

**Test Guideline for the National Licensure Examination for  
Midwives (NLEM)**

**2020**

**(Revised in 2025)**

**Nepal Nursing Council Bansbari, Kathmandu, Nepal**

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Tel : 977-1-4372521

Fax : 977 -1 4377214

E-mail: [info@nnc.org.np](mailto:info@nnc.org.np) Website: <http://www.nnc.org.np>

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## **I. Background**

Nepal Nursing Council is an autonomous body under the Nepal Nursing Council Act 2052 formulated by the Government of Nepal. It aims at promoting quality nursing and midwifery education in order to bring quality nursing and midwifery service in the country.

The National Policy on Skilled Birth Attendants 2006 long term (Pre-service) strategy emphasized to initiate a new cadre of Professional Midwife as a crucial human resource for safe motherhood, providing service and leadership in midwifery for the country. Accordingly, different academic institutions initiated Bachelor of Midwifery education programs that have been endorsed by the Nepal Nursing Council.

The National Licensure Examination for Midwives is an examination for midwives administered by the Nepal Nursing Council. The National Licensure Examination for Midwives is an examination to qualify as midwifery professionals. It is required for all new graduates who have completed an approved midwifery education programme from authorized academic institutions. The examination is geared towards testing knowledge, skills and professional behaviors in relation to their scope of practice determined by the government of Nepal. The examination determines eligibility to earn a title of registered midwife in order to begin as a professional midwife.

## **II. Objectives**

The objectives of the national licensure examination for midwives are as follows:

1. To obtain the authenticity of midwifery practice in the country.
2. To maintain the quality of midwifery services to women, newborns and families.
3. To maintain professional standards of knowledge, skills and behaviors of registered midwives.

## **III. Eligibility for National Licensure Examination for Midwives (NLEM)**

(A) Nepalese citizen, who has successfully completed an approved midwifery education programme in Nepal.

To meet the professional education requirement for licensure as a qualified professional midwife, the candidate must have successful completion of midwifery education programme and must submit the documents as mentioned below in Table 1. This programme includes minimum three-year midwifery education programme.

(B) Nepalese citizen, who has successfully completed an approved midwifery education programme from other countries, must have their equivalence certificate from the concerned government authority. Individual applicant needs to submit the documents as mentioned in Table.

#### IV. Exception

(A) Reporting prior convictions or disciplinary action against licensing

Applicants are required under 'Regulation of the National Licensure Examination for Midwives' to report all misdemeanor and felony convictions. Failure to report prior disciplinary action is considered falsification of application and is a ground for denial of licensure or revocation of license.

(B) Applicants with disability

Applicants, who are constitutionally provisioned for special consideration, will be provided opportunity to appear in the examination based on their limitation.

#### V. Application process

The following documents are required for application.

**Table 1: List of documents required for the registration to appear in the NLEM**

Items	Number
1. Complete online personal information	1
2. Upload scanned original copies of the following documents (size not more than 2MB and must be in jpg format) <ul style="list-style-type: none"><li>• SLC/SEE Mark sheet and Character Certificate</li><li>• Citizenship</li><li>• Updated registered nurse certificate of NNC</li><li>• Academic Transcript or Mark sheets and Character Certificate of Nursing and/or Midwifery Programme</li><li>• Academic Transcript of bachelor or certificate, and Character Certificate for bachelor or certificate</li></ul>	1
3. Upload recent white background Passport size photo (size not more than 2MB and must be in jpg format)	1
4. Online payment of Examination fee of NRs. 4,100/-	1
5. Upload original scanned copies of documents related to recognition/accreditation of institute from the respective midwifery council or individual registration in the respective midwifery council or in the authorized	1

<p>government body (only in case of non-existence of midwifery council) of the respective country (<b>Only applicable for the Nepalese graduated from other countries</b>).</p> <p><b>Upload original scanned copy of Equivalency letter from the concerned government authority</b></p>	
<p>* All original academic certificates, citizenship and related documents need to bring for verification during receiving registration certificate from NNC.</p>	

The process is:

1. The applicant must upload all the documents to online NLEM registration process within the time period mentioned in the notice.
2. The examination center, time and other important information will be notified on the online admit card. The admit card can be downloaded from online application.

**ATTENTION!**

If an applicant changes her/his name and/or address after submitting an application for licensure, the applicant must notify the NNC immediately in order to document receive current information. An applicant is required to submit legal documentation of any change to the NNC immediately after the change occurs.

An Applicant's name must match EXACTLY as it appears on photo identification that will be at the test center. The same name must also be used to the NLEM online at the time s/he registers in order to prevent delays with issuing examination authorization.

## VI. Examination Process / Rule

### Duration, Marks and Pass Marks of Examination

Licensure Examination will be of two parts as follow:

1. Objective Theoretical Examination: Two and half hours (2:30 hours) duration for objective theoretical examination with 150 questions of total 150 marks will be carried out. Applicants are not allowed to enter the examination room after 15 minutes from starting examination. Applicants can leave the room only after 1 hour of starting the examination. To pass this exam at least 50% must be obtained.

2. Objective Structured Practical Examination (OSPE) and Viva: Maximum one-hour duration OSPE and viva will be carried out at the scheduled date and time of total 50 marks. To pass OSPE and viva at least 80% must be obtained.

### Type of Questions

1. Objective theoretical examination: All of the test items are Multiple Choice Question (MCQ) with four options. Applicants are to select the most appropriate choice.

2. Objective Structured Practical Examination (OSPE): Scenario based situational structured questions including viva.

The questions will be prepared based on NLEM test guideline, NNC Scope for midwifery practice, and also ICM essential competencies for midwifery practice.

### Distribution of Items

**Table 2: weightage questions items for theoretical examination, OSPE and Viva**

Subjects	Distribution of test items (%)for theoretical examination	Number of questions for theoretical examination	OSPE and Viva Marks
General Competencies	40%	60	14
Midwifery I : Antenatal care	20%	30	12
Midwifery II: Care during labor and birth	20%	30	12

Midwifery III: Ongoing care of women and newborns	20%	30	12
<b>Total</b>	<b>100%</b>	<b>150</b>	<b>50</b>

#### Application Fee

The fee for the NLEM online application for candidate is NPR 4100.

#### Scoring System

There is no negative scoring system. It means when applicant gives wrong answer, no minus marking will be done.

#### Passing Standard

The grading system on the NLEM is either pass or fail. No numerical score will be provided. In order to pass the National Licensure Examination, the applicant must score at least 50% marks in aggregate in the objective theoretical examination. To pass OSPE and viva at least 80% must be obtained.

#### **Result of NLEM**

The result of NLEM will be published within a week unless and until there is a technical difficulty. Results will be published on the Nepal Nursing Council notice board and on the NNC's website. The Nepal Nursing Council will not inform the candidates individually.

#### **VII. Registration Process**

Once applicants have successfully passed NLEM they can apply for registration to get their license Certificate from the NNC with the registration fee of NPR 2000/ through online payment and they should also bring the admit card and all the original documents and citizenship certificate.

## VIII. Syllabus for NLEM

### NLEM Contents

NLEM General Competencies: No of Questions: 60 (40%)

### Subjects

- Leadership/ Management
- Community Health/ Epidemiology
- SRH
- Foundation of Midwifery
- Education Science
- Maternal Mental Health
- Research and Biostatistics
- Gynaecology
- Pharmacology
- Nutrition
- Basic Science (Anatomy and Physiology, Microbiology, Biochemistry, Pathology)

Subject	Unit	Contents
Leadership and Management	1.	<b>Leadership</b> <ul style="list-style-type: none"><li>• Functions of leadership</li><li>• Types of leadership style</li><li>• Leadership theories</li><li>• Characteristics of a good leader</li></ul> <b>Management</b> <ul style="list-style-type: none"><li>• Concept</li><li>• Purpose</li><li>• Principles of management</li><li>• Skills of managers</li><li>• Functions of management</li></ul>
	2.	<b>Planning and Policy in Health Care System</b> <b>Planning</b> <ul style="list-style-type: none"><li>• Definition, purposes and types</li><li>• Benefits and limitations</li><li>• Elements/Components of planning</li><li>• Steps of planning process</li><li>• Ways of successful planning</li></ul>

		<ul style="list-style-type: none"> <li>• National health planning: short term and long-term health plan of Nepal</li> </ul> <p><b>Policy</b></p> <ul style="list-style-type: none"> <li>• Definition and purposes</li> <li>• Characteristics of policy</li> <li>• Types of policy</li> <li>• Policies development procedure</li> <li>• National health policies and strategies of Nepal</li> </ul>
	<p><b>3.</b></p>	<p><b>Organization</b></p> <p><b>Organization Management</b></p> <ul style="list-style-type: none"> <li>• Introduction and purposes of organization</li> <li>• Principles of organization</li> <li>• Types of organization</li> <li>• Elements of organization</li> <li>• Organizational structure of Health care delivery system of Nepal <ul style="list-style-type: none"> <li>○ Federal level</li> <li>○ Provincial level</li> <li>○ Local level</li> </ul> </li> <li>• Major National Health Programs: Objectives, targets, strategies and policy</li> </ul> <p><b>Organizational Relationships</b></p> <ul style="list-style-type: none"> <li>• Introduction: Authority, Responsibility and Accountability</li> <li>• Power: Introduction, sources,</li> <li>• Delegation of Authority</li> </ul> <p><b>Organizational Communication</b></p> <ul style="list-style-type: none"> <li>• Introduction, types, principles, elements and process of communication</li> <li>• Behavior change communication</li> <li>• Roles of manager in effective communication</li> </ul> <p><b>Change Management</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Need/ Force for change</li> <li>• Change process</li> <li>• Resistant to change</li> <li>• Role of midwife in change management process</li> </ul> <p><b>Organizational conflict</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Sources of conflict</li> <li>• Type of Conflict</li> <li>• Effects of Conflict: Functional and Dysfunctional</li> <li>• Stage and Reaction to Conflict</li> <li>• Different approaches to conflict management</li> </ul>

		<ul style="list-style-type: none"> <li>• Role of midwife in conflict management</li> </ul>
	<p><b>4. Resource Management in Health Services</b></p> <p><b>Human resource management</b></p> <ul style="list-style-type: none"> <li>• Introduction, purposes, Importance and principle of HRM</li> <li>• Process of Human resource management</li> <li>• Component/ Process of human resource management</li> <li>• Staffing process</li> <li>• Problems related to Human resource management</li> <li>• Planning of human resources in health: Steps of HRH planning</li> </ul> <p><b>Inventory management</b></p> <p><b>Time management</b></p> <p><b>Financial Management</b></p> <ul style="list-style-type: none"> <li>• Introduction, objectives, benefits, and limitation</li> <li>• Type of budget</li> <li>• Process of budgeting</li> <li>• Audit: internal and external</li> </ul>	
	<p><b>5. Personnel Development</b></p> <p><b>Motivation</b></p> <ul style="list-style-type: none"> <li>• Introduction and importance</li> <li>• Types</li> <li>• Theories</li> <li>• Ways of motivation</li> </ul> <p><b>Job satisfaction and morale</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Factors contributing to job satisfaction and morale</li> <li>• Significance of job satisfaction and morale in the organization</li> <li>• Leader role in promoting job satisfaction and morale</li> </ul> <p><b>Job description</b></p> <ul style="list-style-type: none"> <li>• Concept and importance of job description</li> <li>• Job description of different categories of health personnel working at different health care setting</li> </ul> <p><b>Discipline of Personnel</b></p> <ul style="list-style-type: none"> <li>• Concept, Objective, types and principles</li> <li>• Process for disciplinary action</li> </ul>	
	<p><b>6. Disaster Management</b></p> <ul style="list-style-type: none"> <li>• Types</li> <li>• Disaster Management cycle</li> <li>• Emergency preparedness and management in hospital &amp; community</li> <li>• Consequences of disaster</li> <li>• Girls/Women in humanitarian Crisis</li> </ul> <p><b>Supervision</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> </ul>	

		<ul style="list-style-type: none"> <li>• Purpose, Principle, Process</li> <li>• Factor contributing to effective supervision</li> </ul> <p><b>Co-ordination in organization</b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Importance</li> <li>• Principles</li> <li>• Types of co-ordination</li> <li>• Technique of co-ordination</li> </ul> <p><b>Health Information Management System</b></p> <ul style="list-style-type: none"> <li>• Introduction, concept, classification</li> <li>• Health Information system in Nepal</li> </ul>
	7.	<p><b>Quality Assurance Management</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Objective</li> <li>• Process and indicators of quality assurance</li> <li>• National Policy and strategy on Quality Assurance</li> </ul>
Community Health/ Epidemiology	8.	<p><b>Concept of Health/Disease</b></p> <ul style="list-style-type: none"> <li>• Determinants of health</li> <li>• Changing concepts of health</li> <li>• Causation of disease</li> <li>• Responsibility of individual, family, group and community</li> <li>• Level of prevention</li> <li>• Mode of intervention</li> </ul>
	9.	<p><b>Primary Health Care</b></p> <ul style="list-style-type: none"> <li>• Concept of PHC</li> <li>• Elements of PHC</li> <li>• Principles of PHC</li> <li>• Roles of nurses in PHC</li> </ul>
	10	<p><b>Community Participation and Community Diagnosis</b></p> <p><b>Community Participation</b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Level of Community Participation</li> <li>• Ways of Community Participation</li> <li>• People participation in health service delivery and utilization process</li> <li>• Various obstacles that interfere with community participation</li> </ul> <p><b>Community Diagnosis</b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Components</li> <li>• Process of Community Diagnosis (care of the childbearing women, newborn &amp; family, application of midwifery process)</li> <li>• Analysis, Interpretation, and Recommendation</li> </ul>

	11	<p><b>Epidemiology</b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Components</li> <li>• Approach</li> <li>• Method</li> <li>• Uses</li> <li>• Epidemiology in midwifery</li> </ul> <p><b>Vital and Health Statistics</b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Demographic Cycle</li> <li>• Classification of Vital and Health Statistics</li> <li>• Importance of Vital and Health Statistics</li> </ul> <p><b>Occupational Health</b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Occupational health hazards</li> <li>• Preventive Measures</li> <li>• Role of midwife in Occupational Health</li> </ul>
	12	<p><b>National Health Program</b></p> <ul style="list-style-type: none"> <li>• National Immunization Program</li> <li>• Integrated Management of Neonatal and Child Health Illness</li> <li>• Nutrition program</li> <li>• Adolescence Sexual and Reproductive Health Program</li> <li>• Family Planning and Reproductive Health Program <ul style="list-style-type: none"> <li>○ Family Planning Services in Nepal</li> <li>○ Emergency contraception</li> <li>○ Contraception for adolescent</li> <li>○ Post abortion contraception</li> <li>○ Postpartum FP</li> <li>○ Roles and responsibilities of nurses/midwives in the management of Family planning services</li> <li>○ Family Planning Counselling</li> </ul> </li> <li>• HIV and STIs Control and Management Program</li> <li>• Basic Health Service Program including essential drugs</li> </ul>
	13	<p><b>Counselling</b></p> <ul style="list-style-type: none"> <li>• Introduction of counselling</li> <li>• Basic elements of counselling</li> <li>• Skills needed for counselling</li> <li>• Process of Counselling</li> <li>• Types of counselling</li> <li>• Stages/ steps of counselling</li> </ul> <p><b>Community Midwifery Services</b></p> <ul style="list-style-type: none"> <li>• Concept</li> </ul>

		<ul style="list-style-type: none"> <li>• Birth preparedness</li> <li>• Antenatal, Intra natal, postnatal, and newborn care</li> <li>• Supervision and guidance in the community</li> </ul>
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<b>Education Science</b>	<b>27</b>	<p><b>Educational Science</b></p> <ul style="list-style-type: none"> <li>• Concept of education and nursing education</li> <li>• Purpose, objective and philosophy of education</li> </ul> <p><b>Educational Objectives</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Types of objectives</li> <li>• Behavioral objectives <ul style="list-style-type: none"> <li>○ Definition, benefits, characteristics</li> <li>○ Criteria and Taxonomy of behavioral objectives</li> </ul> </li> </ul>
	<b>28</b>	<p><b>Learning</b></p> <ul style="list-style-type: none"> <li>• Concept of learning</li> <li>• Introduction</li> <li>• Types of learning</li> <li>• Principles of learning</li> <li>• Characteristic of learning</li> <li>• Learning process</li> <li>• Factors affecting learning</li> <li>• Learning Needs Assessment</li> </ul>

	<p><b>29 Teaching</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Purpose</li> <li>• Approaches</li> <li>• Principle of teaching</li> </ul> <p><b>Teacher</b></p> <ul style="list-style-type: none"> <li>• Characteristic of a good teacher</li> <li>• Teacher’s role</li> </ul> <p><b>Teaching ethics</b></p> <ul style="list-style-type: none"> <li>• Meaning of ethics in teaching</li> <li>• Ethical responsibilities of a teacher</li> <li>• Commitments of self, to students, to teaching and to the nursing profession</li> <li>• Ethical issues in teaching</li> </ul> <p><b>Lesson Plan</b></p> <p><b>Continuing Professional Development (CPD)</b></p> <p><b>Evaluation</b></p>
	<p><b>30 Teaching / Learning Methods and Medias</b></p> <p><b>Teaching / Learning methods</b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Advantage and disadvantage</li> <li>• Criteria of selecting teaching learning methods</li> <li>• Different teaching learning methods</li> </ul> <p><b>Teaching/Learning Medias</b></p> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Advantages and disadvantages</li> <li>• Criteria of selection</li> <li>• Teaching/learning Medias</li> </ul>
	<p><b>31 Curriculum</b></p> <ul style="list-style-type: none"> <li>• Introduction of curriculum</li> <li>• Sources of curriculum</li> <li>• Determinants of curriculum</li> <li>• Elements of curriculum</li> <li>• Design of curriculum</li> <li>• Curriculum development process</li> <li>• Models of curriculum</li> </ul> <p><b>Academic Session Plan</b></p> <ul style="list-style-type: none"> <li>• Calendar of operation</li> <li>• Master plan /rotation plan</li> <li>• Class schedule /Duty schedule</li> </ul>

<b>Maternal Mental Health</b>	<b>32</b>	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Characteristics of mentally healthy person</li> <li>• Causes of mental illness</li> <li>• Classification of mental illness: DSM, ICD</li> <li>• Role of midwife in providing mental health services in different settings</li> <li>• Mental health and wellbeing</li> <li>• Impact of the environment on mental health</li> </ul>
	<b>33</b>	<b>Mental Health Assessment</b> <ul style="list-style-type: none"> <li>• History taking</li> <li>• Mental status examination</li> <li>• Investigations: <ul style="list-style-type: none"> <li>○ Psychological test, personality test</li> <li>○ Other supplementary test: Blood test, EEG, CT, MRI</li> </ul> </li> </ul> <b>Therapeutic Relationship</b> <ul style="list-style-type: none"> <li>• Concept and phases</li> <li>• Therapeutic communication and its techniques</li> <li>• Therapeutic barriers</li> </ul>
	<b>34</b>	<b>Disorders Related to Stress and Trauma</b> <p><b>Anxiety and fear related disorders</b></p> <ul style="list-style-type: none"> <li>• Generalized anxiety disorder</li> <li>• Panic disorder</li> <li>• Separation anxiety disorder</li> </ul> <p>Obsessive-compulsive disorder (OCD)  Post-traumatic stress disorder  Conversion disorder</p> <p><b>Major Mental Illness</b></p> <p><b>Psychotic disorders</b></p> <ul style="list-style-type: none"> <li>• Schizophrenia</li> </ul> <p><b>Mood Disorders</b></p> <ul style="list-style-type: none"> <li>• Mania</li> <li>• Depressive disorders</li> </ul> <p><b>Maternal Mental Health Problems</b></p> <ul style="list-style-type: none"> <li>• Post-Partum blues</li> <li>• Post-Partum depression</li> <li>• Postpartum psychosis</li> <li>• Paternal mental health</li> <li>• Perinatal mental health</li> </ul> <p><b>Disorders due to substance use or addictive behaviours</b></p> <ul style="list-style-type: none"> <li>• Alcohol</li> </ul>

		<ul style="list-style-type: none"> <li>• Tobacco</li> <li>• Treatment and midwifery management of substance use disorders</li> </ul>
	<b>35</b>	<p><b>Psychiatric Emergencies</b></p> <ul style="list-style-type: none"> <li>• Crisis intervention</li> <li>• Suicide</li> <li>• Lithium toxicity</li> <li>• Panic attack</li> </ul> <p><b>Treatment modalities in psychiatry</b></p> <p><b>Psychopharmacology</b></p> <ul style="list-style-type: none"> <li>• Anti-psychotic drugs</li> <li>• Anti-depressant drugs</li> <li>• Anti-anxiety drugs</li> <li>• Anti-manic drugs</li> </ul> <p><b>Physical Method</b></p> <ul style="list-style-type: none"> <li>• E.C.T (electro convulsive therapy)</li> </ul> <p>Counselling- prenatal, postnatal, unwed mother, the psychological problem of individual with HIV and AIDS</p> <p><b>Psychotherapy</b></p> <ul style="list-style-type: none"> <li>• Behavior therapy</li> <li>• Group therapy</li> <li>• Family therapy</li> <li>• Therapeutic restraining</li> </ul>
<b>Research and Biostatistics</b>	<b>36</b>	<p><b>Introduction to research and nursing research</b></p> <ul style="list-style-type: none"> <li>• Introduction, purposes and importance of nursing research</li> <li>• Sources of nursing knowledge</li> <li>• Historical evolution of nursing/midwifery research</li> </ul> <p><b>Types of Research</b></p> <p><b>Ethical Aspect of Research</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Code of Ethics</li> <li>• Importance of Ethics in research</li> <li>• Ethical Principles for Protecting Human Rights</li> </ul>
	<b>37</b>	<p><b>Steps of Research Process</b></p> <ul style="list-style-type: none"> <li>• Research problem</li> <li>• Research objectives</li> <li>• Development of conceptual framework</li> <li>• Research question</li> </ul>

		<ul style="list-style-type: none"> <li>• Formulating hypothesis</li> <li>• Literature Review</li> <li>• Research Design</li> <li>• Sampling</li> <li>• Methods of Data Collection and Research Instrument</li> <li>• Data collection procedure and its purpose</li> <li>• Bias in data collection</li> <li>• Analysis and Interpretation of data</li> <li>• Dissemination/communication of findings</li> <li>• Utilization of the findings</li> </ul>
	<b>38</b>	<b>Research Proposal</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Purpose</li> <li>• Principle</li> <li>• Components of research proposal</li> </ul>
	<b>39</b>	<b>Report writing</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Purpose</li> <li>• Principle</li> <li>• Components</li> </ul>
	<b>40</b>	<b>Biostatistics in Nursing</b> <ul style="list-style-type: none"> <li>• Introduction of biostatistics: Scope, use of bio-statistic in nursing research</li> <li>• Types of statistics <ul style="list-style-type: none"> <li>○ Descriptive statistics <ul style="list-style-type: none"> <li>- Measure of central tendency (Mean, median, mode)</li> <li>- Measures of dispersion (standard deviation, quartile, percentile, docile, range, variance)</li> <li>- Presentation of data: frequency distribution in tabulation, diagrammatic and graphical presentation</li> <li>- Probability</li> </ul> </li> <li>○ Inferential statistics <ul style="list-style-type: none"> <li>- Hypothesis testing and statistical inference: <ul style="list-style-type: none"> <li>- Z test /t test</li> <li>- Chi square test</li> </ul> </li> </ul> </li> </ul> </li> <li>• Software used in biostatistics: Excel and SPSS</li> </ul>

Gynaecology	41	<b>Abortion</b> <ul style="list-style-type: none"> <li>• Introduction: abortion and classification of abortion</li> <li>• Factors contributing to safe and unsafe abortion.</li> <li>• Safe abortion services</li> <li>• Comprehensive abortion care: Introduction, Methods of CAC (Medical and Surgical)</li> <li>• Legal options for induced abortion: eligibility and availability of medical and surgical abortion services</li> <li>• Post abortion care</li> <li>• Post abortion contraception</li> <li>• Complication Management: <ul style="list-style-type: none"> <li>○ Assessment and diagnosis of complications</li> <li>○ Emergency management and referral: shock, hemorrhage, intra-abdominal injury, sepsis associated with incomplete abortion</li> </ul> </li> <li>• Policy and strategy related to abortion</li> <li>• Ethical issues of abortion</li> <li>• Role of the midwife in abortion and post abortion care: care and support (physical and psychological) needed during and after abortion.</li> </ul>
	42	<b>Gynaecological Examination</b> <ul style="list-style-type: none"> <li>• History taking and physical examination</li> <li>• Diagnostic procedure and investigation</li> <li>• Pap smear</li> <li>• Visual inspection under acetic acid (VIA)</li> <li>• Ultrasonography</li> <li>• Colposcopy</li> <li>• Endometrial biopsy</li> <li>• Cervical biopsy</li> <li>• Breast examination</li> <li>• Mammography</li> <li>• Hormone and tumor markers test</li> </ul>
	43	<b>Gynaecological Problems</b> <ul style="list-style-type: none"> <li>• Premenstrual syndrome</li> <li>• Abnormal uterine bleeding: DUB</li> <li>• Climacteric changes and its problems: HRT</li> <li>• Obstetric/genital fistula</li> <li>• Urinary problem in gynecology</li> <li>• Pelvic organ prolapses</li> <li>• Polycystic ovarian syndrome</li> <li>• Sub-fertility</li> </ul>

		<ul style="list-style-type: none"> <li>• Endometriosis</li> <li>• Cervical polyps, erosion</li> <li>• Congenital anomaly of reproductive organs</li> <li>• Delayed puberty</li> </ul>
	<b>44</b>	<b>Infection of Genital Organs</b> <ul style="list-style-type: none"> <li>• Pelvic inflammatory disease (PID)</li> <li>• Vulval infection</li> <li>• Bartholin cysts and abscess</li> <li>• Vaginal infection</li> <li>• Genital tuberculosis</li> <li>• Cervicitis</li> <li>• Salpingitis</li> <li>• Pelvic abscess</li> <li>• Human Immune Deficiency Virus (HIV)</li> <li>• Sexually Transmitted Infections (STIs)</li> <li>• TORCH (toxoplasmosis, rubella cytomegalovirus, herpes simplex, and HIV) infections</li> <li>• Toxic shock syndrome</li> </ul>
	<b>45</b>	<b>Gynecological Neoplasm</b> <b>Neoplasms of female reproductive organs</b> <ul style="list-style-type: none"> <li>• Cancer of cervix</li> <li>• Ovarian cancer</li> <li>• Cancer of Vulva</li> <li>• Cancer of vagina</li> <li>• Endometrial cancer</li> <li>• Breast tumor/ cancer</li> <li>• Gestational trophoblastic disease</li> </ul> <b>Palliative and hospice care</b>
<b>Pharmacology</b>	<b>46</b>	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Describe different pharmaceutical dosage forms with midwifery considerations</li> <li>• Describe pharmacokinetic principles with their significance in drug use</li> <li>• Administration and Storage of Drugs</li> <li>• Drug calculations</li> <li>• Drug administration- oral, intradermal, intramuscular intravenous, infusions.</li> <li>• Prevention of drug administration error</li> <li>• Documentation</li> </ul>
	<b>47</b>	<b>Pharmacology of Drugs Acting on Different Body Systems</b>

		<p><b>Introduction to the drugs used in:</b></p> <p>Cardiovascular Diseases</p> <ul style="list-style-type: none"> <li>• Hypertension</li> <li>• Cardiac arrhythmia</li> <li>• Angina Pectoris</li> <li>• Myocardial Infarction</li> </ul> <p>Diabetes Mellites</p> <ul style="list-style-type: none"> <li>• Oral Hypoglycemic Agent</li> <li>• Insulin</li> </ul> <p>Asthma and COPD</p> <p>Pre- and Post- operative conditions</p> <ul style="list-style-type: none"> <li>• Anesthesia</li> <li>• Narcotic analgesics</li> <li>• NSAIDs</li> <li>• Antiemetic</li> <li>• Antibiotics</li> <li>• Sedatives and Hypnotics</li> </ul> <p>Infections</p> <ul style="list-style-type: none"> <li>• Anti-bacterial</li> <li>• Anti-viral</li> <li>• Anti-protozoal</li> <li>• Anti-fungal</li> </ul>
	<b>48</b>	<p><b>Drugs of Clinical Significance in Midwifery Practice</b></p> <p>MOA, Side effects, contraindications and midwifery considerations of following drugs:</p> <ul style="list-style-type: none"> <li>• Uterine stimulants (Oxytocics)</li> <li>• Progesterone</li> <li>• Estrogen</li> <li>• Dydrogesterone</li> <li>• Insulin</li> <li>• Aspirin</li> </ul> <p>Tocolytic and teratogenic agents</p> <p>Vitamins and minerals</p> <p>Concept on categorization of drugs in pregnancy and lactation</p> <p>Various factors to be considered while using drugs during pre-conceptual period, pregnancy, childbirth, and lactation</p>
<b>Nutrition</b>	<b>49</b>	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>• Types of nutrients</li> <li>• Function of nutrients</li> <li>• Main sources of nutrients in different foodstuffs</li> </ul>

		<ul style="list-style-type: none"> <li>• Digestion and absorption of carbohydrate, protein and fat</li> </ul> <p><b>Lifecycle Nutrition</b></p> <p>Physiological changes, nutrition related complications and nutrient requirement and considerations in different stages of human life cycle</p> <ul style="list-style-type: none"> <li>• Preconception</li> <li>• Pregnancy and lactation</li> <li>• Neonate, low birth weight baby</li> <li>• Infant</li> <li>• Toddler</li> <li>• School children</li> <li>• Adolescent</li> <li>• Adult</li> <li>• Old age</li> </ul>
	50	<p><b>Nutritional status and Factors associated with Nutritional status</b></p> <ul style="list-style-type: none"> <li>• Residential area (urban Vs rural)</li> <li>• Geographical regions</li> <li>• Economic status (low, middle, high)</li> <li>• Family education and literacy</li> <li>• Food availability and distribution</li> <li>• Religion and cultural factors, rituals</li> <li>• Personal factors: preference, age, health status of woman</li> <li>• Food fads and taboos</li> </ul> <p><b>Nutritional Assessment and growth monitoring</b></p> <ul style="list-style-type: none"> <li>• Nutritional assessment</li> <li>• Influence of nutrition on Growth and Development</li> <li>• Breast feeding (exclusive)- Importance and purpose</li> <li>• Weaning- Meaning, purpose, and methods</li> <li>• Role of parents and family in growth monitoring, breast feeding and weaning</li> <li>• Infant and young child feeding practice(IYCFP) and updated national and international guidelines</li> </ul>
	51	<p><b>Nutritional Deficiency Diseases</b></p> <ul style="list-style-type: none"> <li>• Protein energy malnutrition: Kwashiorkor and marasmus: Meaning and management: SAM and MAM: updated national guidelines</li> <li>• Night blindness, Bitot's spots</li> <li>• Iodine deficiency disorder</li> <li>• Folic acid deficiency disorder</li> <li>• Iron deficiency disorder</li> <li>• Rickets</li> </ul>

		<p><b>National Policy, Strategies and Programme</b></p> <p>Recent updated nutritional policy, strategy and programme</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Purpose</li> <li>• Target</li> <li>• Monitoring</li> </ul>
	52	<p><b>Medical Nutrition Therapy</b></p> <ul style="list-style-type: none"> <li>• Nutrition Care Process (NCP)</li> <li>• Nutrition Assessment (Anthropometry, Biochemistry, Nutrition Focused physical examination(NFPE), Dietary Assessment), Diagnosis, Intervention, Monitoring and Evaluation</li> <li>• Therapeutic Diets and classification on the basis of consistency and nutrient contents</li> <li>• Hospital Diets and classification</li> <li>• Meal Planning, Serving size, Portion size, exchange lists, food composition table and its importance</li> <li>• Diabetic Diet and Glycemic Index</li> <li>• DASH Diet</li> <li>• Renal Diet</li> <li>• Gestational Diabetes Mellitus and Diet</li> <li>• Obesity and Dietary management</li> </ul>
<b>Basic Science</b>		
<b>Anatomy and Physiology</b>	53	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>• Introduction of anatomy: definition, subdivision of anatomy, anatomical position, regional name, planes and section, directional terms, body cavity.</li> <li>• Introduction of physiology: common terms used in physiology, homeostasis and control system.</li> <li>• Introduction of different organ systems and their main functions.</li> </ul> <p><b>Human Cell and Tissues</b></p> <ul style="list-style-type: none"> <li>• Structure, physiology and reproduction of the cell</li> <li>• Tissues: characteristics, classification, location and functions and formation</li> <li>• Cell reproduction</li> <li>• Membranes and glands: classification and structure</li> </ul> <p><b>Fluid and Electrolytes in relation to pregnancy and child birth</b></p> <ul style="list-style-type: none"> <li>• Fluid: intracellular, extra cellular: interstitial, trans-cellular, intravascular</li> </ul>

		<ul style="list-style-type: none"> <li>• Fluid gain and loss</li> <li>• Electrolytes and its function</li> <li>• Acid base balance</li> </ul>
	54	<b>Reproductive System</b> <ul style="list-style-type: none"> <li>• Developmental anatomy of reproductive system and related developmental anomalies</li> <li>• Structure and function of organs of female reproductive system</li> <li>• Structure and function of organs of male reproductive system</li> <li>• Structure and function of breast</li> <li>• Female pelvis and pelvic floor muscles</li> <li>• Male and female sex hormones and their functions</li> <li>• Menstrual cycle, ovarian cycle and menopause</li> <li>• Physiological changes during pregnancy and lactation</li> <li>• Introduction of genetics and embryology <ul style="list-style-type: none"> <li>○ Oogenesis and spermatogenesis</li> <li>○ Fertilization, Implantation, Bilaminar germ disc</li> <li>○ Embryonic and fetal development</li> <li>○ Development of fetal membranes and placenta</li> <li>○ Mendelian inheritance</li> <li>○ Parts and types of chromosome; Major chromosomal disorders</li> <li>○ Teratogenicity</li> </ul> </li> </ul>
<b>PATHOLOGY</b>	55	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Concept</li> <li>• Cell injury and death: ischemia, necrosis, apoptosis</li> <li>• Inflammation and wound healing</li> <li>• Hemodynamic disorder: edema, thrombosis, embolism, infarction, shock</li> <li>• Genetic disorders (Downs syndrome, Turners syndrome, Klinefelters syndrome)</li> <li>• Neoplasia (Introduction, nomenclature, difference between benign and malignant tumors)</li> <li>• Antigen and antibody reaction, hypersensitive reaction,</li> <li>• Autoimmune disorders (Systemic lupus erythematosus)</li> </ul> <b>Infectious Disease</b> <ul style="list-style-type: none"> <li>• Mechanism of viral injury</li> <li>• Mechanism of bacterial induced tissue injury</li> <li>• Sexually transmitted disease, HIV/AIDS</li> </ul>
	56	<b>Reproductive system</b>

		<ul style="list-style-type: none"> <li>• PID, DUB, molar pregnancy, ectopic pregnancy, abortion, endometriosis endometritis, cervicitis</li> <li>• Fibroids</li> <li>• Carcinoma cervix and endometrium</li> <li>• Choriocarcinoma</li> <li>• Ovarian cyst and tumour</li> <li>• Breast abscess, breast lump, breast cancer</li> <li>• Infertility/sub-fertility</li> <li>• Obstetric fistula: VVF, RVF</li> </ul>
<b>MICROBIOLOGY</b>	<b>57</b>	<p><b>Introduction of microbiology</b></p> <ul style="list-style-type: none"> <li>• General concept of microbiology</li> <li>• Nomenclature of microorganisms</li> <li>• Important features of medically important organisms</li> <li>• Infection concepts</li> </ul> <p><b>Parasitology</b>  Introduction, classification, characteristics and routes of transmission of parasitic infection  Collection and transport of specimen for identification of common parasites.</p> <p><b>Parasitic diseases:</b></p> <ul style="list-style-type: none"> <li>• Blood parasites (malaria, kala-azar, microfilaria)</li> <li>• Life cycle, pathogenesis and lab diagnosis</li> <li>• Treatment, prevention and control</li> </ul> <p>Intestinal protozoa (entamoeba histolytica, giardia lamblia and toxoplasma)</p> <ul style="list-style-type: none"> <li>• Life cycle, pathogenesis and lab diagnosis</li> <li>• Treatment, prevention and control</li> </ul> <p>Intestinal Worms (Roundworm, Hookworm, Pinworm, Tapeworm)</p> <ul style="list-style-type: none"> <li>• Life cycle, pathogenesis and lab diagnosis</li> <li>• Treatment, prevention and control</li> </ul> <p><b>Bacteriology</b>  Size, shape and arrangement of bacterial cells  Structure of bacterial cells  Bacterial Growth and factor affecting bacterial growth (Temperature and Oxygen)  Nutrition of bacteria  Culture media and culture methods</p> <p>Staining techniques (Gram staining and acid-fast staining)  Introduction to bacterial genetics</p> <ul style="list-style-type: none"> <li>• Nucleic acid (DNA and RNA)</li> <li>• Bacterial chromosome, genes</li> <li>• Plasmid</li> <li>• Mutation</li> </ul>

	<ul style="list-style-type: none"> <li>• Gene transfer</li> </ul> <p>Antimicrobial agents</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Mode of action of antibiotics</li> <li>• Antimicrobial resistance (AMR)</li> </ul> <p>Sterilization and disinfection (terminology, classification)</p> <ul style="list-style-type: none"> <li>• Physical</li> <li>• Mechanical</li> <li>• Chemical</li> </ul> <p>Normal microflora</p> <p>Collection and transport of specimen for identification of common bacterial communicable diseases</p> <p>Bacteria: Staphylococcus, Streptococcus, Neisseria, Clostridium, Enterobacteriaceae, Mycobacterium, Pseudomonas, Vibrio</p>
58	<p><b>Virology</b></p> <ul style="list-style-type: none"> <li>• General properties of viruses</li> <li>• Structure of viruses</li> <li>• Classification of viruses</li> <li>• Replication of viruses</li> <li>• Virus-host interaction: viral infections</li> <li>• Collection and transport of specimens for viral testing</li> <li>• Viral diseases: (Influenza viruses, dengue virus, herpes viruses, cytomegalovirus, human papilloma virus, rubella virus, hepatitis viruses, human immunodeficiency viruses, oncogenic viruses)</li> <li>• Interferon and antiviral agents</li> <li>• Control and prevention of viral diseases</li> </ul> <p><b>Immunology</b></p> <p>Introduction to immunology</p> <p>Cells and organs of the immune system</p> <ul style="list-style-type: none"> <li>• Primary lymphoid organs</li> <li>• Secondary lymphoid organs</li> </ul> <p>Immunity: innate immunity, acquired immunity</p> <ul style="list-style-type: none"> <li>• Antigen, antibody, antigen-antibody reaction and complement system</li> </ul> <p>Hypersensitivity, autoimmunity and immunodeficiency diseases</p> <p><b>Mycology</b></p> <p>Introduction, structure, classification, morphology, reproduction, pathogenesis</p> <ul style="list-style-type: none"> <li>• Superficial, cutaneous and subcutaneous mycoses</li> </ul> <p>Systemic mycoses and opportunistic mycoses</p> <p><b>Healthcare-associated infections (HAIs)</b></p>

		<ul style="list-style-type: none"> <li>• Introduction to Healthcare-associated infections (HAIs)</li> <li>• Causative agents</li> <li>• Risk factors, sources, modes of transmission</li> <li>• Types of HAIs</li> <li>• Prevention and control</li> </ul>
<b>BIOCHEMISTRY</b>	<b>59</b>	<p><b>Introduction</b></p> <ul style="list-style-type: none"> <li>• Definition, scope and importance of biochemistry in health science</li> <li>• Types of solution (Normal solution, Molar Solution and percentage solution)</li> <li>• Acid, Base, pH, Acidity, alkalinity, buffers, diffusion, osmosis and osmotic pressure</li> </ul> <p><b>Biomolecules</b></p> <ul style="list-style-type: none"> <li>• Carbohydrate: Definition, classification composition and function</li> <li>• Protein: Definition, classification composition and function</li> <li>• Amino acid: Definition, classification composition and function</li> <li>• Lipid: Definition, classification, composition and function</li> <li>• Nucleic acid: Definition, composition, types and function.</li> </ul> <p><b>Enzymes</b></p> <p>Definition, classification and use. Factors affecting enzymatic activity, Coenzymes, Isoenzymes, clinical significance of enzymes (AST, ALT, CPK, CPK-MB, Amylase, Lipase, ALP, LDH)</p> <p><b>Vitamins and Minerals</b></p> <ul style="list-style-type: none"> <li>• Vitamins: Definition, classification, biochemical function, daily requirements in diet, clinical significance</li> <li>• Minerals: Definition, classification, biochemical function, daily requirements in diet, clinical significance</li> </ul>
	<b>60</b>	<p><b>Hormones</b></p> <ul style="list-style-type: none"> <li>• Definition, Classification, Source, Mechanism of action of hormones</li> <li>• Biochemical aspect of hypothalamic and pituitary Hormones</li> <li>• Biochemical aspect of thyroid Hormones</li> <li>• Biochemical aspect of hormones of adrenal gland</li> <li>• Biochemical aspect of gastrointestinal Hormones</li> </ul> <p><b>Intermediary metabolisms of Carbohydrate, Protein and Lipid</b></p> <ul style="list-style-type: none"> <li>• General concept of metabolism</li> <li>• Carbohydrate metabolism: digestion and absorption of carbohydrates, glycolysis, TCA cycle, glycogenesis, glycogenolysis, diabetes mellitus, glycated hemoglobin, microalbumin</li> </ul>

		<ul style="list-style-type: none"> <li>• Lipid Metabolism: digestion and absorption and lipids, mobilization of stored lipids, oxidation of fatty acids, ketone body metabolism, ketosis, fatty liver and lipotropic factors</li> <li>• Protein Metabolism: Digestion and absorption of protein, Amino acid pool, transamination, deamination, ammonia transport and urea cycle. Hyperammonemia and its causes</li> </ul> <p><b>Blood Chemistry</b></p> <ul style="list-style-type: none"> <li>• Constituents and function of blood</li> <li>• Blood buffers</li> <li>• Mechanism of Blood coagulation (extrinsic and intrinsic pathway)</li> <li>• Anticoagulants: Definition, types and mechanism of action</li> <li>• plasma proteins: types and functions</li> </ul> <p><b>Organ function Tests</b></p> <ul style="list-style-type: none"> <li>• Liver function tests (Bilirubin, ALT, AST, ALP, GGT, Albumin and PT)</li> <li>• Renal functional tests (Urea, creatinine, Na<sup>+</sup> and K<sup>+</sup>, creatinine clearance test, 24 hrs. urinary protein, spot urinary protein creatinine ratio)</li> <li>• Markers of Acute pancreatitis (Amylase and Lipase) and pancreatic function test</li> <li>• Cardiac profile (Troponin, CPK, CPK-MB, LDH, AST)</li> </ul>
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## Midwifery I : Antenatal Care

Unit	Contents
1.	<p><b>Anatomy &amp; Physiology</b></p> <ul style="list-style-type: none"> <li>• Anatomy and physiology of breast</li> <li>• Physiology of menstruation</li> <li>• Pelvic: diameter, landmark, joint, ligaments, muscle (perineal and pelvic)</li> <li>• Different types of pelvis &amp; its effect on labour</li> </ul>
2.	<p><b>Genetics and Embryology</b></p> <ul style="list-style-type: none"> <li>• Embryology and organ development</li> <li>• Pre-conceptional counseling / care</li> <li>• Genetic counselling</li> <li>• Fertilization</li> <li>• Fetal development</li> <li>• Placenta, amniotic fluid and cord development</li> <li>• Fetal skull (diameter, fontanelle, parts etc.)</li> <li>• Fetal circulation</li> <li>• Difference between fetal and adult circulation</li> <li>• Adjustment to extra uterine life</li> </ul>

	<p><b>Physiological changes during pregnancy</b></p> <ul style="list-style-type: none"> <li>• Changes in reproductive system and other body systems</li> <li>• Maternal weight gain</li> <li>• Normal psychological changes during pregnancy and its impact on family</li> </ul>
	<p><b>Diagnosis of pregnancy</b></p>
	<p><b>Antenatal examination and care</b></p> <ul style="list-style-type: none"> <li>• Introduction, purposes, importance</li> <li>• Calculation of EDD and POG</li> <li>• Focused antenatal visit</li> <li>• <b>Components</b> History taking Physical examination Laboratory Test Care provision</li> <li>• Identification of high risk pregnant mother</li> <li>• Antenatal exercise</li> <li>• Birth preparedness &amp; complication readiness</li> <li>• Prevention of mother to child transmission of HIV/AIDS</li> </ul>
	<p><b>Assessment of fetal wellbeing</b></p> <ul style="list-style-type: none"> <li>• Bio-chemical</li> <li>• Clinical</li> <li>• Bio-physical</li> </ul>
	<p><b>Minor disorders of pregnancy</b></p> <ul style="list-style-type: none"> <li>• Gastro- intestinal system</li> <li>• Musculoskeletal system</li> <li>• Nervous system</li> <li>• Respiratory system</li> <li>• Genito-urinary system</li> <li>• Integumentary system</li> <li>• Circulatory system</li> <li>• Metabolic &amp; endocrine system</li> </ul>
	<p><b>Major disorders of pregnancy</b></p> <ul style="list-style-type: none"> <li>• PIH (Gestational HTN, Pre-eclampsia and Eclampsia )</li> <li>• HELLP Syndrome</li> <li>• Hyperemesis gravidarum</li> <li>• Polyhydramnios</li> <li>• Oligohydramnios</li> </ul>
	<p><b>Bleeding Disorders during Pregnancy</b> <b>Bleeding in early pregnancy</b></p> <ul style="list-style-type: none"> <li>• Implantation bleeding</li> <li>• Ectopic pregnancy</li> <li>• Molar pregnancy</li> </ul>

	<ul style="list-style-type: none"> <li>• Abortion</li> </ul> <p><b>Bleeding in late pregnancy</b> Antepartum haemorrhage</p> <ul style="list-style-type: none"> <li>• Placenta previa</li> <li>• Placenta Abruption</li> </ul>
	<p><b>Medical disease associated with pregnancy</b></p> <ul style="list-style-type: none"> <li>• Anemia</li> <li>• Diabetes mellitus</li> <li>• Cardiac disease</li> <li>• Tuberculosis</li> <li>• Urinary tract infection</li> <li>• Malaria</li> <li>• STIs</li> <li>• HIV/AIDS</li> <li>• Hepatitis</li> </ul>
	<p><b>High Risk factors in pregnancy</b></p> <ul style="list-style-type: none"> <li>• Smoking, alcohol, drug abuse</li> <li>• Violence</li> <li>• Abdominal pain</li> <li>• Anaemia</li> <li>• Vaginal bleeding</li> <li>• Respiratory difficulty</li> <li>• Fetal growth retardation</li> <li>• Cardiovascular problems</li> <li>• Rh incompatibility</li> <li>• Infections</li> <li>• others</li> </ul>
	<p><b>Drugs used in pregnancy</b></p> <ul style="list-style-type: none"> <li>• Tocolytic agent</li> <li>• Teratogenic agent (Teratogenic effects of drugs during pregnancy)</li> <li>• Hematinic agent</li> <li>• Anticonvulsant agents</li> <li>• Others</li> </ul>

## Midwifery II: Care during labor and birth

Unit	Contents
1.	<p><b>Labour</b></p> <ul style="list-style-type: none"> <li>• Concept: labour, normal labour, abnormal labour</li> <li>• Difference between true and false labour</li> <li>• Cause of onset of labour , course, stages of labour</li> <li>• Factors affecting labour</li> </ul>
2.	<p><b>First stage of labour</b></p> <ul style="list-style-type: none"> <li>• Physiological changes during first stage of labour</li> <li>• Mechanism of labour</li> <li>• Management and care of mother during first stage of labour               <ul style="list-style-type: none"> <li>○ initial assessment</li> <li>○ Assessment of labour progress</li> <li>○ Means of support and comfort in labour including pain management and Intranatal exercise</li> <li>○ Fluids and nutrition in labour</li> <li>○ Assessment of maternal and foetal well-being in labour</li> <li>○ Bowel and bladder care</li> <li>○ Active and different positions for labour</li> <li>○ Involvement of family members</li> <li>○ Infection prevention</li> </ul> </li> <li>• Use of Partograph/labor care guide</li> <li>• Importance of partograph/ labor care guide</li> <li>• Component of partograph/ labor care guide</li> <li>• Plotting of partograph/ labor care guide               <ul style="list-style-type: none"> <li>○ Maternal condition</li> <li>○ Foetal condition</li> <li>○ Progress of labour</li> <li>○ Decision making</li> </ul> </li> </ul>
3.	<p><b>Second stage of labour</b></p> <ul style="list-style-type: none"> <li>• Physiological changes during second stage of labour</li> <li>• Management of second stage of labour               <ul style="list-style-type: none"> <li>○ Facilitation of birth in different positions</li> <li>○ Monitoring maternal and foetal condition</li> <li>○ Hydration</li> <li>○ Progress of labour and bearing down effort</li> <li>○ Comfort and support</li> <li>○ Prevention of infection</li> <li>○ Conduction of delivery</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Preparation of midwife, woman and newborn delivery room and equipments</li> <li>• Newborn Resuscitation</li> <li>• Appropriate use of Episiotomy.</li> </ul>
4.	<p><b>Third stage of labour</b></p> <ul style="list-style-type: none"> <li>• Physiological changes during third stage of labour</li> <li>• Care during third stage of labour</li> <li>• Active management of third stage of labour</li> <li>• Assessment of perineum/vagina and repair if needed</li> <li>• Assessment of blood loss</li> </ul>
5.	<p><b>Fourth stage of labour</b></p> <p><b>Management of fourth stage of labour</b></p> <p><b>Evaluation and inspection</b></p> <ul style="list-style-type: none"> <li>• Evaluation of the uterus</li> <li>• Inspection and evaluation of the perineum, vagina, and cervix</li> <li>• Inspection and evaluation of the placenta, membrane and cord</li> <li>• Repair of episiotomy and lacerations, if any</li> <li>• Measure vital signs</li> <li>• Examination of placenta</li> <li>• Recording and reporting- maternal condition, total blood loss, newborn condition and placenta including HMIS and EOC monitoring.</li> <li>• Standard infection prevention practices including waste disposal.</li> </ul> <p><b>Continuing care and monitoring:</b></p> <ul style="list-style-type: none"> <li>• Vital signs</li> <li>• Evaluation of uterus</li> <li>• Assessment of perineum/vagina</li> <li>• Assessment of blood loss</li> <li>• Care of bladder</li> <li>• Breast feeding initiation</li> <li>• Offering food and fluids if allowed and comfort and safety measures</li> <li>• Postpartum Contraceptive: IUCD</li> </ul>
6.	<p><b>Malposition and Malpresentation in labour</b></p> <ul style="list-style-type: none"> <li>• Transverse lie</li> <li>• Occipito posterior position</li> <li>• Breech presentation</li> <li>• Face and brow presentation</li> <li>• Compound presentation</li> <li>• Unstable lie</li> <li>• Cord presentation</li> </ul>

7.	<p><b>Obstetric emergencies and life saving measures</b></p> <ul style="list-style-type: none"> <li>• Ruptured ectopic pregnancy</li> <li>• Fetal distress</li> <li>• Maternal distress: dehydration and ketoacidosis</li> <li>• Cord prolapse</li> <li>• Shoulder dystocia</li> <li>• Retained placenta (placenta accreta, percreta and increta)/ MRP</li> <li>• Shock</li> <li>• Inversion of uterus</li> <li>• Amniotic fluid embolism</li> <li>• Rupture uterus</li> </ul>
8.	<p><b>Abnormal labour</b></p> <ul style="list-style-type: none"> <li>• Preterm premature rupture of membrane (PPROM)</li> <li>• Premature rupture of membrane (PROM)</li> <li>• Premature labour</li> <li>• Prolonged labour</li> <li>• Obstructed labour: CPD, Contracted Pelvis</li> <li>• Post term labour</li> <li>• Induction and augmentation of labour</li> </ul>
9.	<p><b>Birth trauma and its management</b></p> <ul style="list-style-type: none"> <li>• Injuries to birth canal</li> <li>• Birth injuries to baby</li> </ul>
10.	<p><b>Obstetric operation</b></p> <ul style="list-style-type: none"> <li>• Episiotomy</li> <li>• Vacuum delivery</li> <li>• Caesarian section</li> </ul>
11.	<p><b>Immediate Care after delivery</b></p> <ul style="list-style-type: none"> <li>• Immediate care of the newborn</li> <li>• Early and exclusive breast feeding</li> <li>• Assessment of condition of mother</li> <li>• Full assessment of the newborn including gestation and normal variations</li> </ul>
12.	<p><b>Management of other complications during Labour</b></p> <ul style="list-style-type: none"> <li>• Oligohydramnios and polyhydramnios</li> <li>• Multiple pregnancy</li> <li>• Grand multiparity</li> <li>• Scarred uterus</li> <li>• Thrombo-embolic disorders</li> <li>• Rh and ABO incompatibilities</li> </ul>
13.	<p><b>Maternal Health Services</b></p> <ul style="list-style-type: none"> <li>• Assessing quality of maternal health services</li> <li>• Assessment of birth setting</li> <li>• Set up of Onsite Midwife-Led Birth Unit (OMBU)</li> </ul>

	<ul style="list-style-type: none"><li>• Caesarean section rate in different areas and contributing factors</li></ul>
14.	<p><b>Referral Mechanism</b></p> <ul style="list-style-type: none"><li>• Referral system: Concept and importance of referral</li><li>• Problems leading to delays and interventions to ensure timely referral</li><li>• Components of referral system</li><li>• Patient safety during transportation in the referral process</li><li>• Role of municipal and health facility in referral</li><li>• Problems in referral system</li><li>• Ways to improve referral system</li></ul>

Unit	Contents
1.	<p><b>Puerperium</b></p> <ul style="list-style-type: none"> <li>• Physiological and psychological changes during puerperium</li> <li>• Postnatal examination</li> <li>• Postnatal visit and care including postnatal exercise, family planning</li> <li>• New family life</li> <li>• Bonding and attachment</li> <li>• Traditional practices related to the mother and newborn care</li> <li>• Role of family member (grandmother) in postnatal care</li> <li>• Explain support for women and families experiencing bereavement</li> <li>• Discharge teaching</li> </ul>
2.	<p><b>Disorders of Puerperium</b></p> <p><b>Minor disorders of puerperium</b></p> <ul style="list-style-type: none"> <li>• After pain</li> <li>• Haemorrhoid</li> <li>• Constipation</li> <li>• Perineal pain</li> <li>• Urinary incontinence</li> <li>• Postnatal blues</li> </ul>
3.	<p><b>Major disorders of puerperium</b></p> <ul style="list-style-type: none"> <li>• Post partum hemorrhage</li> <li>• Puerperial Sepsis</li> <li>• Breast abscess</li> <li>• Thrombosis and thrombophlebitis</li> <li>• Postnatal psychosis &amp; depression (review)</li> <li>• Postpartum eclampsia</li> <li>• Postpartum urinary tract infection</li> </ul>
4.	<p><b>Breast feeding</b></p> <ul style="list-style-type: none"> <li>• Breastfeeding situation in Nepal</li> <li>• International and national breast feeding codes: BFHI</li> <li>• Revision of anatomy and physiology of the breast</li> <li>• Physiology of lactation</li> <li>• Patterns of infant feeding</li> <li>• Composition of human milk and other milk</li> <li>• Expression and storage of breast milk</li> <li>• Alternate methods of feeding</li> </ul> <p><b>Safe preparation, storage and giving of formula feeding</b></p> <ul style="list-style-type: none"> <li>• Promotion of successful breastfeeding <ul style="list-style-type: none"> <li>○ Initial and exclusive breastfeeding</li> <li>○ Technique of breastfeeding</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Steps of successful breast feeding</li> <li>○ Support and advise to mother</li> </ul> <ul style="list-style-type: none"> <li>● Feeding to baby of HIV positive mother</li> <li>● Breast feeding act</li> </ul>
5.	<p><b>Problems in breastfeeding and their management</b></p> <ul style="list-style-type: none"> <li>● sore/ cracked nipple</li> <li>● depress/ inverted/ flat nipple</li> <li>● engorged breast</li> <li>● mastitis</li> <li>● breast abscess</li> </ul> <p><b>Danger signs of mother</b></p>
6.	<p><b>Neonatal Health</b></p> <ul style="list-style-type: none"> <li>● Neonatal health status in Nepal</li> <li>● Neonatal health policies and strategies of Nepal</li> <li>● Newborn adaptation to extra-uterine life</li> <li>● Characteristic of healthy newborn</li> <li>● Essential Neonatal Care</li> <li>● Newborn Assessment</li> <li>● Newborn resuscitation</li> <li>● Immunisation of newborn</li> </ul>
7.	<p><b>Newborn Problems and their management</b></p> <ul style="list-style-type: none"> <li>● Congenital abnormalities</li> <li>● Birth injuries</li> <li>● Disease prevention for the neonate including PMTCT and hepatitis</li> <li>● Respiratory distress syndrome</li> <li>● Birth asphyxia</li> <li>● Hypothermia</li> <li>● Meconium aspiration syndrome</li> <li>● Low Birth weight and premature babies/dysmature</li> <li>● Kangaroo mother care</li> <li>● Hypoglycemia</li> <li>● Hyperbilirubinemia, kernicterus: phototherapy, exchange transfusion</li> <li>● Convulsions</li> <li>● Failure to thrive</li> <li>● Newborn infection</li> </ul>
8.	<p><b>Minor disorders of newborn</b></p> <ul style="list-style-type: none"> <li>● Oral thrush</li> <li>● Nephkin rashes</li> <li>● Dehydration fever</li> <li>● Pseudomenstruation</li> </ul>

	<ul style="list-style-type: none"> <li>• Milia</li> <li>• Mongolian spots</li> <li>• Engorgement of breast</li> <li>• Vomiting</li> </ul>
9.	<p><b>Major Disorders of Newborn:</b></p> <ul style="list-style-type: none"> <li>• Neonatal sepsis</li> <li>• Enterocolitis</li> <li>• Meningitis <ul style="list-style-type: none"> <li>○ Umbilical infection</li> <li>○ Conjunctivitis(Ophthalmia Neonatorum)</li> <li>○ Skin infection</li> <li>○ respiratory infection</li> </ul> </li> <li>• Danger signs of newborn</li> <li>• Referral process</li> </ul>
10.	<p><b>Postpartum Complications</b></p> <ul style="list-style-type: none"> <li>• Puerperal sepsis</li> <li>• Postpartum eclampsia</li> <li>• Postpartum haemorrhage and management of PPH</li> <li>• Urinary complication</li> <li>• Breast problems</li> <li>• Pulmonary embolism</li> <li>• Thrombophlebitis</li> <li>• Maternal mental disorder (refer to maternal mental health)</li> <li>• Psychosocial problems(refer to maternal mental health)</li> </ul>
11.	<p><b>Maternal perinatal death review/ MPDSR/ Maternal and Newborn Near miss</b></p> <ul style="list-style-type: none"> <li>• Maternal, neonatal and perinatal death review</li> <li>• Perinatal and maternal death audit Concept and indicators of MPDSR</li> <li>• Goal, objectives and components of MPDSR</li> <li>• Process of MPDSR in hospital and community at different level of health Care System</li> <li>• Causes and determinants of Maternal death in Nepal</li> <li>• Bereavement and loss</li> <li>• Care of the deceased</li> <li>• Breaking bad news</li> <li>• Documentation</li> <li>• National protocol of maternal perinatal death review (MPDR) maternal Perinatal death surveillance and response (MPDSR)</li> </ul>