



# MGM INSTITUTE OF HEALTH SCIENCES

(Deemed to be University u/s 3 of UGC Act, 1956)

**Grade 'A' Accredited by NAAC**

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COMPETENCY BASED MEDICAL EDUCATION

**(CBME)**

**(with effect from 2019-2020 Batches)**

**Curriculum for**

**Second M.B.B.S**

**Forensic Medicine and Toxicology**

Amended upto AC – 44 /2022 , Dated 09/12/2022

## **Amended History**

1. Approved as per BOM 57/2019 [Resolution no. 3.1.2.2], Dated 26/4/2019.
2. **Item 05 of BOS** : Format for Forensic Medicine University theory and Practical Examination CBME  
**Resolution No.3.24 of Academic Council ( AC-42/2022)**: Resolved to approve the format for Forensic Medicine University theory and practical examination CBME batch. [**ANNEXURE – 19A, 19B, 19C**]
3. Amended as per AC-44/2022, [Resolution No. 5.59], [Resolution No. 5.20], dated 09/12/2022

## II<sup>nd</sup> MBBS CBME Curriculum

### Forensic Medicine & Toxicology

Forensic Medicine & Toxicology (FMT)	Lectures	Small Group Teaching / Tutorials / Integrated teaching / Seminars / Practicals	Self Directed Learning Hours	Total
	15	30	05	50

Competency No.	The student should be able to	Teaching Method	Lecture Topics	No. of Hours
<b>General Information</b>		<b>Number of Competencies: (11)</b>		<b>Number of Procedures that require certification: (Nil)</b>
FM1.1	Demonstrate knowledge of basics of Forensic Medicine like definitions of Forensic medicine, Clinical Forensic Medicine, Forensic Pathology, State Medicine, Legal Medicine and Medical Jurisprudence.	Lecture	Introduction to FMT	L-1
FM1.2	Describe history of Forensic Medicine			
FM1.3	Describe legal procedures including Criminal Procedure Code, Indian Penal Code, Indian Evidence Act, Civil and Criminal Cases, Inquest (Police Inquest and Magistrate's			

	Inquest), Cognizable and Non-cognizable offences	Lecture	Legal Procedure	L-2
FM1.4	Describe Courts in India and their powers: Supreme Court, High Court, Sessions court, Magistrate's Court, Labour Court, Family Court, Executive Magistrate Court and Juvenile Justice Board			
FM1.5	Describe Court procedures including issue of Summons, conduct money, types of witnesses, recording of evidence oath, affirmation, examination in chief, cross examination, re-examination and court questions, recording of evidence & conduct of doctor in witness box	Lecture	Legal Procedure	L-3
FM1.6	Describe Offenses in Court including Perjury; Court strictures vis-a vis Medical Officer	Small Group Discussion	Legal Procedure	S - 1
FM1.7	Describe Dying Declaration & Dying Deposition		Legal Procedure	
FM1.8	Describe the latest decisions / notifications / resolutions /circulars / standing orders related to medico-legal practice issued by Courts / Government authorities etc.		Legal Procedure	

FM1.9	<p>Describe the importance of documentation in medical practice in regard to medico-legal examinations, Medical Certificates and medico-legal reports especially</p> <ul style="list-style-type: none"> <li>- Maintenance of patient case records, discharge summary, prescribed registers to be maintained in Health Centres.</li> <li>- Maintenance of medico-legal register like accident registers.</li> <li>- documents of issuance of wound certificate</li> <li>- documents of issuance of drunkenness certificate</li> <li>- documents of issuance of sickness and fitness certificate.</li> <li>- documents for issuance of death certificate. - documents of Medical Certification of Cause of Death - Form Number4 and 4A</li> <li>- documents for estimation of age by physical, dental and radiological examination and insurance of certificate</li> </ul>	Small Group Discussion	Legal Procedure	S-2
FM1.10	Select appropriate cause of death in a particular scenario by referring ICD 10 code	Practical	Legal Procedure	Pract.-1
FM1.11	Write a correct cause of death certificate as per ICD 10 document		Legal Procedure	
<p><b>Topic: Forensic Pathology                      Number of competencies: (35)                      Number of procedures that require certification : (NIL)</b></p>				
FM2.1	Define, describe and discuss death and its types including somatic/clinical/cellular, molecular and brain-death, Cortical Death and Brainstem Death	Lecture	Death & its causes	

FM2.2	Describe and discuss natural and unnatural deaths	Lecture	Death & its causes	L-4
FM2.3	Describe and discuss issues related to sudden natural deaths	Lecture	Death & its causes	
FM2.4	Describe salient features of the Organ Transplantation and The Human Organ Transplant (Amendment) Act 2011 and discuss ethical issues regarding organ donation	Small Group Discussion	Medical Ethics & Laws	S-3
FM2.5	Discuss moment of death, modes of death - coma, asphyxia and syncope	Lecture	Death & its causes	L-4
FM2.6	Discuss presumption of death and survivorship	Lecture	Death & its causes	
FM2.7	Describe and discuss suspended animation	Small Group Discussion	Post Mortem Changes	S-4
FM2.8	Describe and discuss postmortem changes including signs of death, cooling of body, post-mortem lividity, rigor mortis, cadaveric spasm, cold stiffening and heat stiffening	Small Group Discussion	Post Mortem Changes	DOAP -1
FM2.9	Describe putrefaction, mummification, adipocere and maceration	Small Group Discussion	Post Mortem Changes	SDL -1
FM2.10	Discuss estimation of time since death	Small Group Discussion	Post Mortem Changes	S-4

FM2.11	Describe and discuss autopsy procedures including post-mortem examination, different types of autopsies, aims and objectives of post-mortem examination	Lecture	Medicolegal Autopsy	L-5
FM2.12	Describe the legal requirements to conduct post-mortem examination and procedures to conduct medico-legal post-mortem examination	Lecture	Medicolegal Autopsy	L-5
FM2.13	Describe and discuss obscure autopsy	Lecture	Medicolegal Autopsy	L-5
FM2.14	Describe and discuss examination of clothing, preservation of viscera on post-mortem examination for chemical analysis and other medico-legal purposes, post-mortem artifacts	Lecture	Medicolegal Autopsy	L-5
FM 2.15	Describe special protocols for conduction of medico-legal autopsies  in cases of death in custody or following violation of human rights as per National Human Rights Commission Guidelines	Small Group Discussion	Medicolegal Autopsy	S-5
FM2.16	Describe and discuss examination of mutilated bodies or fragments, charred bones and bundle of bones	Small Group Discussion	Medicolegal Autopsy	S-6
FM2.17	Describe and discuss exhumation	Small Group Discussion	Medicolegal Autopsy	S-6
FM2.18	Crime Scene Investigation:-  Describe and discuss the objectives of crime scene visit, the duties & responsibilities of doctors on crime scene and the reconstruction	Lecture	Medicolegal Autopsy	L-6

	of sequence of events after crime scene investigation			
FM2.19	Investigation of anesthetic, operative deaths:  Describe and discuss special protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences	Small Group Discussion	Anesthetic & operative deaths	S-7
FM2.20	Mechanical asphyxia:  Define, classify and describe asphyxia and medico-legal interpretation of post-mortem findings in asphyxial deaths	Lecture	Asphyxia	L-7
FM2.21	Mechanical asphyxia:  Describe and discuss different types of hanging and strangulation including clinical findings, causes of death, post-mortem findings and medico-legal aspects of death due to hanging and strangulation  including examination, preservation and dispatch of ligature material	Lecture  +  Autopsy	Asphyxia	L-7
FM2.22	Mechanical asphyxia:  Describe and discuss patho-physiology, clinical features, postmortem findings and medico-legal aspects of traumatic asphyxia, obstruction of nose & mouth, suffocation and sexual asphyxia	Lecture	Asphyxia	L-8
FM2.23	Describe and discuss types, patho-physiology, clinical features, postmortem findings and medico-legal aspects of drowning, diatom test and, Gettler test.	Lecture	Asphyxia	L-8
FM2.24	Thermal deaths: Describe the clinical features, post-mortem finding and medico-legal aspects of injuries due to physical agents like heat (heat-hyper-pyrexia, heat stroke, sun stroke, heat exhaustion/prostration, heat cramps [miner's cramp] or cold (systemic and localized hypothermia, frostbite, trenchfoot, immersion foot)	Lecture	Thermal Injuries	L-9



FM2.25	Describe types of injuries, clinical features, patho-physiology, postmortem findings and medico-legal aspects in cases of burns, scalds, lightening, electrocution and radiations	Lecture	Thermal Injuries	L-9
FM2.26	Describe and discuss clinical features, post-mortem findings and medico-legal aspects of death due to starvation and neglect	Small Group Discussion	Starvation	SDL-2
FM2.27	Define and discuss infanticide, foeticide and stillbirth	Lecture	Infanticide	L-10
FM2.28	Describe and discuss signs of intrauterine death, signs of live birth, viability of foetus, age determination of foetus, DOAP session of ossification centres, Hydrostatic test, Sudden Infants Death syndrome and Munchausen's syndrome by proxy	Small Group Discussion	Infanticide	S-8
FM2.29	Demonstrate respect to the directions of courts, while appearing as witness for recording of evidence under oath or affirmation, examination in chief, cross examination, re-examination and court questions, recording of evidence	Moot Court	Legal procedure	S-9
FM2.30	Have knowledge/awareness of latest decisions / notifications / resolutions / circulars / standing orders related to medico-legal practice issued by Courts / Government authorities etc	Small Group Discussion	Recent updates	S-10
FM2.31	Demonstrate ability to work in a team for conduction of medico-legal autopsies in cases of death following alleged negligence medical dowry death, death in custody or following violation of human rights as per National Human Rights Commission Guidelines on exhumation	Lecture	Medical ethics and law	L-11
FM2.32	Demonstrate ability to exchange information by verbal, or nonverbal communication to the peers, family members, law enforcing agency and judiciary	Lecture	Medical ethics and law	L-11
FM2.33	Demonstrate ability to use local resources			L-12

	whenever required like in mass disaster situations	Lecture	Mass disaster	
FM2.34	Demonstrate ability to use local resources whenever required like in mass disaster situations	Lecture	Mass disaster	L-12
FM2.35	Demonstrate professionalism while conducting autopsy in medicolegal situations, interpretation of findings and making inference/opinion, collection preservation and dispatch of biological or trace evidences	Small Group Discussion	Medicolegal Autopsy	DOAP-2
<p><b>Topic: Clinical Forensic Medicine</b>                      <b>Number of competencies:(33)</b>                      <b>Number of procedures that require certification: (NIL)</b></p>				
FM3.1	IDENTIFICATION  Define and describe Corpus Delicti, establishment of identity of living persons including race, Sex, religion, complexion, stature, age determination using morphology, teeth-eruption, decay, bite marks, bones-ossification centres, medico-legal aspects of age	Lecture	Identification	L-13
FM3.2	IDENTIFICATION  Describe and discuss identification of criminals, unknown persons, dead bodies from the remains-hairs, fibers, teeth, anthropometry, dactylography, foot prints, scars, tattoos, poroscopy and superimposition	Lecture	Identification	L-13
FM3.3	Mechanical injuries and wounds:  Define, describe and classify different types of mechanical injuries, abrasion, bruise, laceration, stab wound, incised wound, chop wound, defense wound, self-inflicted/fabricated wounds and their medico-legal aspects	Lecture	Mechanical injury	L-14
FM3.4	Mechanical injuries and wounds: Define injury,			

	assault & hurt. Describe IPC pertaining to injuries	Lecture	Mechanical injury	L-14
FM3.5	Mechanical injuries and wounds: Describe accidental, suicidal and homicidal injuries. Describe simple, grievous and dangerous injuries. Describe ante-mortem and post-mortem injuries	Lecture	Mechanical injury	L-14
FM3.6	Mechanical injuries and wounds: Describe healing of injury and fracture of bones with its medico-legal importance	Lecture	Mechanical injury	L-14
FM3.7	Describe factors influencing infliction of injuries and healing, examination and certification of wounds and wound as a cause of death: Primary and Secondary	Small Group Discussion	Mechanical injury	S-11
FM3.8	Mechanical injuries and wounds: Describe and discuss different types of weapons including dangerous weapons and their examination	Practical	Mechanical injury	Pract.-2
FM3.9	Firearm injuries: Describe different types of firearms including structure and components. Along with description of ammunition propellant charge and mechanism of fire-arms, different types of cartridges and bullets and various terminology in relation of firearm – caliber, range, choking	Small Group Discussion	Mechanical injury	SDL -3
FM3.10	Firearm injuries: Describe and discuss wound ballistics-different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidences in cases of firearm and blast injuries,  various tests related to confirmation of use of firearms	Small Group Discussion	Mechanical injury	SDL - 4
FM3.11	Regional Injuries:			

	Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial haemorrhages, coup and contrecoup injuries), neck, chest, abdomen, limbs, genital organs, spinal cord and skeleton	Lecture	Regional injury	L-15
FM3.12	Regional Injuries  Describe and discuss injuries related to fall from height and vehicular injuries – Primary and  Secondary impact, Secondary injuries, crush syndrome, railway spine	Lecture	Regional injury	L-15
FM3.13	Describe different types of sexual offences. Describe various sections of IPC regarding rape including definition of rape (Section 375 IPC), Punishment for Rape (Section 376 IPC) and recent amendments notified till date	Small Group Discussion	Sexual offences	S-12
FM3.14	SEXUAL OFFENCES  Describe and discuss the examination of the victim of an alleged case of rape, and the preparation of report, framing the opinion and preservation and despatch of trace evidences in such cases	Practical	Sexual offences	Pract.-3
FM3.15	SEXUAL OFFENCES  Describe and discuss examination of accused and victim of sodomy, preparation of report, framing of opinion, preservation and dispatch of trace evidences in such cases	Practical	Sexual offences	Pract.-4
FM3.16	SEXUAL OFFENCES  Describe and discuss adultery and unnatural sexual offences sodomy, incest, lesbianism, buccal coitus, bestiality, indecent assault and preparation of report, framing the opinion and preservation and despatch of trace evidences in such cases	Seminar-	Sexual Offences	Seminar-1
FM3.17	Describe and discuss the sexual perversions fetishism, transvestism, voyeurism, sadism, necrophagia, masochism, exhibitionism,	Small Group Discussion	Sexual Offences	SDL-5

	frotteurism, Necrophilia			
FM3.18	Describe anatomy of male and female genitalia, hymen and its types. Discuss the medico-legal importance of hymen. Define virginity, defloration, legitimacy and its medicolegal importance	Small Group Discussion	Virginity	S-13
FM3.19	Discuss the medicolegal aspects of pregnancy and delivery, signs of pregnancy, precipitate labour superfoetation, superfecundation and signs of recent and remote delivery in living and dead	Lecture	Pregnancy and delivery	Integrated -1
FM3.20	Discuss disputed paternity and maternity	Seminar	Pregnancy and delivery	Seminar - 2
FM3.21	Discuss Pre-conception and Pre Natal Diagnostic Techniques (PC&PNDT) - Prohibition of Sex Selection Act 2003 and Domestic Violence Act 2005	Seminar	Pregnancy and delivery	Seminar - 3
FM3.22	Define and discuss impotence, sterility, frigidity, sexual dysfunction, premature ejaculation. Discuss the causes of impotence and sterility in male and female	Lecture	Impotence and sterility	Integrated -2
FM3.23	Discuss Sterilization of male and female, artificial insemination, Test Tube Baby, surrogate mother, hormonal replacement therapy with respect to appropriate national and state laws	Lecture	Impotence and sterility	Integrated -3
FM3.24	Discuss the relative importance of surgical methods of contraception (vasectomy and tubectomy) as methods of contraception in the National Family Planning Programme	Lecture	Impotence and sterility	Integrated-4
FM3.25	Discuss the major results of the National Family Health Survey	Lecture	Impotence and sterility	Integrated-5
FM3.26	Discuss the national Guidelines for accreditation, supervision & regulation of ART Clinics in India	Lecture	Impotence and sterility	Integrated-6

FM3.27	Define, classify and discuss abortion, methods of procuring MTP and criminal abortion and complication of abortion. MTP Act 1971	Lecture	Abortion	Integrated-7
FM3.28	Describe evidences of abortion - living and dead, duties of doctor in cases of abortion, investigations of death due to criminal abortion	Lecture	Abortion	Integrated-8
FM3.29	Describe and discuss child abuse and battered baby syndrome	Small Group Discussion	Infanticide	S-14
FM3.30	Describe and discuss issues relating to torture, identification of injuries caused by torture and its sequelae, management of torture survivors	Small Group Discussion	Medicolegal Aspect of Injuries	S-15
FM3.31	Torture and Human rights Describe and discuss guidelines and Protocols of National Human Rights Commission regarding torture	Small Group Discussion	Medicolegal Aspect of Injuries	S-15
FM3.32	Demonstrate the professionalism while preparing reports in medicolegal situations, interpretation of findings and making inference/opinion, collection preservation and dispatch of biological or trace evidences	Small Group Discussion	Legal procedure	S-16
FM3.33	Should be able to demonstrate the professionalism while dealing with victims of torture and human right violations, sexual assaults psychological consultation, rehabilitation	Small Group Discussion	Medical ethics and laws	S-15



**Resolution No. 5.19 of Academic Council (AC-44/2022): Resolved to approve the modifications in the competencies (CBME) of Forensic Medicine subject Nos. FM 3.16, FM 3.13, FM 3.17, FM 3.18 & FM 14.14, FM 14.15 & PS 13.1 to 13.17 in MBBS in FMT for Theory with effect from the batch admitted in Academic Year 2022-23 onwards. Further it was clarified that the Psychiatry Competencies (PS 13.1 to 13.17) are related to Forensic Psychiatry [ANNEXURE-22J.**

Sr	Existing competency	Modified Competency
	<b>Forensic Medicine Competency</b>	
1.	<p><b>FM3.16</b> Describe and discuss adultery and unnatural sexual offences- sodomy, incest, lesbianism, buccal coitus, bestiality, indecent assault and preparation of report, framing the opinion and preservation and despatch of trace evidences in such cases.</p>	<p><b>FM 3.16:</b></p> <p>Describe and discuss informed consent in sexual intercourse.</p> <p>Describe and discuss histories of gender and sexuality-based (sexual orientation) identities and rights in India.</p> <p>Describe history of decriminalisation of 'adultery' and consensual adult homosexual sexual behaviour.</p> <p>Describe sexual offences with its medicolegal significance--</p> <ul style="list-style-type: none"> <li>- forced/non-consensual penetrative anal sex</li> <li>- forced/non-consensual oral sex</li> <li>- sexual acts with animals/ bestiality/ zoophilia</li> <li>- forced/non-consensual insertion of fingers or objects</li> <li>- forced/non-consensual touching or groping or disrobing ('indecent assault').</li> </ul>



Sr	Existing competency	Modified Competency
2.	<p><b>FM3.13:</b> Describe different types of sexual offences. Describe various sections of IPC regarding rape including definition of rape (Section 375 IPC), Punishment for Rape (Section 376 IPC) and recent amendments notified till date</p>	<p><b>FM3.13:</b> Describe various sections of IPC &amp; CrPC related to definition of rape and sexual assault, medical examination of rape victim and accused of rape, police information by the doctors and medical care with recent amendments notified till date (i.e., Section 375 IPC, 166 B IPC, 357 C &amp; 164 A, 53 A of CrPC).</p> <p>Describe the relevant provisions of POCSO act related to medical examination, emergency medical care and police information.</p>
3.	<p><b>FM3.17:</b> Describe and discuss the sexual perversions fetishism, transvestism, voyeurism, sadism, necrophagia, masochism, exhibitionism, frotteurism, Necrophilia.</p>	<p><b>FM3.17.</b> Describe the difference between Paraphilia and Paraphilic disorder. Describe paraphilic disorder as per as per the latest guidelines of DSM &amp; ICD and describe medico-legal implications of paraphilic disorder by referring scientific literature and legal justification (if any).</p> <p>Describe and discuss the various paraphilias in the context of informed consent during any sexual interaction.</p>
4.	<p><b>FM3.18</b> Describe anatomy of male and female genitalia, hymen and its types. Discuss the medico-legal importance of hymen. Define virginity, defloration, legitimacy and its medicolegal importance.</p>	<p><b>FM3.18</b> Describe legitimacy and its medicolegal importance.</p> <p>Describe and discuss how 'signs' of virginity (so called 'virginity test', including finger tests on female genitalia) are unscientific, inhuman and discriminatory.</p> <p>Describe and discuss how to appraise the courts about unscientific basis of these tests if court orders it.</p>

Sr	Existing competency	Modified Competency
5.	<p><b>FM14.14:</b> To examine &amp; prepare report of an alleged accused in rape/unnatural sexual offence in a simulated/ supervised environment</p>	<p><b>FM14.14:</b> To examine and prepare report on an alleged accused person in cases of various sexual offences in a simulated/ supervised environment.</p> <p>Demonstrate an understanding of framing the opinion, preservation and despatch of trace evidences in such cases.</p> <p>Describe and discuss personal opinions and their impact on such examinations and the need for objectivity/neutrality to avoid prejudice influencing the case.</p>
6.	<p><b>FM14.15</b> To examine &amp; prepare medico-legal report of a victim of sexual Offence /unnatural sexual offence in a simulated/ supervised environment.</p>	<p><b>FM 14.15</b> To examine and prepare medico-legal report on an alleged victim of various sexual offences in a simulated/ supervised environment. (Guidelines and Protocols of Medico Legal Care for Survivors Victims of Sexual Violence. Ministry of Health &amp; Family Welfare, GOI- with latest modifications if any).</p> <p>Demonstrate an understanding of framing the opinion and preservation and despatch of trace evidences in such cases.</p> <p>Describe and discuss sympathetic/ empathetic examination and interview of victims of sexual assault, including presence of trusted adult figure in cases of minor victims.</p>
<b>Psychiatry Competency:</b>		
7.	<p><b>Topic Name:</b> Psychosexual and gender identity disorders (Vol II Page 210)</p>	<p><b>Topic Name:</b> Human sexuality; Gender incongruence or Gender dysphoria; Gender non-conformity;</p>

Sr	Existing competency	Modified Competency
		Differences of sex development (DSD) or Intersex; Paraphilia and Paraphilic disorders; Sexual dysfunctions.
8.	<p><b>PS 13.1:</b> Enumerate and describe the magnitude and etiology of psychosexual and gender identity disorders.</p> <p><b>PS13.2</b> Enumerate, elicit, describe and document clinical features in patients with magnitude and etiology of psychosexual and gender identity disorders.</p> <p><b>PS13.3</b> Enumerate and describe the indications and interpret laboratory and other tests used in psychosexual and gender identity disorders</p> <p><b>PS 13.4</b> Describe the treatment of psychosexual and gender identity disorders including behavioural, psychosocial and pharmacologic therapy.</p> <p><b>PS13.5</b> Demonstrate family education in a patient with psychosexual and gender identity disorders in a simulated environment.</p>	<p><b>PS13.1:</b></p> <p>Demonstrate an understanding of difference between sex and gender/ biological and social construction of personhood;</p> <p>Demonstrate an understanding of gender identity;</p> <p>Demonstrate an understanding of transgender, gender non-conformity, and other gender diverse identities.</p> <p>Demonstrate an understanding of sexual/sexuality identity, sexual orientation, sexual desire;</p> <p>Demonstrate an understanding of the wide variety of sexual orientations and desires;</p> <p>Describe and demonstrate an understanding of the differences in sex development in individuals who don't fit into the biological binary of male or female.</p> <p>Demonstrate an understanding of common myths and misconceptions about LGBTQIA + identities like Hijra, Intersex.</p> <p>Demonstrate an attitude of openness and respect for all genders and sexualities.</p> <p>Demonstrate an understanding of common psychosocial stressors faced by members of LGBTQIA+ communities in India.</p> <p>Demonstrate Knowledge about basic tenets of LGBTQIA+ affirmative counselling.</p>

Sr	Existing competency	Modified Competency
	<p><b>PS13.6</b> Enumerate and describe the pharmacologic basis and side effects of drugs used in psychosexual and gender identity disorders.</p> <p><b>PS13.7</b> Enumerate the appropriate conditions for specialist referral</p>	<p><b>PS13.2:</b> Demonstrate the ability to assess the gender identity of an individual and distress caused (if any) due to the individual's own gender identity in a simulated environment.</p> <p><b>PS13.3:</b> Describe and understand how to discuss sexual orientation, sexuality identity, gender identity, as well as intersex identity (differences in sex development) as part of routine history taking.</p> <p><b>PS13.4:</b> Demonstrate in simulated environment the ability to educate and counsel individuals or family members about intersex variations, sexual orientations, sexuality identities, gender incongruence, gender dysphoria, and gender identities. Demonstrate knowledge that conversion therapy practices for sexual orientation or gender identity or on people with intersex variations are unethical.</p> <p><b>PS13.5:</b> Describe differences between Gender Incongruence and Gender Dysphoria. Describe and demonstrate an understanding of the biological and gender binaries, rejection of gender binary, gender non-conforming, gender non-binary, androgynous, and other identities.</p> <p><b>PS13.6:</b> Describe and discuss Gender Dysphoria.</p>

Sr	Existing competency	Modified Competency
		<p>Enumerate criteria to diagnose Gender Dysphoria according to the latest psychiatric classifications (refer to WPATH guidelines) and when to refer an individual to a mental health professional.</p> <p><b>PS13.7</b></p> <p>Demonstrate in the simulated environment the ability to educate an individual and family members that Gender Incongruence by itself is not a disorder and does not require clinical intervention.</p> <p>Discuss situations where there is a role for mental health support in Gender Dysphoria i.e., discussing with family, deciding on hormonal treatments or Sex Reassignment Surgery (Gender Affirming Care or Gender Affirmative Therapies or Gender Confirmation Surgery).</p> <p>Demonstrate in simulated environment the ability to educate and counsel individual and family members about various types of sexual orientation being normal.</p> <p><b>PS13.8</b></p> <p>Demonstrate in simulated environment the ability to educate an individual and family members that the gender of an individual can be different than the sex assigned at birth and also educate about the difference between sex and gender of an individual.</p> <p>Demonstrate the ability to assess gender incongruence in an individual with intersex variations due to their gender identity.</p>

Sr	Existing competency	Modified Competency
		<p>Demonstrate knowledge and ability to educate family members that unnecessary medical interventions on individuals with intersex variations are unethical.</p> <p><b>PS13.9:</b> Describe the difference between Paraphilia and Paraphilic disorder. Describe different paraphilias. Describe and discuss the importance of informed consent during any sexual interaction. Describe and discuss impact of personal opinions on working with people who express paraphilias.</p> <p><b>PS13.10:</b> Describe the prevalence &amp; etiology of paraphilic disorders.</p> <p><b>PS13.11:</b> Enumerate criteria for the diagnosis (diagnostic criteria) of paraphilic disorders according to the latest psychiatric classification.</p> <p><b>PS13.12:</b> Demonstrate in the simulated environment the ability to educate the individual/family members that paraphilia in itself is not a disease and may not require clinical intervention.</p> <p><b>PS13.13:</b> Enumerate the reasons for specialist referrals for any of the cases.</p> <p><b>PS13.14:</b></p>

Sr	Existing competency	Modified Competency
		<p>Describe the stages and differences in the human sexual cycle.</p> <p><b>PS13.15:</b></p> <p>Enumerate the diagnostic criteria of various sexual dysfunctions corresponding to the stages of the human sexual cycle.</p> <p><b>PS13.16:</b></p> <p>Describe the management (till the level of MBBS graduate domain) and reasons for specialist referral in cases of sexual dysfunction.</p>

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**Resolution No. 5.20 of Academic Council (AC-44/2022): Resolved to approve the topics identified for integration with other departments in MBBS in FMT for Theory with effect from the batch admitted in Academic Year 2022-23 onwards [ANNEXURE-23J.**

Annexure-23 of AC-44/2022

**MGM MEDICAL COLLEGE, KAMOTHE  
NAVIMUMBAI  
DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOGY  
Topics Identified for Integration**

Sr. No.	Comp. No.	Competency	Topic for Integration	Sub-Topic needed	Department for Integration
1	FM1.9	Describe the importance of documentation in medical practice in regard to medico-legal examinations, Medical Certificates and medico-legal reports especially - Maintenance of patient case records, discharge summary, prescribed registers to be maintained in Health Centers. - Maintenance of medico-legal register like accident registers. - Documents of issuance of wound certificate - Documents of issuance of drunkenness certificate. - Documents of issuance of sickness and fitness certificate. - Documents for issuance of death certificate. -documents of Medical Certification of Cause of Death- Form Number 4 and 4A documents for estimation of age by physical, dental and radiological examination and issuance of certificate	Wound Certificate  Sickness/fitness certificate  Estimation of age by Physical, dental & radiological examination	-  -  -	General Surgery,   General Medicine,   Pediatrics
2	FM2.1 MPJ	Define, describe and discuss death and its types including somatic/clinical/cellular, molecular and brain-death, Cortical Death and Brainstem Death	Somatic /Clinical/Cellular & Brain death, Cortical death	-	Pathology
3	FM2.2 MPJ	Describe and discuss natural and unnatural deaths	Cell death, Nuclear death (Apoptosis, Necrosis cell death)	-	Pathology



Sr. No.	Comp. No.	Competency	Topic for Integration	Sub – Topic needed	Department for Integration
4	FM2.3 MPJ	Describe and discuss issues related to sudden natural deaths	Molecular & cellular changes in sudden natural death	-	Pathology
5	FM2.5 MPJ	Discuss moment of death, modes of death - coma, asphyxia and syncope	Cellular changes seen in Asphyxia & syncope of coma	-	Psychiatry, Pathology
6	FM2.11 MPJ	Describe and discuss autopsy procedures including post-mortem examination, different types of autopsies, aims and objectives of post-mortem examination	Cellular changes seen in autopsy & post-mortem examination objective of Autopsy	-	Pathology
7	FM2.12 MPJ	Describe the legal requirements to conduct post-mortem examination and procedures to conduct medico-legal post-mortem examination	Autopsy cellular changes	-	Pathology
8	FM2.13 MPJ	Describe and discuss obscure autopsy	Cellular changes in post-mortem	-	Pathology
9	FM2.19	Investigation of anesthetic, operative deaths: Describe and discuss special protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences	++	-	Anesthesiology, General Surgery
10	FM3.1	IDENTIFICATION Define and describe Corpus Delicti, establishment of identity of living persons including race, Sex, religion, complexion, stature, age determination using morphology, teeth-eruption, decay, bite marks, bones-ossification centers, medico-legal aspects of age	Define and describe age determination sex determination using morphology , teeth eruption , decay, bite marks, bones-ossification centers, medico-legal aspects of age	-	Human Anatomy

Sr. No.	Comp. No.	Competency	Topic for Integration	Sub – Topic needed	Department for Integration
11	FM3.20	Discuss disputed paternity and maternity		-	Obstetrics &Gynecology
12	FM2.27	Define and discuss infanticide, foeticide and stillbirth	infanticide, foeticide and stillbirth	-	Pediatrics
13	FM2.28	Describe and discuss signs of intrauterine death, signs of live birth, viability of foetus, age determination of foetus, DOAP session of ossification centers, Hydrostatic test, Sudden Infants Death syndrome and Munchausen's syndrome by proxy	Molecular and cellular changes of intrauterine death , sign of live birth , viability of foetus, age determination of foetus, Hydrostatic test, Sudden Infants Death syndrome and Munchausen's syndrome by proxy	-	Pediatrics, Human Anatomy
14	FM3.29	Describe and discuss child abuse and battered baby syndrome	child abuse and battered baby syndrome	-	Pediatrics
15	FM6.1	Describe different types of specimen and tissues to be collected both in the living and dead: Body fluids (blood, urine, semen, faces saliva), Skin, Nails, tooth pulp, vaginal smear, viscera, skull, specimen for histo-pathological examination, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard's Exchange Principle	, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard's Exchange Principle	-	Pathology
16	FM8.1	Describe the history of Toxicology		-	Pharmacology
17	FM8.2	Define the terms Toxicology, Forensic Toxicology, Clinical Toxicology and poison	Poison toxins and management	-	Pharmacology
18	FM8.3	Describe the various types of poisons, Toxicokinetics, and Toxicodynamics and diagnosis of poisoning in living and dead	Toxicokinetics, and Toxicodynamics and diagnosis of poisoning in living and dead	-	Pharmacology

Sr. No.	Comp. No.	Competency	Topic for Integration	Sub-Topic needed	Department for Integration
19	FM8.4	Describe the Laws in relations to poisons including NDPS Act, Medico-legal aspects of poisons	, Medico-legal aspects of poisons	-	Pharmacology
20	FM8.5	Describe Medico-legal autopsy in cases of poisoning including preservation and dispatch of viscera for chemical analysis	preservation and dispatch of viscera for chemical analysis	-	Pharmacology
21	FM8.6	Describe the general symptoms, principles of diagnosis and management of common poisons encountered in India	general symptoms, principles of diagnosis and management of common poisons encountered in India	-	Pharmacology
22	FM8.7	Describe simple Bedside clinic tests to detect poison/drug in a patient's body fluids	Bedside clinic tests to detect poison/drug in a patient's body fluids	-	Pharmacology
22	FM8.8	Describe basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination	methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination	-	General Medicine Pharmacology
23	FM13.1	Describe toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry	toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry	-	General Medicine

Sr. No.	Comp. No.	Competency	Topic for Integration	Sub – Topic needed	Department for Integration
24	FM14.3	Assist and demonstrate the proper technique in collecting, preserving and dispatch of the exhibits in a suspected case of poisoning, along with clinical examination	demonstrate the proper technique in collecting, preserving and dispatch of the exhibits in a suspected case of poisoning, along with clinical examination	-	General Medicine
25	FM14.7	Demonstrate & identify that a particular stain is blood and identify the species of its origin	identify that a particular stain is blood and identify the species of its origin	-	Pathology, Physiology
26	FM14.8	Demonstrate the correct technique to perform and identify ABO & RH blood group of a person	correct technique to perform and identify ABO & RH blood group of a person	-	Pathology, Physiology
27	FM 14.9	Optic Injuries -	Grievous hurt- IPC -319	-	Ophthalmology
28	FM 14.10	Human organ donation Act	Human organs /Corneal donation	-	Anatomy Ophthalmology

**Resolution No. 3.2.2.1 of BOM-62/2020:** Resolved to approve the restructured Formative and Summative assessment pattern for 2nd MBBS Para-Clinical disciplines (Microbiology, Pathology, Pharmacology and FMT) which is in line with Competency Based Medical Education (CBME) curriculum guidelines as mandated by MCI. [**Annexure-46A, 46B, 46C, 46D**]

## Formative Assessment

### Theory Portion (1st Internal Assessment)

50 Marks

- Introduction, general /history
- Identification- Estimation of age
- Age of foetus
- Death
- Signs of death
- Changes after death
- Time since death

### Practical Portion (1st Internal Assessment)

50 Marks

- Estimation of age Bone age/ Teeth / Secondary sexual characteristic
- Age of foetus
- MCCD—certifications

### Theory Portion (2nd Internal Assessment)

50 Marks

- Evidences- types
- Examination of stains
- Trace evidence
- Wet specimen
- Photograph
- X Rays
- Bones
- Weapons

### Practical Portion (2nd Internal Assessment)

50 Marks

- Evidences- types
- Examination of stains
- Photograph
- X Rays
- Bones
- Weapons

### Formative Exam – Theory, Time – 2 Hours

First and Second Formative Exam ( Second Professional Year)					
	Section "A"	Section "B"	Section "C"	Section "D"	Total
	MCQ	SAQ	LAQ	Essay / Short Note /Recent advances / Opinion from	

<b>Theory</b>	0.5 Mark X20 (Compulsory)	5 Mark X 4 out of 5	10 Mark X 1 out of 2	given data /Situation with reasons /Problem based Question 10 Marks X 1  (Compulsory)	
<b>Marks</b>	10	20	10	10	<b>50</b>

<b>First and 2<sup>nd</sup> Formative Exam – Practical (Second Professional Year)</b>	
<b>Practical Heads</b>	<b>Marks</b>
<b>Exercises</b>	<b>20</b>
<ul style="list-style-type: none"> <li>Prepare Injury Report from given data <b>or</b> Prepare Age Estimation from given data</li> </ul>	05
<ul style="list-style-type: none"> <li>Prepare MCCD from given data</li> </ul>	05
<ul style="list-style-type: none"> <li>Prepare Determination of age of Foetus</li> </ul>	05
<ul style="list-style-type: none"> <li>Prepare Sickness <b>or</b> Fitness Certificate</li> </ul>	05
<b>Spotters OSCE – 05 – Slides</b>	
<ul style="list-style-type: none"> <li>(Sperm / Blood Stain / Hair/ Fiber), Histopathology Slides, Photographs, X-rays, Instruments / Equipments, Models, Bones, Weapons, Documents, Specimens, Pathological / Biochemical Tests</li> </ul>	<b>10</b>

<b>Viva- Voce</b> (10 marks X 2 Tables)	<b>20</b>
<b>Total</b>	<b>50</b>

**Time:** 1 Hour for all Exercises,

2 Minute each for each Spotter station,

10 Minute at each table Viva



**Resolution No.3.1.2.3 of BOM-59/2019:** The updated list of Text books and Reference books for 2<sup>nd</sup> MBBS (Microbiology, Pharmacology, Pathology, FMT) are approved. [**Annexure-8**]

**(To be merged with syllabus i.e. Annexure-69 of BOM-57/2019 dt.26/04/2019)**

**Resolution No. 5.18 of Academic Council (AC-44/2022): It was resolved to approve:**

a) Change in the Day to Day assessment pattern for internal assessment calculations according to NMC norms in all paraclinical subjects.

b) Day to Day assessment for theory can be conducted online in the form of Google forms having structured questions like MCQ, one liners, Picture based questions (20 questions for 20 marks).

c) Day to Day assessment for Practical can be conducted as defined OSPE station /practical /Clinical test /DOPS (20 Marks).

All above said changes are to be implemented in the programme UG-MBBS in all Paraclinical Subjects for Theory & Practical with effect from the batch admitted in Academic Year 2022-23 onwards.

It was further resolved that suitable validation exercise must be undertaken for all online formats. [ANNEXURE-21A, 21B, 21C & 21D].

## **Recommended books**

### **Text Books:**

1. Modi's Text book of Medical Jurisprudence & Toxicology.
2. The Essentials of Forensic Medicine & Toxicology: K.S.N. Reddy.
3. Textbook of Forensic Medicine: JB. Mukharjee.
4. Principles of Forensic Medicine: A. Nandy.
5. Textbook of Forensic Medicine & Toxicology, Principles & Practice: Krishan Vij

### **Reference Books**

1. Forensic Pathology by Bernard Knight
2. Handbook of Forensic Pathology by Vincent DiMaio & Suzanna E. Dana
3. Keith Simpson's Forensic Medicine.
4. Ross's post mortem Appearances
5. Forensic medicine-a guide to principle by Gordon & Shapiro
6. Forensic Medicine: A study in trauma & Environmental Hazards by Tedesch

### **For Additional Reading**

1. "Informed consent in Medical Practice principles & conventions". Dr. Kalidas Chavan &Dr. Rajendra Banjal- Publishers: Jaypee Brothers, Mumbai.
2. The Making of A Doctor' R.S.Downie . Charlin Calmam 1992
3. 'The Medical Teacher' by Ken Cox Christine Ewan. 2nd edition 1988

**Resolution No.3.24 of Academic Council ( AC-42/2022):** Resolved to approve the format for Forensic Medicine University theory and practical examination CBME batch. [ANNEXURE – 19A, 19B, 19C]

Annexure-19B of AC-42/2022

## **MGMIHS, Navi Mumbai**

**FORMAT / SKELETON OF QUESTION PAPER**  
**Course and Year: MBBS-III Part- Applicable with effect from**  
**OCT-2022 and onwards examinations.**  
**Subject: Forensic medicine and Toxicology**  
**Total Marks: 100**  
**Paper-I**

**Instructions:**

**SECTION “A” MCQ**

- 1) Put  in the appropriate box below the question number once only.
- 2) Use blue ball point pen only.
- 3) Each question carries **One mark**.
- 4) Students will not be allotted mark if he/she overwrites strikes or put white ink on the cross once marked.

**SECTION “A” MCQ (20 Marks)**

1. Multiple Choice Questions (Total 20 MCQ of One mark each) (20x 1=20)
- a) b) c) d) e) f) g) h) i) j)  
k) l) m) n) o) p) q) r) s) t)

**SECTION “B” & “C”**

- Instructions:**
- 1) Use **blue/black** ball point pen only.
  - 2) **Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) **All questions are compulsory**.
  - 4) The number to the **right** indicates **full** marks.
  - 5) Draw diagrams **wherever** necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any forensic medicine and toxicology syllabus. Students cannot claim that the Question is out of syllabus. As It is only for the placement sake, the distribution has been done.

**SECTION “B” ( 40Marks)**

2. Short Answer Questions (Any 5 out of 6) (5 x 6 = 30)
- a) b) c) d) e) f)
3. Long Answer Questions (Any 1out of 2) (1 x 10 = 10)
- a) b)

**SECTION "C" ( 40Marks)**

(5 x 6 = 30)

4 Short answer questions (One short note should be from **AETCOM3.2** is compulsory ) (Any 5 out of 6 )

(1 x 10 = 10)

a)      b)      c)      d)      e)      f)

5. Long Answer Questions (Any 1 out of 2 )

a)      b)

[ANNEXURE – 19A]

## III/I MBBS Practical Mark's Structure MGMIHS

Applicable w.e.f October 2022 onwards examination

### Subject: Forensic Medicine & Toxicology

Subject: Forensic Medicine & Toxicology													
Practical									Oral/Viva			Total	
Seat No.	Medical Certificate of Cause of Death (MCCD)	Injury report	Survivor/ Accused of Sexual Assault report	Alcohol Intoxication Drunkenness report	Sickness/ Fitness certificate	Age/ Potency/Foetus Report	Weapon Report	Spots- • Bone-1 • Specimen-1 • Poison-2 • X-ray/ Photograph/ Instrument/ Document-1	Total	Forensic Pathology, Clinical Forensic Medicine	Medical Jurisprudence and Toxicology	Total	Practical & Oral (I+ L)
	A	B	C	D	E	F	G	H	I	J	K	L	M
<b>Max Marks</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>2 X 5= 10</b>	<b>80</b>	<b>10</b>	<b>10</b>	<b>20</b>	<b>100</b>

**Suggestions:**

1. It is suggested that minimum 2 exercises can be kept as actual case or in simulated environment.
2. In the spots - minimum 2 spots can be kept as OSPE stations.

**Item 05 of BOS :** Format for Forensic Medicine University theory and Practical Examination  
CBME batch

**Resolution No.3.24 of Academic Council ( AC-42/2022):** Resolved to  
approve the format for Forensic Medicine University theory and practical  
examination CBME batch. [ANNEXURE – 19A, 19B, 19C]



# MGM INSTITUTE OF HEALTH SCIENCES

(Deemed to be University u/s 3 of UGC Act, 1956)

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