perspectives and with different circumstances?
3. How was the situation managed? What was the outcome? Do you have ideas for a different way of managing the situation? How will that influence the outcome?
4. What did you learn? How has it helped you to do differently next time?

3.3 Viva voce

Viva voce is a powerful and often a stressful domain of examination in medicine. It is defined as "an examination conducted by speech or assessment in which a student's response to the assessment task is verbal, in the sense of being expressed or conveyed by speech instead of writing" (Pearce & Lee 2009).

It has several advantages and some disadvantages. It checks the abilities of a student to answer directly and instantly. The wider area of coverage in knowledge as 'anything could be asked'. If asked a similar set of questions in a structured manner it can be made uniform. We use the viva to assess areas that are otherwise difficult to assess such as medical emergencies and acute medical topics.

There are some disadvantages as well. Candidates are very anxious when facing a viva. Before you go to the viva, try to visualize your performances. Think of the situations, some predicted questions. Think through how you would walk into the room, greet the examiners and sit down. Imagine answering a few mock questions. You may feel the anxiety! Do a few mock sessions with your friends too.

The other disadvantage of a viva is that answers to common questions can be memorized. For example, a question such as 'how do you manage a patient with unstable angina?'. In contrast, the examiner can present a case scenario allowing the candidate to decide on investigation and management plan to establish the diagnosis and to treat the patient. Thus, a unique answer for that case will be discussed. In this way, viva voce examinations can simulate real world clinical situations

and give the examiner to assess how the candidate will possibly fare when faced with such a clinical scenario.

Influence of language difficulties is a common issue as the viva is conducted in English. Those who are weak in speaking in English may find it as an additional challenge. The attitudes of the examiner and their likes and dislikes should not affect the candidate. Examiners should NEVER laugh at an grammatical mistakes of students.

Questioning during a viva examination

Questioning a candidate at a viva requires experience and good skills as an examiner. Examiner must keep in mind that the aim of the viva is to assess the competencies that the candidate has achieved during the MBBS study period. Examiners' personal likes and dislikes should not influence the candidate.

The Viva starts with greeting the students and examiners. Topics are generally emergency medicine, ethics and acute medicine. Examiners should give clear questions and let the candidate demonstrate their knowledge and competencies in problem solving. In high stake examinations and summative assessments, it is best to ask standard and similar questions from all the candidates. The questioning method is similar to what is described in long case questions with the explanation of breadth and depth of knowledge/ competency. It is important to question more than one area of the subject as the candidates could be strong in one section and weaker in another topic.

Case Scenario for a structured viva is given below:

You are and intern in a medical ward in RTH. Mr. B, a 60-year-old businessman is admitted with a history of hematemesis. He has chronic liver disease. He has vomited almost two cups of blood. His hands and feet are cold. He is alert and answers your questions clearly.

- What would you do immediately at this stage?
- What are the drugs you would administer?
- What are the tests would you do as an emergency?

Assessment during VIVA

When question is given a competent candidate demonstrates spontaneous and confident delivery of answers. Some candidates need prompting or a little assistance and build the answer from there, whereas a weaker candidate finds it difficult to answer even with assistance to build an answer for the question. Uniform mark sheets are given to enter the marks.

CHAPTER 4:

A GUIDE TO THE HOME VISITS

Home visit

The objective of the Home Visit is to experience and learn about the home environments of patients and aspects of care of patients in their homes after discharge from hospital. This will enable students to appreciate the social factors that contribute to a patient's illness and recovery.

We give below a format of a program on Home Visits. More details are given in the workbook.

1. Select a patient who has an acute illness or chronic illness or elderly patient
2. Have 6-8 students per patient
3. They will gather the relevant information
   3.1. by taking a history, speaking to members of the family
   3.2. they will examine the patient.
4. Arrange for home visit through the MOH of the area
5. The first visit is to gather data and information. These can be categorized as follows:
   5.1. Medical problems
   5.2. Physical issues including ADLs and nutrition
   5.3. Psychological / personal problems
   5.4. Social aspects (education level, language fluencies, occupations of household, poverty, financial status, expenditures, financial security such as savings to cope with illness, and any discriminations or stigma they suffer)
   5.5. Environmental issues (hazards in the household, difficulties such as distance to washroom or to the hospital, risks, and exposures)
6. During the second visit the students agree with the patient and family on the possible interventions
7. With the second visit, commence a few interventions based on patient's and householder's priorities. Some of the interventions will be by the family members, carers, and family. Even community interventions are possible, e.g. clearing a neighbourhood of dengue breeding mosquitoes
8. A third visit is to evaluate the progress made.
9. Meet relevant resource persons to get more information
10. Link the family and the household to official government institutions that will sustain the support. For example, the GN, the GS, the Social Services. You may also access NGOs.

Assessment

The assessment for home visit is based on the report compiled in the workbook, reflections and the presentation. These are detailed in the Workbook.

Guidelines for presentation

The presentations will be for a maximum of **10 minutes per group, and will include a** brief history, physical examination, investigations, a comprehensive diagnosis and a list of issues and potential interventions out of which what was caried out.

CHAPTER 5

A GUIDE TO THE CONTINUOUS ASSESSMENTS DURING THE PROFESSORIAL APPOINTMENT

Marks obtained in this continuous assessment will constitute 10% of the Final MBBS Medicine examination mark. Ward work forms an important component of your assessments. These will be considered when allocating marks during the Viva Voce conducted at the end of the appointment.

End of the appointment interview (30% of marks of the Professorial Unit Continuous Assessment)

The *viva voce* will be conducted for 10-15 minutes, by a panel of two teachers based mainly on medical emergencies.
The following will also be checked and **included** in the grading of the interview:

Attendance

The attendance will be marked every day. Attendance is compulsory and absence should be supported by a medical certificate or by obtaining permission from the academic in charge of the ward. his will be graded on a scale of A, B, C: A = Those without a single day of absence from work, B=1 to 3 days absence with prior notice / supporting documents and have handed over patients to a colleague. C= leave without notice, or more than 3 days absent or patients under your care not handed over to a colleague. The latter is an important part of your work as a house officer, ie to 'handover' the patients under your care to another person in the ward.

Assessment of Patient Cantered Learning

This forms one of the most important components of the programme. Each teacher will give a grading based on the

- familiarity with the patients assigned
- expression of knowledge during rounds
- level of participation during rounds
- general conduct in the ward and
- participation in patient care and in well-being of the patient

Clinical teachers may assess students during ward rounds. This could be at the time of a case presentation, or by asking a few questions on topics related to the patient. For example:

- "Summarize the history of your patient"
- "Obtain a brief history from this patient in order to confirm if she has migraine"
- "Which features indicates that this patient has chronic heart failure?"
- "How have you confirmed a diagnosis of acute kidney injury in this patient?"

Other components of PCL are:

1. Assistant House-Officer (AHO) scheme

The student could be assessed by the consultant, based on the work performed, during the period of AHO. The consultant may inquire about the work carried out by the AHO ffrom the House Officers, nurses or the rest of the team.

2. **Completed Workbook and Portfolio**

The Workbook and Portfolio forms an important part of the guide to your learning, and continuous assessments. Procedures, medical emergencies, laboratory work and casualty experience must be logged in this book.

3. **Case Histories**

Students should have detailed history; examination findings and daily state should be recorded on an A4 paper and and available for assessment. Eencourage students to use the 'SOAP' format (S – subjective, O – objective, A – assessment, P – plan) to write daily states relevant to the patient's illness. The case histories could be endorsed by the consultant during the ward rounds. The endorsed case histories should be filed and available during the end of appointment viva.

Each case history should include the following and reflect the Long Case examination

- History followed by a short discussion on the likely diagnoses based on the history
- Examination findings followed by a narrowing down of diagnoses mentioned in the previous section
- Summary of the case (i.e. how you would present the important features to an examiner or consultant)
- Investigations available to you at the time of taking the history and examination
- Discussion of differential diagnosis
- Problem list which includes medical, psychological and social problems. Include the types of information you gather during your Home Visit.

- Plan of management with at least one reference to a published guideline or Evidence Based Medicine
- Daily status while in the ward with investigation results in red and their reference ranges
- Plan on discharge
- Discharge summary of the patient. This should be written on a photocopy of a blank 'diagnosis card' given to patients.
- Prescription given to the patient
- Brief explanation of medical problem and treatment in an easily understandable form in the patient's native language

4. **Observed history taking (10% of marks of the Prof Unit Continuous Assessment)**

The student will take a history from an assigned patient while being observed by a teacher. This will take place in the 2nd week of the appointment. The objective is to evaluate and identify the deficiencies in the student's skills in taking a systematic, focused history and processing information.

The student will spend 10 minutes taking a history from an assigned patient, while being observed by the teacher on a one-to-one basis:

- Greeting the patient, self-introduction, explaining what is going to be done, and obtaining consent
- Beginning with open ended questions and use of closed ended questions where appropriate (when you want to clarify something)
- Build a good rapport with the patient
- Use appropriate non-verbal communication
- Use simple language to
- Analyse symptoms to arrive at a diagnosis or to identify the problems faced by the patient (most important!)
- Comprehensive history covering review of systems, past medical history, family history, social history etc.)
- Time management
- Conclusion of interview including thanking the patient

At the end (after 10 minutes), the teacher will ask a few questions for 2 minutes focusing on what could be the diagnosis and the reasons for arriving at the particular diagnosis.

5. **The OSCE (50% of marks of the Prof Unit Continuous Assessment)**

Interpretation

OSCE: includes clinical skills, iinterpretation of clinical pictures, test results and data. OSCEs will be held in the last week of the appointment and consist of 20, three-minute stations.

6. **Communication Skills (10% of marks of the Prof Unit Continuous Assessment)**

How you explain an investigation, an illness, obtain consent for a test or promote change in behaviour will be assessed. This assessment will be in Sinhala or Tamil.

CHAPTER 6

A GUIDE TO THE FINAL MBBS

In the final MBBS examination, medicine consists of following components

- Continuous assessments – 20 marks o End of 4th year (10 marks) o End of Prof Appointment (10 marks)
- Multiple Choice Questions (MCQ) paper – 20 marks
- Structured Essay Question (SEQ) paper -20 marks
- Short case assessments – 20 marks
- Long case assessments – 20 marks

6.1 Multiple Choice questions (MCQ)

Multiple choice questions will cover broad domain of knowledge in the curriculum and it is a quick assessment method of wider area of knowledge and competency. It is being developed with prior agreement on the correct answer. They are very reliable and has easy scoring systems. There will be "true or false" type (T/F) questions and "single best response" type (SBR) questions in medicine. MCQs in medicine are made with an intension to emphasize higher level thinking of six cognitive levels of Bloom's taxonomy of educational objectives rather than just recall type questions. There will be questions to assess memory and application, cause and interpretation, justify methods and procedures, data interpretation, clinical diagnosis, management options, medical emergencies, pathophysiology and even adverse outcomes. There will be few questions to assess the knowledge about epidemiology, disease prevention and community services.

The common MCQ examination conducted at present will be continued with the same format, i.e., 30 SBR questions and 20 T/F type questions.

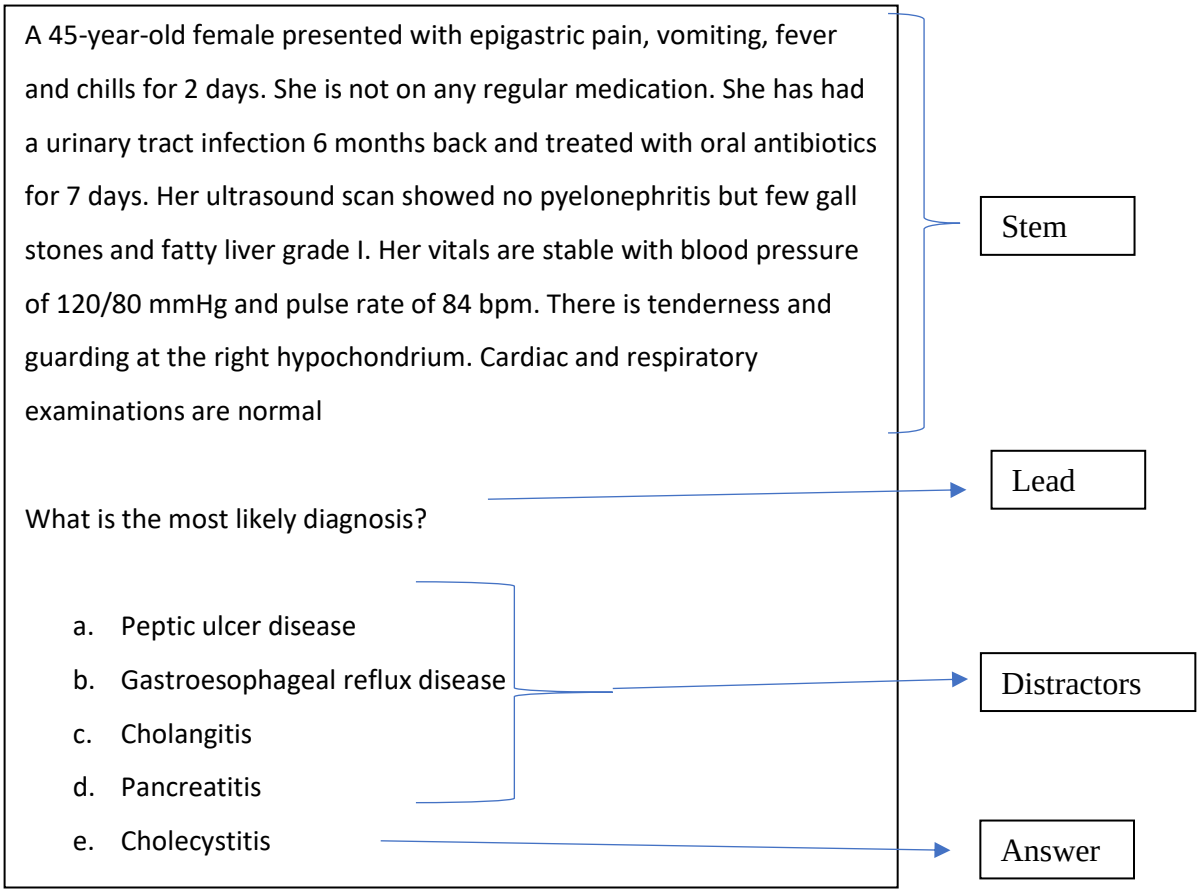
The composition of MCQ paper; The number of questions in each system / section e.g. cardiovascular system, respiratory system in the common MCQ paper is given in the table below.

Sub-heading (Acronym)	**No. of MCQs Needed**	
	T/F - 20	**SBR - 30**
Central Nervous System (CNS)	2	3
Cardiovascular (CVS)	2	3
Respiratory (RS)	2	3
Liver & GIT (GIT)	2	3
Renal (Ren)	1	3
Endocrine & Metabolism (Endo & Met)	2	3
Haematology & Oncology (Haemat & Onco)	1	2
Rheumatology (Rheumat)	1	1
Infection & STD (Inf & STD)	2	2
Toxicology (Toxic)	0	2
Toxinology (Toxin)	0	1
Dermatology (Dermat)	1	1
Statistics/Epidemiology (Stat/Epid)	0	1
Genetics (Gen)	1	0
Physiology (Phys)	1	0
Psychiatry (Psych) (State (“This will change with the introduction of psychiatry as a separate subject in all final MBBS examinations".	2	2
	20	30

Multiple choice question is composed of a stem, followed by a lead-in. Stem is the main body that describe a case scenario. The lead is the question that the candidate should find the answer from the given options.

It describes the context of the item and options could be correct alternative (the answer key) or false alternatives (the distractors). Usually there are five answers. In SBR questions there is one answer key and 4 distractors. Distractors may be partially correct, but not the ‘best’!

Following example illustrates the components of an MCQ



SBAs with stemless items are more consist of "recall" items rather than the application of knowledge (e.g. clinical reasoning, comprehension of processes).

SBAs with stem and lead-in

Example

A 58-year-old male who had extensive anterior myocardial infarction, suddenly developed shortness of breath, cough and frothy sputum on 6th day in the ward. He gives a past history of asthma. His blood pressure is 100/60 and heart rate 90 per min. There are fine bi-basal basal crepitations. What is the most likely cause for this acute change?

A. Aspiration pneumonia
B. Pulmonary fibrosis
C. Pulmonary oedema
D. Exacerbation of bronchial asthma

E. Pulmonary embolism

The correct answer is C

Practice guide in preparing MCQ

Following are general concepts that are adhered when preparing MCQs.

- Number and type of MCQs and alternatives need to be decided according to the blue print
- Write stems with focused lead-in questions. However, in undergraduate examinations assessments a significant proportion of factual knowledge should be included.
- The correct alternatives should be unequivocally right and the distractors. Distractors should be wrong in T/F or not be comparable to the answer in a SBR question.
- All alternatives are best be made as homogeneous and similar in length, the degree of complexity and attribute.
- Write positive questions in the lead in as well as statements in alternatives.
- Avoid repeated or overlapped elements in alternatives
- Avoid vague, absolute or frequency terms such as common, commonest, frequently, most, recognised, all, none, always, never, only and etc.
- Avoid absolute and personal wording on the lead-ins (Rather than asking "What is the correct diagnosis?", it is preferable to ask, "What is the most likely diagnosis?".
- Do not use alternatives that aggregate other alternatives (e.g. "all/none of the above")
- All components of the question, should be grammatically and logically congruent
- Do not repeat words from the stem in the alternatives
- It is preferred to measure one attribute at a time

The "true or false" type multiple choice questions

It contains more than one correct answer. There will be sufficient correct option and sufficient distracters (incorrect options) to find a good balance.

A 30-year-old female presents with fever, weight loss, and cough for 4 months. You are suspecting pulmonary TB. Which of the following are signs that would support your clinical suspicion:

a. Clubbing of the fingers
b. Tracheal deviation
c. Hyper-resonant percussion note
d. Crepitations in the left upper zone of her chest.
e. Widespread rhonchi

Correct answers are b and d.

Wrong answers are a, c, and e

Correct options are constructed in defensibly correct manner and distracters are constructed in defensibly incorrect manner. When a student identifies “false” statements correctly, we can conclude only that the student knew the statement was false. But it does not imply that the student knew the correct fact. When a student identifies “correct” statements correctly it evaluates the correctness of an assumption. There will be negative marks if someone identify a correct answer as incorrect. Negative marks are calculated within the question and are not brought forward to total calculation according to current guidance of the MCQ marking. Negative marks are included to discourage guessing!

T/F type MCQ - Sample question

1. Regarding Irritable Bowel Syndrome (IBS)
    a. Constipation is not a feature
    b. Faecal calprotectin helps to confirm the diagnosis
    c. High ESR is an expected finding
    d. Colonoscopy is essential before starting treatment
    e. Use of short-chain carbohydrates improves symptoms

Answer: FTFFF

The “single best” type multiple choice questions

This type of questions is used to evaluate higher order thinking of the students mainly focusing on problem identification, clinical reasoning and management using mainly case-based scenarios

These questions comprise the basic model of a stem and a lead-in followed by five answers. Best option is called “the correct answer” and other options are distractors. All answers should be homogenous. Options should be simple, short and readily understood. All options should be plausible or true but acceptable in varying degree. But the correct answer needs to be expressed clearly that only one answer is most suitable.

SBA should test the problem-solving ability and application of medical knowledge. All the information that is necessary for a competent candidate to answer the question should be provided in the stem including clinical presentation, results of investigations and at times, part of initial treatment.

SBA type MCQs - Sample questions

1. A 24-year-male attended to the gastroenterology clinic for advice, as his 30 years old brother is recently diagnosed with haemochromatosis. Which test you would recommend to him for screening?

    A. Serum ferritin level
    B. Serum transferrin saturation
    C. Liver iron levels
    D. HFE gene analysis
    E. Ultrasound scan of the liver

    The correct answer is B

2. A 55-year-male diagnosed to have advanced cirrhosis was admitted with abdominal pain, and distension with altered level of consciousness. On examination his temperature was 38.5 C, pulse rate was 105 beats per min, blood pressure was 98/50 mmHg. Abdominal examination revealed gross ascites with shifting dullness. What is most appropriate test to do on him?

    A. Culture of ascitic fluid
    B. Adenosine deaminase test on ascitic fluid
    C. Ascites fluid analysis for microscopy
    D. Ultrasound scan of the abdomen
    E. Acetic fluid cytology

    Correct answer is C

A 50-year-old-male is brought to the casualty ward with epigastric pain lasting 2 hours. The dull pain is in the epigastrium and left side of chest. On further questioning he says the pain radiates to left arm. He had vomited twice and had burped about 10 times. He had noticed sweating. Blood pressure is 130 / 90 and his heart rate is 80 per minute and regular. Physical examination is normal.

The most likely diagnosis you would consider at this stage is

a. Acute pancreatitis
b. Myocardial infarction
c. Gastro-oesophageal reflux
d. Acute gastritis
e. Left pleurisy

3.2 Structured Essay questions (SEQ)

Essay questions are open ended questions and a SEQ limits to focus content and directs the student to a precise and specific response. This also useful in assessing higher levels of thinking in Bloom's taxonomy such as analysis, evaluation and application. Questions are based on case scenarios and is utilized to assess the knowledge of basic sciences and pathophysiology, problem identification, data interpretation, further investigation, management as well as primary and secondary prevention. Even knowledge on holistic aspects of care, multidisciplinary teamwork, communication, ethics also can be evaluated. Relevant focused questions are set up to give short answers according to marks and time allocated to each component of the question. Following are features of SEQs

a. Open ended – there are a few correct answers
b. Specific outcomes are assessed
c. Topics are precisely divided
d. Provide adequate information in the text
e. Define the statements clearly
f. Specific allocated marks and time are given to each part.
g. Examiner agreed marking scheme provide specific check list with key points to ensure a reasonably high objectivity.

	Clinical reasoning	investigations	treatment	Basic sciences	pathophysiology	Ethics	Health system
CVS							
RS							
GIT and Liver							
Nephrology							
CNS							
Rheumatology							
Endocrine and metabolism							
Infections							
Emergency							
Toxicology/ Toxinology							

3.3 Short Cases

This part of the examination will consist of a minimum of 4 cases representing the major systems, namely the cardiovascular system, respiratory system, nervous system and the abdomen.

The duration of each case will be 7.5 minutes. 5 minutes are allocated for the examination and 2.5 minutes for the discussion. Candidates will be given specific instructions at each station displayed written (e.g., Examine this patient's cardiovascular system). A structured examination sheet will be used to ensure a uniform marking scheme which consists of various domains of competencies expected from an undergraduate

The following domains will be assessed during the examination

a) Technique of examination

The technique of examination is taught during the clinical training. It is the standard practice that the undergraduate should follow the proper technique and sequence of examination. There are well established techniques and the order of examination which should not be altered during the examination as an undergraduate. One will be able to detect a physical sign correctly only if they perform the examination in correct technique. The examiners are watching during the physical examination and will not comment on techniques unless it could cause harm or discomfort to the patient. However, they take notice of the accuracy of the technique to allocate marks.

b) Detection of physical signs

The detection of physical signs is dependent on two things. The accuracy of the technique and the experience of the candidate. There are essential and optional physical signs identified by the examiners during their calibration process. The essential signs are expected to be detected by the candidate for them to pass the case. Optional ones are better to detect for them to score more marks.

c) Interpretation of physical signs and differential diagnosis

Interpretation of the detected physical signs needs knowledge on the subject and experience. The interpretation of each physical sign and application of them to the patient as a whole.

Based on the findings the candidate is expected to give a diagnosis or differential diagnosis. For undergraduate the expected diagnosis is usually fallen within the common or usually encountered conditions. The rare conditions are not ~~generally~~ expected from them. The appropriate number of differentials to suggest is about 2-5.

d) Patient welfare

i. **Patient welfare** is assessed throughout the examination by the examiner. It includes approach, consent, patient handling, making them comfortable during the examination and avoiding painful procedures. It is best to make good rapport with the patient and be genuinely caring for them as a routine practice, so it flows as a natural process. Greeting patients, using descent and convenient language, showing empathy and taking care not to embarrass or cause pain, and finally thanking patient are assessed by the examiners. Candidates must demonstrate good patient welfare throughout the examination and any failures can be detrimental. It is relevant to note that certain high-stake examinations fail candidates if they cause unnecessary pain or embarrassment to a patient!

ii. **Approach** includes greeting the examiners, greeting the patient including appropriate facial expressions and tone of voice, introducing themselves to the patient, explanation of the procedure and taking informed verbal consent, appropriate exposure, setting up of the scenario if needed changes (e.g., positioning the patient, adequate lighting and) and having a chaperon. Appropriate clean clothing and basic grooming to appear pleasant are also important to consider

e) Presentation skills

Presentation is very important as far as the score is concerned. Good sensible presenter will be able get more marks. It is essential to practice the presentation to be fluent it and to manage the time of 2.5 minutes. Learn to include the essential findings and to make an appropriate discussion with the examiner.

Teachers are requested consider the following comments during the clinical appointments or during the assessments

- Avoid comments that could upset the candidate, e.g. “I have noted you during the appointment’
- Do not attempt to teach the student during an examination. An exam is to assess, not to teach! If you wish to, anonymous feedback can be given after release of results.
- Avoid making comments such as ‘You have not studied this section?’, ‘You should know these’ ‘These are basic facts’
- Don’t share personal information about the candidate with your co-examiner, e.g., “He is the son of the consultant pathologist in our hospital’
- If a student or candidate does not know an answer, do not repeatedly question on the same point. This is because some candidates develop thought blocks with anxiety and further questioning will not unlock it.
- Avoid asking questions on details of management.
- Short Cases are meant to focus on physical examination skills and interpretation and therefore avoid questioning on topics such as investigations or management

There are two examiners per station (or a case) except when there are an additional trainee examiner involved as observers. Each examiner will mark independently when allocating marks. They may discuss amongst them if necessary to clarify any doubts and to avoid major discrepancies. Candidates are expected to complete the presentation in 2.5 minutes, and they could then greet the examiners and move on to the next short case. The marksheets will be kept confidentially and will be handed over to the exam coordinators at the end of the examination.

Final MBBS Medicine – Short Cases Mark Sheet

CVS		**Abdomen**		**Respiratory**		**CNS**	

First place a ✓ mark against the appropriate band and then select a mark within the range

Aspect tested		Very poor (0 – 29)	Poor (30 – 39)	Inadequate (40 – 49)	Adequate (50 – 59)	Good (60 – 69)	Very good (70 – 79)	Outstanding (80 – 100)
Examination technique								
	Mark							
Elicited signs								
	Mark							
Interpretation								
	Mark							
Presentation skills and patient welfare								
	Mark							

Remarks

Examine 1. Signature …… Examiner 2. Signature ……..

For office use only				
Examination technique (30)	Elicited signs (30)	Interpretation (30)	Presentation and welfare (10)	Total (100)

3.4 Long case

The long case in medicine has a significant place in final MBBS examination in the faculty. One fifth of total marks is allocated for this component highlighting the importance of competency one should achieve in long case. Conducting a long case examination in final MBBS with 100 to 200 candidates is a strenuous work. However, we believe that the long case is an essential component in the final MBBS although it has become unpopular in western countries in recent past.

Following section describes the preparation, conduction and marks allocation for long case in details. A study conducted by the authors (*C Gamakaranage, Y Chathurange and S Jayasinghe. Evaluating the long case component of final MBBS clinical assessment. Extended abstract oral presentation at 8th ICSUSL 2021*) on post MBBS students of University of Colombo (*n = 201 with a 50% response rate*) found that candidates considered the Long Case to be the best examination tool to assess the clinical competency and holistic management approaches to patient care. The disadvantage is that the Long Case in not too reliable because there is an element of 'luck' in the selection of cases as well as examiner bias. Research has shown that two shorter versions of the Long Case will overcome these disadvantages. However, our universities do not have adequate human resources to double the number of Long Cases. Our student batches are far too large, and the number of staff to handle such as load are very small!

Preparation for long case

A successful long case examination needs proper preparation by the candidates, examiners and the organizers. Candidates study for long cases during their MBBS training. Long case is such a powerful tool of assessment which could be used to assess one's training along the whole training period.

Examiners prepare themselves by calibrating the cases, done in the hour prior to the commencement of the examination. Organizers will select cases, organize the examination venue and conduct the examination. In addition to the maintenance of routine rules and regulations of examination here the organizers need to provide care for the patients got involved in examination. Thus, organizing and conducting a long case examination is a strenuous process and need well organized multidisciplinary team work to make it a success.

Selection of cases for long case

Case selection and organizing them ready for the examination is also a strenuous and time-consuming process. We must be grateful to the patients participating in examinations. The patients for the long cases are selected by a team of experts consist of senior lecturers/ lecturers in the department of medicine. In addition, some consultants of the extended faculty and selected postgraduate students

related to the department of medicine may be involved as invitees of the department. It is a highly confidential process. Candidates are kept out of bound during the period of selection of cases till end of the examination.

Case selection is a careful process in which organizers take care to include commonly encountered scenarios in the general medical wards. Rare and complex cases are mainly for postgraduate examinations. Candidates are expected to be ready for the common cases and there is no exact cut off where we differentiate undergraduate and postgraduate cases. Examiners will be careful to limit the questioning to undergraduate limit during the discussion. However, the opportunity for an excellent undergraduate to show their expertise beyond the horizon is not restricted. Following are some **examples** for commonly encountered case scenarios, that the editors has selected from their experience in the subject.

1) A middle-aged lady with type 2 diabetes admitting with urinary tract infection/ pyelonephritis
2) An elderly man (or a young) admitting with acute coronary syndrome and cardiovascular risk factors
3) An elderly lady with longstanding diabetes, polyneuropathy and chronic kidney disease
4) Middle aged man with poorly controlled hypertension and admitting with a stroke or transient ischemic attack
5) Young lady with recurrent urinary tract infections
6) Elderly lady with stroke and swallowing difficulty admitting with aspiration pneumonia
7) Young man with dengue haemorrhagic fever
8) Young man with pyrexia of unknown origin (or infective endocarditis)
9) Middle aged lady with rheumatoid arthritis and interstitial lung disease
10) Middle aged man with decompensated cirrhosis admitted with haematemesis
11) Young lady with SLE
12) Middle aged lady with dyslipidaemia, obesity and hypothyroidism
13) Middle aged man with heavy smoking and COPD with history of TB with post-TB bronchiectasis
14) Longstanding asthma patient admitting with infective exacerbation of asthma
15) Young man with chronic diarrhoea

Long case procedure and components

Candidates will be allocated 40 minutes to obtain a detailed history and physical examination and formulate a management plan. This will be followed by a 20-minute discussion with a panel of two (usually) examiners. Candidates are gathered into a pre-examination room where they will be instructed on procedure, rules and regulations relevant to the examination. They will be taken in small groups (usually about 3 to 5 or little more) and patients are allocated, who are kept in a separate area of the examination premises. When candidates interview the patient, they have freedom to conduct the interview as they prefer. There will be organising staff to assist the candidates as chaperon and for patient care. However, the interviewing is an unobserved process in SUSL (although it could be conducted as an observed interview in a different format of observed long case).

After the 40 minutes of history and examination there may be a 2 - 3 minutes (not more than 5 minutes) till they encounter their examiners in a separate discussion area. During this few minute the candidates can organize their thoughts and get ready for the presentation, during the next 20 minutes of discussion.

Following are components of case history prepared for long case discussions

a) History
b) Examination findings
c) Summary of history and examination
d) Problem list
e) Differential diagnosis
f) Plan of investigations
g) Plan of management

Candidates are asked to present their histories to the examiners which is expected to present in the conventional order as far as the undergraduates are concerned. However, case specific flexibility for the alterations is allowed if it's appropriate. The conventional order of components of the history are as follows; demographic information of the patient, presenting complaint and duration, history of presenting complaint, past medical history, past surgical history, obstetric and gynaecological history in females, drug and allergic history, family history and social history. Examiner may rarely interrupt the candidate during the history presentation if there is anything to clarify. At the end of the history the examiner may question the candidate to inquire about problems identified and differential diagnosis before moving into the physical examination.

The examiner may ask to present the examination findings or may ask the candidate to present only the relevant or the positive findings depending on the case and the availability of time. Examiners will question further during the presentation of examination findings, to clarify doubts and to assess whether the candidate has good skills in finding correct signs, interpret them correctly and to see whether they know the pathophysiological corelation of the signs identified.

At the end of the examination the candidate will be asked to provide the revised list of differentials. At the end of both history and examination the candidate should be ready to give a summary of the case and/ or the identified problem list if they are asked to. The discussion will move on based on these and it is highly case specific.

A structured examination sheet will be used, by the examiners to ensure the uniformity of marking scheme (See annexures) as much as possible.

Questioning and answering during long case

In most cases candidates are asked to present the history, examination before discussion begin. However candidates may be questioned during the history and examination if the examiner wants to clarify things or to omit wasting time on insignificant aspects (like missing a very important history point during presentation to see whether the candidate has inquired it or not, detailed neurological examination findings in a patient having acute coronary syndrome, or when there are many negative findings in the examination but if the time is lacking the examiner might ask to present the significant findings only). At the end of the history and examination discussion will move to problem identification and summary of the case. It is very important to identify all the problems and present them in categories like acute and chronic problems or medical, surgical and social problems etc. This is highly case specific and the candidate is expected to select the appropriate classification for the case. Exploring through history and examination to identify all the problems is a valuable skill a doctor should have.

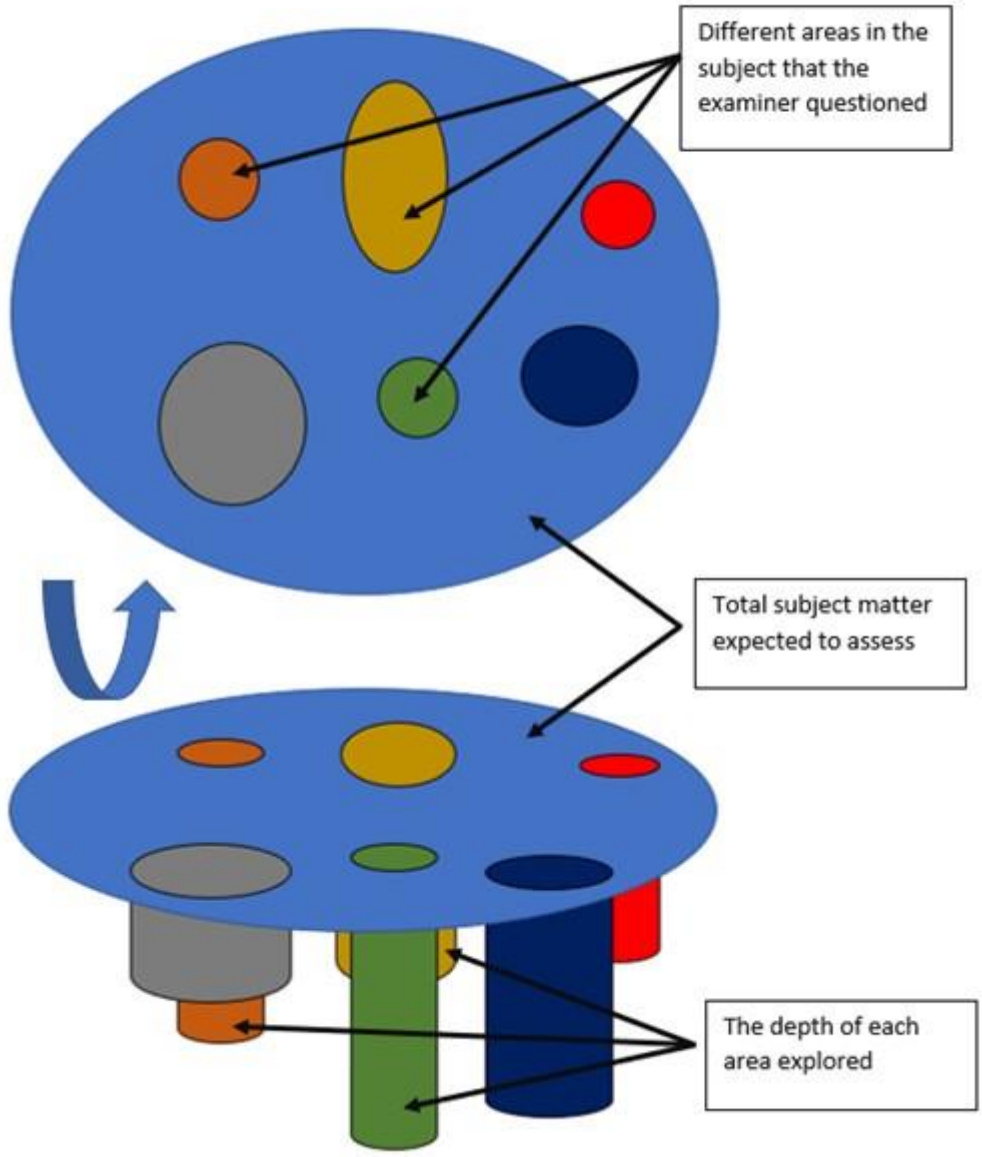
Next is to discuss on the differential diagnosis or the diagnosis for the diagnostic problem(s) the patient is having. Candidate should identify what is (are) the diagnostic issue(s) and formulate about 2-5 differential diagnosis (DD) or if confident can give the most likely diagnosis for that. Best practice is to tell the most likely diagnosis first in the list of DDs. The examiner will question the candidate to assess clinical reasoning for their diagnosis at this point. There is always good marks for those with sensible and rational reasoning for their answers.

Once the problems are identified and the DDs are presented the next move is to discuss about the investigation and management plan for the patient. One should always plan out their investigations thinking few general concepts; basic and non-invasive tests should come before the advance and

invasive investigation, availability accessibility and cost effectiveness are important aspects to think before suggesting an investigation. Investigations are done in the aim of confirming the diagnosis, identify the complications and to plan out the management for the patient given.
The management of the patient is discussed to a depth only up to the expected standard for the MBBS candidate. However, there is always some space for brilliant candidates to show their expertise allowing them to reach distinctions.
The questioning a candidate need good understanding what to ask. Examiners idea is to elicit the competency level of the candidate using the very limited time given for them. Examiner should not be emotionally involved, instead use their skills to elicit the candidate's best performance.
Examiners can start with one subject area and assess the candidate's response. Once the examiner is satisfied on that area in the subject, they should move to another area taking the opportunity to assess some other competency. Likewise, the examiner should try to question several areas of the subject. If a student is weak in one subject area the examiner should take note of it but should not waste time asking too many questions making the candidate more nervous, which will drop their performance at this tense situation. Instead, the examiner should move to another area in the subject and start questioning. At the end, the examiner should be able to elicit the 'breadth' of knowledge/ competency (here the better term competency indicates not merely the knowledge, but the collection of knowledge, skills, attitudes and reflection of experience). The other parameter to assess of a candidate is the 'depth' of the knowledge/ competency. To assess this the examiner can dig into deeper subject matters of each given area of the subject. Once you elicit both breadth and depth of competency then you get a better three-dimensional picture of the candidate's level of competency. Actually, it is a 3D sampling of the candidate's competency in the expected subject matter. This concept of assessment of a candidate is illustrated in the diagram shown below.

There are some important tips the candidates should know when answering such questions. there are basically three types of answers that you can give to a question. One, when you know the exact answer for the question given, where you can give that with confidence. Two, when you don't know the answer for the question, where you should tell the examiner 'I don't know the answer for that question, so that the examiner can move to other area in subject with a fresh question. Remember it is very important to know what you don't know, and it is extremely important that as a doctor one should accept when they don't know something than laying and risking lives. Thirdly, you can say, "I don't know the exact answer for the question; however, I know these and these facts and I have this experience related to the condition which might help me to find an answer for the question" in a

situation where you don't know the exact answer but know some useful and relevant information on that area of subject.



Marking the long case

Marks taken for a long case is very important for the candidate as it carries a huge bulk (one fifth) of overall marks given at the final MBBS. Generally long case gives a good overall idea of the competency level of a candidate when assess thoroughly. A good, prepared candidate is easy to recognize. Examiners also need quite an experience and preparedness on that patient (during calibration) to assess the candidate properly.

The components of competencies assessed during the long case are; history, examination, differential diagnosis, investigation, management and the knowledge related to the topic. At undergraduate examinations, it is best we follow the conventional order of questioning in long case. Start from asking the candidate to present their history, examination and discuss based on that. Sometimes in postgraduate examinations examiners may ask to start from summary, problem list or from differential diagnosis, depending on the case.

Allocation of the marks for the candidate is done in a structured manner to make it unbiased and maintain the uniformity. The structured marking sheet is annexed bellow.

Once marking is completed the mark sheets are collected at the end by the dedicated collector of the organizing team and are taken confidentially to the faculty.

Calibration of Long cases **Date: ………**

Case no.	Patient's diagnoses
Essential findings in history	
Essential findings in examination	
Crucial diagnoses to entertain	
Main areas for investigations	
Final Diagnoses	
Plan of management	
Important points in management	
Other relevant points	

Case no.	Patient's diagnoses
Essential findings in history	
Essential findings in examination	
Crucial diagnoses to entertain	
Main areas for investigations	
Final Diagnoses	
Plan of management	
Important points in management	
Other relevant points	

Case no.	Patient's diagnoses
Essential findings in history	
Essential findings in examination	
Crucial diagnoses to entertain	
Main areas for investigations	
Final Diagnoses	
Plan of management	
Important points in management	
Other relevant points	

Examiner name: ……………………………… **Signature ……………………**

Final MBBS Long Case Mark Sheet

Step 1: Place a ✓mark in the appropriate **band**

Step 2: Select an appropriate **mark within the range** for the band

Aspect tested		Very poor (0 – 29)	Poor (30 – 39)	Inadequate (40 – 49)	Adequate (50 – 59)	Good (60 – 69)	Very good (70 – 79)	Outstanding (80 – 100)
History								
	Mark							
Tentative diagnosis on history								
	Mark							
Physical examination								
	Mark							
Diagnosis and problems								
	Mark							
Investigation, treatment and follow-up								
	Mark							
Presentation								
	Mark							
Knowledge related to patients' problems								
	Mark							

Remarks

Examiners:

1. Signature:…… 2.Signature:……

Name:					**for office use**		
History (20)	Tent Dx (20)	Exam (10)	Dx & prob (20)	Inv and Rx (20)	Presentation (5)	Knowledge (5)	Total (100)

The following are NOT encouraged during the assessment process

- Do not make comments that could upset the candidate, e.g. “I have noted you during the appointment’
- Do not attempt to teach the student during an exam. An exam is to assess, not to teach!
- Avoid making comments such as ‘You have not studied this section?’, ‘You should know these’ ‘These are basic facts’
- Don’t share personal information about the candidate with your co-examiner, e.g., “he is the son of the consultant pathologist in our hospital’
- If a candidate does not know an answer, do not question on the same point. This is because some candidates develop thought blocks with anxiety and further questioning will not unlock it.

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