

Government Degree College Baramulla

SEMESTER 8th

MAJOR COURSE

Subject: Clinical Biochemistry

Title: Maternal and Fetal health

Code: CBCC3822M

CREDIT: (4+2) THEORY: 04; PRACTICAL: 02

Contact Hours: 64(T) + 64 (L)

Course Objectives:

- *To learn the general well-being of expectant women by identifying essential prenatal care practices.*
- *To recognize safety measures during pregnancy to prevent complications and ensure maternal and fetal health.*
- *To provide foundational knowledge of fetal development and factors influencing growth.*
- *To acquire basic knowhow of neonatal care skills through tutorials on newborn assessment, feeding, and early interventions.*

Learning Outcomes: On completion of the course, the student should be able to:

- *Understand the importance of general wellbeing during pregnancy.*
- *Identify key risk factors affecting maternal and fetal health and propose preventive measures.*
- *Describe the stages of fetal development and the*
- *Apply basic neonatal care techniques, including temperature regulation, breastfeeding support, and infection prevention.*
- *Demonstrate knowledge of safe pregnancy practices and emergency preparedness for complications*

Unit-I General well-being of expectant women

(16 Hours)

Understanding the importance of well-being during pregnancy, General health assessment, Evaluation of overall health - including Height, weight, BP & general physical condition, Hormonal assessment: Evaluation of hormone levels: TSH, FSH, progesterone, Blood tests: Assessing CBC, WBC, RBC, Hb levels, Blood type & Rh factor, Blood Glucose test, Nutritional Assessment: - Assessment of nutritional status including iron levels, Vitamin D/folate/folic acid levels.

Unit-II Safe pregnancy measures

(16 Hours)

Benefits of exercise and nutrition during pregnancy, Stress management during pregnancy. Pregnancy complications: Ectopic pregnancy, gestational T2DM, preeclampsia, pregnancy induced hypertension, Placental abnormalities, low lying placenta, placenta previa, Some management strategies related to pregnancy complications.

Unit-III Introduction to fetal development

(16 Hours)

Overview of prenatal development, Stages of prenatal development. Factors affecting fetal health; Impact of lifestyle choices (Smoking, alcohol, drugs) on fetal development, Importance of prenatal care,

UNIT IV Birth defects and Diagnostic techniques

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Diagnostic techniques for assessing Fetal health, Prenatal Screening, On-invasive prenatal testing (NIPT), Common fetal health conditions: -Birth defects and congenital anomalies, Fetal growth restriction, Intrauterine growth retardation (IUGR).

UNIT IV

PRACTICAL (2 Credit: 60 Hours)

1. Awareness about nutrition and supplements in pregnancy.
2. How to do basic Anthropometry
3. Stress management – Deep breathing and relaxation techniques
4. Basic knowledge of neonatal care.
5. Visit to PHC/Maternal ward.

Recommended Books:

1. Harrison's Principles of Internal Medicine, 18th Edition (Harrison's Principles of Internal medicine) by Dan L. Longo, Anthony S. Fauci, Dennis L. Kasper, Stephen L. Hauser, J. Larry Jameson and Joseph Loscalzo, McGrawHill publishers
2. Textbook of Medical Physiology by John E. Hall, Guyton and Hall, Saunders.
3. Principles of Anatomy & Physiology by Tortora, G.J. & Grabowski, S. John Wiley & Sons, Inc.
4. Teitz, Fundamentals of Clinical Chemistry and Molecular Diagnostics by Nader Rifai. Publisher: Elsevier Publication