

MICROBIOLOGY

Logbook

For MBBS Phase II

**A Model, based on National Medical Commission, India's
Competency Based Medical Education (CBME) Curriculum**

Dr Jyoti M Nagmoti

Dr Suman P Singh

Dr Anand B Janagond

Dr Apurba S Sastry

MICROBIOLOGY LOGBOOK

Contributors

Dr. Jyoti M. Nagmoti MD, Ph.D (Med.Micro),
FME (UIC, USA), FAIMER Fellow, PGDHPE
Professor of Microbiology J. N. Medical College, Belagavi
Additional Controller of Examinations, KAHER, Belagavi
Member, Microbiology Curriculum Committee, RGUHS,
Bengaluru, Karnataka
Former Dean Faculty of Science, KAHER
Former Founder Director of University Department of
Education for Health Professionals (UDEHP), KLE Academy of
Higher Education and Research (KAHER), Belagavi



Dr. Suman P Singh MD, PhD, FAIMER Fellow, ACME
Professor of Microbiology
Assistant Dean Academic Excellence
Pramukhswami Medical College
Bhaikaka University
Karamsad, Gujarat



Dr. Anand B. Janagond MD, DNB, ACME
Member, Microbiology UG Curriculum Committee
RGUHS, Bengaluru, Karnataka
Professor of Microbiology
S. Nijalingappa Medical College
Bagalkot, Karnataka



Dr. Apurba S Sastry MD,DNB,MNAMS,PDCR
Infection Control Officer
Officer In-charge HICC
Antimicrobial Stewardship Lead
Associate Professor of Microbiology
JIPMER, Pondicherry



NAME OF THE COLLEGE WITH EMBLEM

Department of Microbiology

Logbook

For

PHASE II MBBS STUDENTS

Batch: 2019-20

As per,

**Competency Based Medical Education Curriculum,
National Medical Commission, India**

Personal Details

Student Name _____

Date of admission to MBBS course: _____

Date of beginning of Current Phase: _____

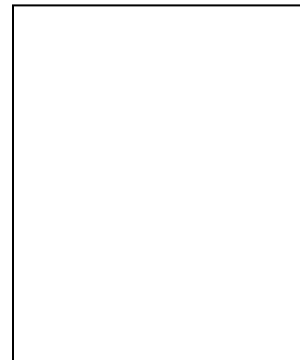
Registration Number (College ID): _____

Registration Number (University ID): _____

Permanent address: _____

Email ID (optional): _____

Mobile number (optional): _____



Logbook Certificate

This is to certify that the candidate

Mr/ Ms _____

Reg. No./Roll No. _____, admitted in the year _____ in

----- Medical College, has satisfactorily
completed/ Not completed all assignments/requirements mentioned in this logbook
for II year MBBS course in the subject of Microbiology during the period from
_____ to _____. S/he is **Eligible/Not Eligible**
to appear for the University assessment as on the date given below.

Signature of Faculty:

Name and Designation:

Countersigned by Head of the Department:

Principal/Dean of the College:

Place:

Date:

Introduction

The key aspect of the new Competency Based UG Curriculum is to emphasize on the acquisition of competencies as a requisite for learning progression. There is a need to document the active learning process adopted by the students and achievement of competencies / predetermined tasks. The logbook provides the platform for such documentation and thus forms an integral part of the formative/ continuous assessment program.

This book is designed based on the National Medical Commission's Competency based curriculum. The comprehensive logbook provides scope for documentation of learning of cognitive, psychomotor and behavioral skills throughout the Microbiology course. The students can use this book to record their performances in Formative/day-day and Internal Assessment (IA) tests. Formats are suggested for tabulation of Unit wise, Block-wise and Final IA marks that are to be sent to the University for Consideration of candidature or otherwise to appear for the Summative Examination.

This document shall be helpful for the students and the faculty to enable recording and tracking of skill acquisitions, and in adopting reflective practices to enhance learning.

Glossary

Logbook: is a *verified record* of the progression of the learner documenting the acquisition of the requisite knowledge, skills, attitude and/ or competencies.

Portfolio is a collection of learner's progression in tasks and competencies. A portfolio is an evidence of events documented in the logbook. It includes selected assignments, self-assessment, feedback, work-based and in-training formative assessments, reflections and learnings from planned activity in the curriculum.

Activity: This term refers to a predefined task performed by learners that contributes to the achievement of stated objectives or competencies.

Repeat: An activity if not completed satisfactorily and learning outcomes are not achieved in the first attempt, it needs to be done again by the student. It does not need further teaching-learning intervention by the teacher

Remedial: This is a planned activity aimed at correcting deficits that prevents a learner from achieving an intended outcome.

Feedback: Feedback is a formal active interaction performed at the completion of an observed activity (or activities) intended to facilitate positive change, growth and improvement of the learner through guided reflection of activity(ies) performed.

General Instructions

1. The logbook is an important document used for recording acquisition of competencies through various teaching-learning-assessment activities by the student such as,
 - Self-directed learning,
 - Participation and performance in Small Group Discussions, practical exercises
 - Certifiable skills learning ('Perform' level competencies)
 - Desirable skills learning ('Show' how level competencies)
 - AETCOM activities
 - Participation and achievement in conferences, field activities, other extra-curricular activities
2. It is the responsibility of each student to bring the logbook to the class and get it verified and signed by the concerned teacher regularly.
3. All the activities mentioned in the logbook are to be verified and signed by the teacher and the student with date. At the end of the academic year, the entries in the logbook are scrutinized and certified by the Head of the Department of Microbiology.
4. **Proper care and maintenance of the logbook with entries and signatures is utmost important. This record will be certified by the Head of the Department with regards to a student's Eligibility to appear for the summative examination. Therefore, logbook record is an essential prerequisite for the University Examination.**
5. As per the NMC Curriculum document, it is expected that, the student has to perform 'at' or 'above' the level of expectancy on all the Certifiable skills for the predetermined number of times. If the student's performance is below the level of expectancy, the activity is *Repeated* twice and, if the student still fails to perform as expected, then a *Remedial* teaching-learning session is conducted. This is in order to ensure that the student becomes competent in predetermined certifiable competencies.
6. Provision is made to indicate whether the student has participated/performed at or above the expected level of competency so as to indicate the need for Repeat or Remedial activities, including timely & constructive Feedback to the students by the faculty.
7. This book can be used as a ready reckoner to gauge the progression of student learning through his/ her performance in Formative (day to day) and Internal Assessments (IA).
8. Logbook has provision for entries of block-wise attendance of the student. Attendance requirements are 75% in theory and 80% in practical for eligibility to appear for the University examinations in that subject. 75% attendance in Professional Development Programme (AETCOM Module) is required for eligibility to appear for final examination in each professional year.

References

1. Medical Council of India, Competency based Undergraduate curriculum for the Indian Medical Graduate, 2018. Vol. 1, 2 and 3.
2. Medical Council of India, Attitude Ethics and Communication (AETCOM) Competencies for the Indian Medical Graduate 2018.
3. Medical Council of India, Competency Based Assessment Module for Undergraduate Medical Education 2019.

Acknowledgements

1. Members of Curriculum Committee for Microbiology (UG), Rajiv Gandhi University of Health Sciences, Bengaluru, Karnataka
2. Logbook Committee Members, Department of Pharmacology, J.N. Medical College, KLE University, Belagavi, Karnataka
3. Dr. Rupal Patel, Professor of Microbiology, Pramukhswami Medical College, Bhaikaka University, Karamsad, Gujarat
4. Dr. Chirag Modi, Professor of Microbiology, Pramukhswami Medical College, Bhaikaka University, Karamsad, Gujarat

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Table I: *Overall Internal Assessment (IA) Performance

Internal Assessment (IA)	Theory Max. Marks	Marks Obtained	Practical Max. Marks	Marks Obtained
IA - I	100		100	
IA - II	100		100	
IA - III	200		100 (80 Practical + 20 Viva-Voce)	
Unit Tests (07)	70		--	
SDL	20		--	
Certifiable skills	--		80	
Desirable Practical skills	--		70	
AETCOM skills	--		10	
Performance in SGD	--		30	
Additional Skill acquisitions	10		10	
Total <i>Reduced to 20%</i>	500		500	
	100 (Min.40)		100 (Min.40)	
GRAND TOTAL (Aggregate of Theory & Practicals) (Min.50)	/200			
	ELIGIBLE		NOT ELIGIBLE	

Internal Assessment (IA).

- * This is only a suggested pattern for allotment of IA marks to be sent to the University
- Internal Assessment examinations are conducted in theory & practicals separately for 500 marks each. The Final IA marks can be reduced to 20% as depicted in the table above.
- Student must secure at least 50% of the total marks (combined in theory and practical) and not less than 40% marks separately in theory and practical in order to be “Eligible” for appearing at the final University examination in the subject of Microbiology.
- **As per NMC guidelines, Internal Assessment marks decide the candidates Eligibility to appear for the Final University examination, and are NOT added to the University Examination marks. However, the final Internal Assessment marks obtained by the candidates are separately depicted on the University marks card.**

Table II: Block-wise Internal Assessment (IA) Performance

A	Formative assessment				Formative assessment		
	<u>Theory</u>				<u>Practicals</u>		
Competencies	Block			Competencies	Block		
	I	II	III		I	II	III
SDL				Certifiable Skills			
Unit tests				Desirable skills			
---				AETCOM			
				SGD			
Others				Others			
Total				Total			
B	Internal Assessment (IA):				Internal Assessment (IA):		
	<u>Theory</u>				<u>Practicals</u>		
	I	II	III		I	II	III
			P1 P2				
Total				Total			
Grand Total (A+B)				Grand Total (A+B)			

Table. III: Performance in Internal Assessment/Term-end Tests (Theory)

Internal Assessment (IA) Exams	Max. Marks		Marks Obtained	
Internal Assessment-I	100			
Internal Assessment-II	100			
Internal Assessment -III (Preliminary)	Paper-1	100	Paper-1	
	Paper-2	100	Paper-2	
Total IA (Theory)	400			

Table. IV: Performance in Unit Tests (Theory)

Unit	Topic	Max. Marks (Reduced to)	Marks Obtained
I	General Microbiology, Immunology & Hospital Infection Control	10	
II	Bloodstream and cardiovascular system infections	10	
III	Gastrointestinal & Hepatobiliary infections	10	
IV	Skin, soft tissue and musculoskeletal system infections	10	
V	Central nervous system infections	10	
VI	Respiratory tract infections	10	
VII	Genitourinary & Sexually transmitted infections	10	
Total		70	

Table. V: Overall Performance in Self-Directed Learning (SDL) Sessions

*Sl. No.	Date	Topic	Score	Teachers Sign	Student Sign
1					
2					
3					
4					
5					
TOTAL					

(*As per NMC curriculum, total of ten hours are earmarked for SDL sessions, in this regard, five SDL sessions of two hours durations may be conducted over the course)

V. A: Performance in Self-Directed Learning (SDL) Session-1

Date:	Time:	
Venue:		
Topic:		
Faculty Facilitator:		
Learning Objectives:		
Key task performed:		
Reflections:		
Feedback:		
Score		Faculty Sign.

V B: Performance in Self-Directed Learning (SDL) Session-2

Date:	Time:	
Venue:		
Topic:		
Faculty Facilitator:		
Learning Objectives:		
Key task performed:		
Reflections:		
Feedback:		
Score		Faculty Sign.

V. C: Performance in Self-Directed Learning (SDL) Session-3

Date:	Time:	
Venue:		
Topic:		
Faculty Facilitator:		
Learning Objectives:		
Key task performed:		
Reflections:		
Feedback:		
Score		Faculty Sign.

V D: Performance in Self-Directed Learning (SDL) Session-4

Date:	Time:	
Venue:		
Topic:		
Faculty Facilitator:		
Learning Objectives:		
Key task performed:		
Reflections:		
Feedback:		
Score		Faculty Sign.

V.E: Performance in Self-Directed Learning (SDL) Session-5

Date:	Time:	
Venue:		
Topic:		
Faculty Facilitator:		
Learning Objectives:		
Key task performed:		
Reflections:		
Feedback:		
Score		Faculty Sign.

Table VI: Acquisition of Certifiable skills

Sl. No	Completion Date	*Rating/ (Below expectations =B Meets expectations =M Exceeds expectation=E)	Faculty Decision (Completed = C, Repeat=R, Remedial = Re)	Faculty sign & Date	Student sign (For receiving Feedback)
I	Competency: MI 1.2; Perform and identify the different causative agents of Infectious diseases by Gram Stain				
1	Activity: Perform Gram stain from given clinical specimen/ fixed smear, focus under microscope, record your observations and interpret				
2	Activity: Perform Gram stain from given fixed smear from broth of a flagged blood culture bottle, focus under microscope, record your observations and interpret				
3	Activity: Perform Gram stain from given clinical specimen from breast abscess/ fixed smear from colony isolated from the specimen. Focus it under microscope, record your observations and interpret				
4	Activity: Perform Gram stain from given CSF specimen/ fixed smear from colony isolated from CSF. Focus it under microscope, record your observations and interpret				
5	Competency: MI 6.2 Identify the common etiologic agents of upper respiratory tract infections (Gram Stain)				
	Activity: Perform the Gram stain from given smear prepared from throat swab collected from a case of URTI. Focus it under microscope, record your observations and interpret				
II	Competency: MI 1.2; Perform and identify the different causative agents of Infectious diseases by Zeihl-Neelsen Stain				
1	Activity: Perform ZN stain from clinical specimen / fixed smear. Focus it under microscope, record your observations and interpret				

Sl. No	Completion Date	*Rating/ (Below expectations =B Meets expectations =M Exceeds expectation=E)	Faculty Decision (Completed = C, Repeat=R, Remedial = Re)	Faculty sign & Date	Student sign (For receiving Feedback)
2	Activity: A heat-fixed smear of mesenteric lymph node aspirate/ colony obtained from lymph node aspirate is provided. Perform ZN stain, focus it under microscope, record your observations and interpret				
3	Activity: A heat-fixed smear of cervical lymph node aspirate/ colony obtained from lymph node aspirate is provided. Perform ZN stain, focus it under microscope, record your observations and interpret				
4	Activity: A heat-fixed smear of vertebral biopsy/ colony obtained from biopsy is provided. Perform ZN stain, focus it under microscope, record your observations and interpret				
	Competency: MI 6.3 Identify the common etiologic agents of lower respiratory tract infections (Acid fast stain)				
5	Activity: Perform ZN stain on heat-fixed smear of sputum specimen. Focus it under microscope, record your observations and interpret				
III	Competency: MII.2 Perform and identify the different causative agents of Infectious diseases by Stool routine microscopy				
1	Activity: Perform Normal Saline and Iodine mount for Stool sample provided. Screen for parasitic elements, record your observations and interpret.				
2	Activity: Perform Normal Saline and Iodine mount for Stool sample collected from a person with diarrhea. Screen for parasitic elements, record your observations and interpret.				

Sl. No	Completion Date	*Rating/ (Below expectations =B Meets expectations =M Exceeds expectation=E)	Faculty Decision (Completed = C, Repeat=R, Remedial = Re)	Faculty sign & Date	Student sign (For receiving Feedback)
3	Activity: Perform Normal Saline and Iodine mount for Stool sample collected from a patient with dysentery. Screen for parasitic elements, record your observations and interpret.				
4	Activity: Perform Normal Saline and Iodine mount for Stool sample collected from an apparently healthy person. Screen for parasitic elements, record your observations and interpret.				
5	Activity: Perform Normal Saline and Iodine mount for Stool sample of a person with anemia provided. Screen for parasitic elements, record your observations and interpret.				
III	Competency: M8.7 Demonstrate Infection control practices and use of Hand hygiene				
1	Activity: Perform steps of hand hygiene with soap and water or alcohol-based hand rub as appropriate during phlebotomy				
2	Activity: Perform steps of hand hygiene with soap and water or alcohol-based hand rub as appropriate during blood spill management				
3	Activity: Perform steps of hand hygiene with soap and water or alcohol-based hand rub as appropriate during providing care to a Covid-19 patient				
IV	Competency: M8.7 Demonstrate Infection control practices and use of Personal Protective Equipment (PPE)				
1	Activity: Choose and Perform donning and doffing of PPE for phlebotomy				

Sl. No	Completion Date	*Rating/ (Below expectations =B Meets expectations =M Exceeds expectation=E)	Faculty Decision (Completed = C, Repeat=R, Remedial = Re)	Faculty sign & Date	Student sign (For receiving Feedback)
2	Activity: Choose and Perform donning and doffing of PPE as appropriate for blood spill management				
3	Activity: Choose and Perform donning and doffing of PPE as appropriate for providing care to a Covid-19 patient				

***Rating Rubric:** Below expectations (B) (Score – 1, 2, 2.5),
 Meets expectations (M) (Score – 3, 3.5),
 Exceeds expectation (E) (Score – 4, 4.5, 5)

Table VI-A: Repeat Activity for Certifiable skills

S.No.	Date	*Rating (Below expectations =B Meets expectations =M Exceeds expectation=E)	Faculty Decision (Completed = C, Repeat=R, Remedial = Re)	Feedback with faculty sign	Student Sign
1		Competency No: Name & Number of Activity:			
2		Competency No: Name & Number of times of Activity:			
3		Competency No: Name & Number of times of Activity:			
4		Competency No: Name & Number of times of Activity:			
5		Competency No: Name & Number of times of Activity:			
6		Competency No: Name & Number of times of Activity:			
7		Competency No: Name & Number of times of Activity:			
8		Competency No: Name & Number of times of Activity:			
9		Competency No: Name & Number of times of Activity:			
10		Competency No: Name & Number of times of Activity:			

***Rating Rubric:** Below expectations (B) (Score – 1, 2, 2.5),
 Meets expectations (M) (Score – 3, 3.5),
 Exceeds expectation (E) (Score – 4, 4.5, 5)

Table VI-B: Remedial activity for Certifiable skills

S.No.	Completion Date	*Rating (Below expectations =B Meets expectations =M Exceeds expectation=E)	Faculty Decision (Completed = C, Not Completed = NC)	Feedback with faculty sign	Student Sign
1		Competency:		Number of times of Activity:	
		Remedial action taken:			
2		Competency:		Number of times of Activity:	
		Remedial action taken:			
3		Competency:		Number of times of Activity:	
		Remedial action taken:			
4		Competency:		Number of times of Activity:	
		Remedial action taken:			
5		Competency:		Number of times of Activity:	
		Remedial action taken:			
6		Competency:		Number of times of Activity:	
		Remedial action taken:			
7		Competency:		Number of times of Activity:	
		Remedial action taken:			
8		Competency:		Number of times of Activity:	
		Remedial action taken:			
9		Competency:		Number of times of Activity:	
		Remedial action taken:			
10		Competency:		Number of times of Activity:	
		Remedial action taken:			

***Rating Rubric:** Below expectations (B) (Score – 1, 2, 2.5),
 Meets expectations (M) (Score – 3, 3.5),
 Exceeds expectation (E) (Score – 4, 4.5, 5)

**Table VII: Acquisition of Desirable skills
Formative Assessment (Practicals)**

S.No.	Completion Date	Topic	Competency No.	*Rating (B/M/E)	Faculty Sign	Student Sign
I General Microbiology, Immunology & Hospital Infection Control						
1		A-Introduction to Microbiology laboratory B - Microscopy	MI 1.1 MI 1.2			
2		General principles of Laboratory diagnosis of Bacterial diseases.(Sample collection, transportation, bacterial identification methods in general)	MI 8.10 MI 8.11			
3		Direct methods of bacterial detection a) Simple staining b) Hanging drop	MI 1.2			
4		Bacterial culture: Culture media, methods and identification techniques (conventional and automated)	MI 1.1			
5		Antibiotic sensitivity testing	MI 1.6			
6		Indirect methods of infectious disease diagnosis (Immunological diagnostic tests)	MI 1.8, MI 8.15			
7		General principles of laboratory diagnosis of Viral diseases	MI 1.1			
8		General principles of laboratory diagnosis of Parasitic diseases	MI 1.2			
9		General principles of laboratory diagnosis of Fungal diseases	MI 1.1			
10		Hospital infection control: Sterilization & Disinfection, Biomedical waste management, Needle stick injuries	MI8.5, MI8.6, MI8.7			
Unit I : **AVERAGE SCORE				/10		

S.No.	Completion Date	Topic	Competency No.	*Rating (B/M/E)	Faculty Sign	Student Sign
II	Bloodstream and cardiovascular system infections					
11		Laboratory diagnosis of Rheumatic heart disease, Infective endocarditis and sepsis	MI2.3			
12		Laboratory diagnosis of Brucellosis, Leptospirosis, Dengue fever, Scrub typhus, Candidemia	MI2.3, MI8.1			
13		Laboratory diagnosis of Enteric fever	MI3.3, MI3.4			
14		Laboratory diagnosis of Malaria	MI2.5, MI2.6			
15		Laboratory diagnosis of Filariasis and Leishmaniasis	MI2.5, MI2.6			
16		Laboratory diagnosis of HIV infection	MI2.7			
Unit II : **AVERAGE SCORE				/10		
III	Gastrointestinal & Hepatobiliary infections					
17		Laboratory diagnosis of Diarrhea	MI1.2, MI3.1, MI3.2			
18		Laboratory diagnosis of Dysentery	MI1.2, MI3.1, MI3.2			
19		Laboratory Diagnosis of Intestinal helminthic infections	MI1.2, MI3.2, MI2.4, MI2.5, MI3.1,			
20		Laboratory diagnosis of Hepatic infections	MI3.7, MI3.8			
Unit III: **AVERAGE SCORE				/10		

S.No.	Completion Date	Topic	Competency No.	*Rating (B/M/E)	Faculty Sign	Student Sign
IV Skin, soft tissue and musculoskeletal system infections						
21		Laboratory diagnosis of skin infections-I (Bacterial: Furuncle, cellulitis, Surgical site infection, Burn wound infection, Leprosy)	MI4.3			
22		Laboratory diagnosis of skin infections-II (Fungal and Viral infections)	MI4.3			
23		Laboratory diagnosis of musculoskeletal infections (Arthritis, Osteomyelitis)	MI4.2 MI1.2			
Unit IV: **AVERAGE SCORE				/10		
V Central nervous system infections						
24		Laboratory diagnosis of Meningitis (Pyogenic, Tubercular, Cryptococcal & Aseptic)	MI5.3			
25		Laboratory diagnosis of Encephalitis	MI5.2			
Unit V: **AVERAGE SCORE				/10		
VI Respiratory tract infections						
26		Laboratory diagnosis of Upper respiratory tract infections	MI6.2			
27		Laboratory diagnosis of Lower respiratory tract infections	MI6.3			
Unit VI: **AVERAGE SCORE				/10		
VII Genitourinary & Sexually transmitted infections						
28		Laboratory diagnosis of Urinary tract infections	MI 7.3			
29		Laboratory diagnosis of Genitourinary and Sexually transmitted diseases (Urethritis, Genital ulcers)	MI7.1, MI 7.2			
Unit VII: **AVERAGE SCORE				/10		
TOTAL				/70		

***Rating Rubric:** Below expectations (B) (Score – 1, 2, 2.5),
 Meets expectations (M) (Score – 3, 3.5),
 Exceeds expectation (E) (Score – 4, 4.5, 5)

** Unit wise Average score can be reduced to 10

Note: Some competencies listed in the table are not belonging to ‘Show how’ level as per NMC document. However, they may be considered for desirable skill activities.

Table VIII: Acquisition of AETCOM skills

Sl. No	Completion Date	*Rating (Below expectations =B Meets expectations =M Exceeds expectation=E)	Faculty Decision (Completed = C, Not Completed = NC)	Feedback with faculty sign	Student sign (For receiving Feedback)
1	Competency: MI 8.11 Demonstrate respect for patient samples sent to the laboratory for performance of laboratory tests in the detection of microbial agents causing Infectious diseases				
	Activity: Observe the student handling (dummy) clinical samples during practical sessions. Participation of a student in the case discussion held to help them identify the situations or ways of respecting a clinical sample.				
2	Competency: MI 8.14 Demonstrate confidentiality pertaining to patient identity in laboratory results				
	Activity: Identify the situations and events, which breach confidentiality of patient's identity in laboratory result.				
3	Competency:				
	Activity:				

*Rating Rubric: Below expectations (B) (Score – 1, 2, 2.5),
Meets expectations (M) (Score – 3, 3.5),
Exceeds expectation (E) (Score – 4, 4.5, 5)

Table IX: Performance in Small Group Teaching Activities

Sl. No.	Date	Topic	*Rating (B/M/E)	Teachers Sign	Student Sign
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Total					

*Rating Rubric: Below expectations (B) (Score – 1, 2, 2.5),
 Meets expectations (M) (Score – 3, 3.5),
 Exceeds expectation (E) (Score – 4, 4.5, 5)

Table X: Record of Attendance
BLOCK-I

Sl. No.	T-L Session	Number Held	Number Attended	Percentage (%)	Student Signature	Faculty Signature
1	Lecture					
2	Practicals					
3	Small Group Discussion (SGD)					
4	Self Directed Learning (SDL)					
5	AETCOM module					
6	Pandemic module					
Overall Attendance						

BLOCK-II

Sl. No.	T-L Session	Number Held	Number Attended	Percentage (%)	Student Signature	Faculty Signature
1	Lecture					
2	Practicals					
3	Small Group Discussion (SGD)					
4	Self Directed Learning (SDL)					
5	AETCOM module					
6	Pandemic module					
Overall Attendance						

BLOCK-III

Sl. No.	T-L Session	Number Held	Number Attended	Percentage (%)	Student Signature	Faculty Signature
1	Lecture					
2	Practicals					
3	Small Group Discussion (SGD)					
4	Self Directed Learning (SDL)					
5	AETCOM module					
6	Pandemic module					
Overall Attendance						

Overall Attendance

Sr. No	Block	Theory (%)	Practical (%)	Signature of Faculty
1	I			
2	II			
3	III			
Total				

Note: Attendance requirements are 75% in theory and 80% in practical for eligibility to appear for the University examinations in that subject. 75% attendance in Professional Development Programme (AETCOM Module) is required for eligibility to appear for final examination in each professional year.

Table XI: Participation in Conferences, CME, Workshops

S. No	Date	Title of Conference/ CME/ Workshops with key learning	Signature of faculty
1			
2			
3			
Faculty Feedback/Remarks:			

Table XII: Participation in Extracurricular activities

S. No.	Date	Description of activity	Signature of faculty
1			
2			
3			
Faculty Feedback/Remarks:			

Table XIII: Awards, Achievements and Recognitions

S. No.	Achievements/Recognitions	Date	Signature of faculty
1			
2			
3			

ANNEXURES

ANNEXURE-1: Guide for the conduct of End-block Internal Assessment Tests

- It is suggested to divide the Teaching-Learning activities into three blocks (blocks I-III) and carry out the Internal Assessment (IA) tests one each in theory (cognitive skills) and practical at the end of each block.
- The marks distributions for IA tests are suggested in Table II.
- First End-block test can be conducted for 50/100 marks in theory and practicals using standard assessment tools
- Second End-block test can be conducted for 100 marks in theory and practicals using standard assessment tools
- Third End-block test (Theory) should be conducted in the same pattern as that of summative University examination with two theory papers (paper-1 & 2) of 100 marks each.
- Third End-block test (Practicals) should be conducted in the same pattern as that of summative University examination (80 practicals + 20 viva-voce =100) .
- *These scores shall constitute important components of Final Internal Assessment scores to determine the Eligibility of a candidate to appear for the University Examinations*

ANNEXURE-2: Guide for the conduct of Unit tests

As per the New Curriculum document, there are VIII Units /systems under which the competencies are distributed. However, here it is suggested to conduct VII Unit tests on completion of topics from each unit/system. The reason being, in the present 'system wise' teaching approach in microbiology, one would have covered the topics under unit VII (zoonotic infections & miscellaneous) in any one of the units (I-VII) /body systems.

Written tests in the form of Multiple Choice Questions (MCQ), short and long answer questions can be used for assessment of cognitive skills.

Formative assessment of Practical skills can be done using Objective Structured Practical Examination (OSPE) and also based on the participation and performance in practical exercises, Small Group Discussion sessions (SGD), AETCOM sessions using the rubrics provided in this document.

Consolidated scores can be derived based on the consensus of the faculty members of the Department.

These scores can be entered in comprehensive log sheets (Table I, Table II) provided in the logbook.

These scores shall constitute important components of Final Internal Assessment scores to determine the Eligibility of a candidate to appear for the University Examinations

ANNEXURE-3: Illustrative example for logbook entry of Self Directed Learning activity

Self-directed Learning Session

Date:

Time:

Venue:

Presenting Group:

Facilitator:

Topic Title: Opportunistic infections

Competency addressed: MI 8.2

Learning Objectives:

Define and enlist common opportunistic pathogens with clinical conditions that predispose to acquiring infection by these pathogens.

Explain pathogenesis, laboratory diagnosis and prevention of common opportunistic infections

Task:

- Explain the pathogenesis and laboratory diagnosis of these infections.
- To study the impact of these infections on patients outcome.
- To suggest preventive measures for development of these infections.

Steps for Self Directed Learning Activity	Domain	Duration	Method	Media
Session-1: Introduction of topic Setting Learning Goals Planning to find resources & Group Disassemble	Cognitive	30 min	Brain storming and Interactive lecture	LCD
Session-2: Finding Resources for the topic Individual / group study	Cognitive	*one week for assignment	Hospital survey/ literature search	-
Session-3: Wrap up session Discussion Outcome Summary Assessment of Learning	Cognitive	90 min	Discussion on task performed and assessment of learning.	-

**To be considered as one hour class room time*

Suggested Teaching learning Strategies/ Activities:

- Students are to be divided in small groups.
- Each group to be given a task to focus on one hospital location eg. transplant unit, nephrology, diabetes clinic, cancer centre etc. and interact with residents/ consultants to find the common immunocompromised conditions encountered and common infections reported.
- A common questionnaire to conduct above survey can also be given as a task to students.
- Students to conduct the survey and make a list of at least ten common immunocompromised conditions seen in the specific hospital location.
- Students can also be given individual task to read scientific journal and find an articles on opportunistic infections.
- To search literature and find common immunocompromised states and opportunistic infections associated with these conditions.
- Resources to be suggested- Reference Books , few infectious disease journals
- Students to be given a weeks' time for task.
- Task to be guided and monitored by faculty facilitator virtually or physically at each other convenient time.
- One faculty facilitator may guide multiple groups
- Students to make a group presentation to achieve the identified objectives
- Students to write reflections about the whole learning experience.
- Attach the survey document, literature searched at the end of logbook as an evidence of the SDL session

Feedback provided to the group by the faculty facilitator following SDL session, keeping following points in mind:

1. Extent of student’s involvement in identifying their learning needs.
2. Ability of the students to identify appropriate resources for the topic.
3. Demonstration of group dynamics / team spirit during the assigned task as well as during presentations in class.
4. Ability of the students to identify clinical applications of theoretical concept of microbiology.

Performance Assessment Rubric for SDL

S. No.	Student’s performance	Score [#]		
1	Comes prepared with requisite prior knowledge	1	2	3
2	Participates actively and contributes to discussion during SGD	1	2	3
3	Shows professional conduct during the Teaching Learning session	1	2	3
4	Completes the record book activities in time	1	2	3
5	Shows evidence of learning the new skills (Intellectual/Psychomotor)	1	2	3
	Total score <i>(Can be reduced to 5 for convenience)</i>	/15		
Faculty Remarks/Feedback:				
Date :		Faculty Name & Signature		

Mark as 1, 2, 3 for ‘Not satisfactory’, ‘satisfactory’ & ‘Very Good’ respectively

- The scores have to be entered in the logbook after each SDL session.
- The students would also receive timely & constructive Feedback by the faculty.

ANNEXURE-4: Illustrative example for logbook entry of Certifiable competencies

Example; Competency addressed: MI 8.7: Hand Hygiene

The faculty member shall assess the students' performance on this certifiable skill using ***Rubric.1**. The scores obtained out of ten may be reduced out of five. Then these scores need to be converted into Rates as B/M/E (using ****Rubric-2**) and suggest Repeat/Remedial activities.

***Rubric-1**

Step	Student's performance	Score	YES	NO (Score=0)
1	Removes all hand accessories(finger ring, wrist watch. etc.) (0.5) and Applies sufficient amount of soap/hand wash /hand rub (0.5)	1.0		
2	Rubs palm to palm	0.5		
3	Rubs back of palm on Both sides (0.5 + 0.5)	1.0		
4	Follows rotational rubbing of thumb on Both sides (0.5 + 0.5)	1.0		
5	Rubs back of fingers on palm on Both sides (0.5 + 0.5)	1.0		
6	Interlaces fingers in the web spaces	1.0		
7	Rubs nails on palms on Both sides (0.5 + 0.5)	1.0		
	<i>Completes the above steps in 20-40 seconds time or Waits till the hands are dried (in case of hand rub)</i>	1.0		
8	Rinses hands with water	0.5		
9	Dries hands with paper with single use towel & (0.5) Closes the tap with same paper towel/elbow (0.5)	1.0		
10	Disposes the paper towel appropriately	1.0		
	<i>Completes the steps 8, 9 & 10 in 40-60 seconds time</i>	1.0		
	Total score <i>(Can be reduced to 5 for convenience)</i>	10	/10	
Faculty Remarks/Feedback:				
Date :		Faculty Name & Signature		

****Rubric-2**

Score obtained	Rating	Certification	Faculty Decision
1, 2, 2.5	Below expectations (B)	NO	REMEDIAL/REPEAT Activity
3, 3.5	Meets expectations (M)	YES	-----
4, 4.5, 5	Exceeds expectation (E)	YES	-----

4A. Guidelines for logbook entry of Repeat/Remedial activity

As per the NMC Curriculum document, it is expected that, the student has to perform ‘at’ or ‘above’ the level of expectancy on all the Certifiable skills for the predetermined number of times. If the student’s performance is below the level of expectancy, the activity is ***Repeated Twice*** and, if the student still fails to perform as expected, then a ***Remedial*** teaching-learning session is conducted and documented in the table designed for the purpose with description of the remedial action taken. This is in order to ensure that the student becomes competent in predetermined certifiable competencies.

*This is illustrated in assessment of one of Certifiable skill below.

Competency No.: MI 1.2	Competency: Gram Stain	
Student’s Performance	Max. Marks (05)	Marks Scored
Performs skill by following all the steps correctly	02	1
Focusses the stained slide appropriately	01	0.5
Identifies the structures correctly and interprets.	01 (0.5+0.5)	0.5
Draws colored labelled diagram of the microscopic field and writes the report	01 (0.5+0.5)	0
	Score	2
<u>Rating Rubric</u> Below expectations (B) (Score – 1, 2, 2.5) Meets expectations (M) (Score – 3, 3.5)* Exceeds expectation (E) (Score – 4, 4.5, 5)	Rating	B
CERTIFICATION <i>(*Students should secure ‘M’ or ‘E’ to be able to get Certification in a given skill)</i>	NO	YES
Remark: you are required to repeat the Gram staining procedure twice and report within.....		
Date	Faculty Name & Signature	

The logbook entry as to whether the student has performed ‘at’ or ‘above’ the expected level of competency and the need to *Repeat* or undergo *Remedial* activities needs to be made.

The students would also receive timely & constructive Feedback by the faculty.

ANNEXURE-5: Illustrative example for logbook entry of Desirable competencies

1. Competency identified:

- MI3.7: Describe the epidemiology, the etio-pathogenesis and discuss the viral markers in the evolution of viral hepatitis. Discuss the modalities in the diagnosis and prevention of viral hepatitis
- MI3.8: Choose the appropriate laboratory test in the diagnosis of viral hepatitis with emphasis on viral markers

2. Name of activity

- The students should be able to describe laboratory diagnosis of viruses causing hepatitis, suggest appropriate sample and laboratory diagnostic test for a given case of viral hepatitis, interpret the laboratory diagnostic test results of viral hepatitis and suggest appropriate measures to prevent viral hepatitis

• 3. Components of activity:

- i. Attends theory session on laboratory diagnosis of hepatitis followed by demonstration/DOAP session on specimen collection, transportation and storage.

4. Criteria for successful completion of activity:

Student demonstrates learning of expected level of skills per the checklist.

- a. Below expectations (B)- Student fails to remember the important principles/concepts.
- b. Meets expectations (M)
- c. Exceeds expectations (E)- Student meets expectations, and demonstrates good evidence on acquisition of new skills related to laboratory diagnosis of hepatitis.

5. Numerical scoring: Marks out of 5 for each activity

6. Documentation of activity,

- The scores have to be entered in the logbook after each session.
- The students would also receive timely & constructive Feedback by the faculty

7. Recommended action when learner is unsuccessful -

Provide opportunity to repeat if not able meet expectation.

8. Any other comments - Provide feedback to help improve performance

ANNEXURE-6: Illustrative example for logbook entry of AETCOM competencies

1. Competency identified:

MI 8.11 Demonstrate respect for patient samples sent to the laboratory for performance of laboratory tests in the detection of microbial agents causing Infectious diseases

2. Name of activity

In a given situation/case scenario, identify the events that show disrespect to the clinical sample and suggest ways to rectify them (situations highlighting inappropriate container/ site/ sample/ amount, label, incomplete or wrong information in request form, time of transportation, storage condition, quality of test performance, test result etc) .

3. Components of activity:

- ii. Attends introductory session on demonstrating respect for clinical sample
- iii. Actively participates in small group discussions / problem solving exercises designed to highlight ways that show disrespect to sample.
- iv. Actively participates in role-play script writing and performance of the same.
- v. Identifies identify the events that show disrespect to the clinical sample and suggest ways to rectify them

4. Criteria for successful completion of activity:

Correctly identify the events that show disrespect to the clinical sample and suggests ways to rectify them in a given situation/case scenario

- d. Below expectations (B)- Student fails to identify any situation or event that shows disrespect to clinical sample
- e. Meets expectations (M)- Student identifies most of the situation or event that shows disrespect to clinical sample and shows ways to correct them
- f. Exceeds expectations (E)- Student identifies all of the situation or event that shows disrespect to clinical sample and shows ways to correct them and also suggests some more ways that can show disrespect and ways to rectify them.

5. Numerical scoring for activity: Marks out of 5 for each activity

6. Documentation of activity in portfolio or Annexure of logbook:

Documentation of reflections and learning summary required in the practical record book/ logbook or portfolio and obtain feedback from the faculty.

7. Recommended action when learner is unsuccessful

Repeat session if not able to identify the situations/ event in given scenario first time.
Remedial session, if student is not able to meet expectation after repeat session as well.

8. Any other comments

Provide feedback on each performance

ANNEXURE-7: Illustrative example for logbook entry of Small Group Teaching

Date:

Time:

Venue:

Topic Title: Sexually transmitted infections

Facilitator: One facilitator to observe 2-3 groups

Competency addressed: **MI 7.2** Describe the etio-pathogenesis and discuss the laboratory diagnosis of sexually transmitted infections. Recommend preventive measures

Total Number of students: 50/ batch

Number of Student Groups: 10 per group

Learning Objectives:

- Choose the appropriate microbiological investigation to be conducted in a case of genital tract / sexually transmitted infection.
- Interpret the results of the microbiological investigation conducted in a case of genital tract / sexually transmitted infection.
- Counsel a patient of genital tract/ sexually transmitted infection about preventive aspects of such infections.

Session Planned:**Session A-60 minutes (for interpretational skills)**

Sr No	Activity	Time
1	Introductory session	5 min
2	Paper case scenario for discussion to identify the most appropriate microbiological investigation in the case	15 min
3	Provide report of investigations for students to interpret the findings in group	15 mins
4	Groups share findings with wrap up of key learning by facilitator	25 mins

Session B: 60 min (for counselling skills)

Sr No	Activity	Time
1	Introductory session	5 min
2	Video demonstration of technique of counselling a patient with genitourinary & sexually transmitted infections.	10 min
3	Role play by students for counseling a patient about preventive aspects of STI.	30 mins
4	Feedback with wrap up of key learning by facilitator	15 mins

Rate Communication skills of the student using rating scale adapted from Kalamazoo consensus statement

Sr. No	Criterion	Score
1	Builds relationship	
2	Opens the discussion	
3	Gathers information	
4	Understands the patient's perspective	
5	Shares information	
6	Manages flow	
7	Overall rating Rating: 1-3: Below Expectation 4-6: Meets Expectations 6-10: Exceeds Expectations	

Feedback and score provided to students on SGD:

Sl.No.	Student's performance	Score [#]		
1	Comes prepared with requisite prior knowledge	1	2	3
2	Participates actively and contributes to discussion during SGD	1	2	3
3	Shows professional conduct during the Teaching Learning session	1	2	3
4	Completes the record book activities in time	1	2	3
5	Shows evidence of learning the new skills (Intellectual/Psychomotor)	1	2	3
	Total score <i>(Can be reduced to 5 for convenience)</i>	/15		

Documentation of activity in portfolio or Annexure of logbook:

Documentation of reflections and learning summary in the practical record book/ logbook and obtain feedback from the faculty.