



D. Y. Patil University

# SYLLABUS OF ANESTHESIA

## I. OBJECTIVES:

At the end of the training, the students should be able to:

1. Perform cardio-pulmonary resuscitation with the available resources and transfer the patients to a bigger hospital for advanced life support.
2. Set up intravenous infusion.
3. Clear and maintain airway in an unconscious patient.
4. Administer oxygen correctly.
5. Perform simple nerve block.
6. Exhibit awareness of the principles of administration of general and local anesthesia.

## II. SKILLS:

1. Start I V line and infusion in adults, children and neonates.
2. Do venous cutdown
3. Insert, manage a CVP line
4. Conduct CPR (Cardiopulmonary resuscitation) and first aid in newborns, children and adults including endotracheal intubation.
5. Perform nerve blocks like infiltration, digital and field blocks.
6. Do lumbar puncture.
7. Administer O<sub>2</sub> by mask, catheter, and O<sub>2</sub> tent and be able to handle O<sub>2</sub> cylinder.

## LEARNING METHODS

Lectures, Tutorials bedside clinics and lecture cum demonstrations Distribution of Teaching hours -

- Lectures - 20 hours
- Tutorials and revision –
- Bedside clinics - 36 hours, one clinical postings 2 weeks in Anesthesiology



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**COURSE CONTENTS:**

1. Cardiopulmonary resuscitation (CPR) - basic and advanced, including use of simple ventilators.
2. Anatomy of upper airway, sites of respiratory obstruction and management of airway in an unconscious patient.
3. Various methods of oxygen therapy and its indications.
4. The pharmacology of local anesthetics, their use and how to perform simple nerve blocks like - Infiltration anesthesia, digital block, ankle block, pudendal and paracervical blocks.
5. Management of complications of regional anesthesia. The principles of administration of general anesthesia.



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# SYLLABUS OF DENTISTRY

## (I) GOALS

Comprehensive understanding of Dentistry, Orofacial structures, the Dentition, Maxillary and Mandibular jaws and the Diagnosis, Treatment, Prevention, Restoration and Rehabilitation of the common dental problems

## (II) OBJECTIVES

### A. KNOWLEDGE

- Various Diseases, Syndromes, Lesions, Disorders manifesting and affecting the Oral cavity, the Jaws and the TM joint.
- Effects of Dental Caries, Gingival and Periodontal diseases and Malocclusion.

### B. SKILLS

- Examination of the Oral cavity and the TM Joint
- Local Anesthesia Administration. Dental block
- Exodontia
- Emergency management of Maxillofacial Trauma.
- Plaque control and Oral health care regimen.

## Learning methods

**Total teaching hours: 10**

**Theory lectures: 10** in 7<sup>th</sup> Semester

Clinical Postings; 2weeks each in 7th semester

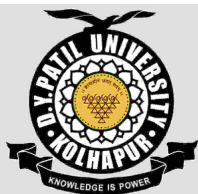
Internal assessment:

Term ending examination at the end of Posting of 50 marks out of Total 450 marks under general surgery.

## **COURSE**

III MBBS, 7<sup>th</sup> SEMESTER LECTURES: 10 Hours.

1. Scope of Dentistry Introduction of various branches of Dentistry. Basic Understanding of Dental Epidemiology Effects of deleterious Habits on Dentition and Orofacial structures.



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2. Development and Growth of Jaws & Orofacial structures. Development & Eruption of teeth, Deciduous & Permanent, Occlusion, Preventive Care in Pediatric patients.
3. Dental Caries Gingival & Periodontal Diseases, Developmental Anomalies, Cysts & Tumours of Oral cavity, Neoplasms of Oral cavity, Oral Microbiology.
4. Orofacial Pain & its Management
5. Maxillofacial Trauma and Management of patient.
6. Oral Medicine - Systemic diseases, the relevance of medications prescribed & their Oral Manifestations. Infections of Orofacial structures esp. periodontal diseases & their Manifestations in Systemic conditions. Relationship between Oral and systemic health. Women's Oral health care in Reproductive phase.
7. Interdisciplinary team approach in the management of a patient in Dentistry involving Pediatrics, Plastic surgery, ENT Surgery, Neurosurgery, Ophthalmic surgery, Gen. Surgery, Medicine, Orthopedics, Dermatology, Endocrinology and OB-GYN.
8. Rehabilitation of lost Oral structures. Implantology.
9. Dentofacial Deformities and Surgical corrections.
10. Biomaterials used in Dentistry. Emerging technologies in Contemporary Dentistry. Molecular Dentistry. Integration with anatomy, surgery, pathology radiology and Forensic Medicine be done.

#### CLINICAL POSTING in DENTISTRY - 2 WEEKS

1. L.A. Administration, Techniques for different Blocks.
2. Exodontia
3. Preliminary Management of Maxillofacial Trauma
4. Pathological conditions of Oral cavity.
5. Oral and Maxillofacial Radiography & Imaging
6. Maxillo-Facial Prosthodontics



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## MEDICINE

### GOAL:

The broad goal of the teaching of undergraduate students in Medicine is to have the knowledge, skills and behavioral attributes to function effectively as the first contact physician.

### OBJECTIVES:

#### KNOWLEDGE:

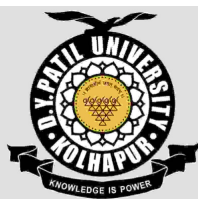
At the end of the course, the student shall be able to:

1. Diagnose common clinical disorders with special reference to infectious diseases, nutritional disorders, tropical and environmental diseases;
2. Outline various modes of management including drug therapeutics especially dosage, side effects, toxicity, interactions, indications and contra-indications;
3. Propose diagnostic and investigative procedures and ability to interpret them;
4. Provide first level management of acute emergencies promptly and efficiently and decide the timing and level of referral, if required;
5. Recognize geriatric disorders and their management.

### SKILLS:

At the end of the course, the student shall be able to:

1. Develop clinical skills (history taking, clinical examination and other instruments of examination to diagnose various common medical disorders and emergencies;
2. Refer a patient to secondary and/or tertiary level of health care after having instituted primary care;
3. Perform simple routine investigations like hemogram, stool, urine, sputum and biological fluid examinations;
4. Assist the common bedside investigative procedures like pleural tap, lumbar puncture, bone marrow aspiration/ biopsy and liver biopsy.



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A course of systematic instruction in the principles and practice of medicine, including medical disease of infancy;

- Lecture-demonstrations, seminars and conferences in clinical medicine during the 3 years shall run concurrently with other clinical subjects;
- Instructions in comprehensive medical care;
- Instructions in applied anatomy and physiology and pathology throughout the period of clinical studies;
- Instructions in dietetics, nutrition and principles of nursing Medical and in simple ward procedure e.g. should be imparted during clinical concurrently.

iv) **Attitude :**

- The teaching and training in clinical medicine must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.
- It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes.
- Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals.

**Curriculum for Theory Lecture series & Tutorials and LCD for General Medicine including Psychiatry, Tb. & Dermatology**

TERM	DAY	TIME	LECTURES	TOPIC
4th	MON	8-9	20	Introduction to Medicine
5th	MON FRI	8-9 8-9	15 15	Infectious Diseases/Tropical diseases Cardiovascular System
6th	TUE THU MON TUE SAT	12-1 8-9 8-9 8-9	20 20 20 20 15	GIT, Liver, Pan. Chest + Miscellaneous TB Psychiatry
7th	FRI THU FRI MON	8-9 12-1 2-4 2-3	15 15 30 20	Neurology Haematology/Haemato-oncology Tutorials Skin / STD



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8th	TUE THU TUE WED	8-9 8-9 2-4 2-4	20 20 40 40	Endo + Misc + Genetics ( 3 Lectures.) Nephro. +Clinical Nutrition Tutorial Medicine, Skin, Tb, Psychiatry, Tutorial
9th	TUE MON	12-1 2-4	15 30	LCD Medicine (10 ) Skin 1 Psychiatry (1) Tb(1) LCD Medicine (7)

The above timetable is general outline to guide the planning of curriculum at college level. However, flexibility may be exercised to the extent that there may be minor re-scheduling of course contents day-wise or term-wise. It must be ascertained that the course contents are covered fully and total hours allotted for the subjects are effectively implemented.

Note :- These are suggested time tables. Adjustments where required, depending upon the availability of time and facility, be made.

### SYLLABUS

(General Instruction: 1) **The Lectures** Stated below shall cover knowledge about applied aspects of basic & allied sciences, practical approaches in the management of patients in the outdoor & indoor settings as well as their management in the community. Special emphasis shall be placed on preventive aspects, National Health Programs & dietetics & nutrition.)

**2) During practical teaching & training in wards, OPD & field works** proper emphasis should be given to common health problems in addition to other diseases. Emphasis should be given to learning of tacit knowledge & skills in diagnosis & interpretation of finding & Lab. data.

### **INTRODUCTION TO MEDICINE: 4 TH SEMESER**

<b>Lect. 1</b>	History of Medicine.
<b>Lect. 2/3</b>	Concept & objectives of history taking. Diagnosis, Provisional Diagnosis, Differential diagnosis.
<b>Lect. 4</b>	Symptomatology of Cardiovascular Diseases.
<b>Lect. 5</b>	Symptomatology of Respiratory diseases.
<b>Lect. 6</b>	Symptomatology in Nervous system.
<b>Lect. 7</b>	Symptomatology in Gastrointestinal and Hepatobiliary diseases.
<b>Lect. 8</b>	Approach towards a patient with Fever/Oedema.
<b>Lect. 9</b>	Approach towards a patient with anaemia / jaundice.
<b>Lect. 10</b>	Approach towards a patient with Lymphadenopathy.



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<b>Lect. 11</b>	Investigations ( Non- Invasive ) X-rays, USG C.T. ./ M.R.I. Scan Secretions examinations Peripheral smear
<b>Lect. 12</b>	Investigations ( Invasive ) Bone marrow F.N.A.C. Liver biopsy Lymph node biopsy Endoscopies Lumber puncture
<b>Lect. 13/14</b>	Review of common diseases in India
<b>Lect. 15/16</b>	Revision
<b>Lect. 17</b>	Examination
<b>Lect. 18/20</b>	Buffer

#### INFECTIOUS DISEASES: 5 TH SEMESTER

<b>Lect. 1</b>	Introduction. Infections – types, Modes of Infection transmission, Incubation period Host defenses, Immunity & Immunization & Management including Prevention
<b>Lect.2</b>	Viral hepatitis.
<b>Lect.3/4/5</b>	Swine Flu
<b>Lect.6/7</b>	Malaria
<b>Lect.08</b>	Rabies
<b>Lect.09</b>	Typhoid fever
<b>Lect.10/11</b>	Gastroenteritis
<b>Lect.12</b>	Plague / Dengue
<b>Lect.13/14</b>	(HIV) Infection & AIDs.
<b>Lect.15</b>	Examination.

Note:- The course contents in above topics should also cover applied aspects in basic sciences like Anatomy, Physiology, Bio-Chemistry, Micro- Biology, Pharmacology, Pathology, FMT while giving training on Clinical features, investigations, Diagnosis, D/D treatment & prevention.

#### CARDIOVASCULAR SYSTEM: 5 TH SEMESTER

<b>Lect. 01</b>	Introduction Functions/anatomy/physiology and its applications Various terminologies used
<b>Lect.2/3:</b>	Methods of evaluation Non - invasive Invasive
<b>Lect.04</b>	Arrhythmias Concept & Classification Presentation Diagnosis Pharmacotherapy in short
<b>Lect.05</b>	Cardiac arrest.
<b>Lect.06</b>	C.C.F. Types Presentations Pathophysiology Management





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<b>Lect.07</b>	C.H.D. Aetiology and classification CHD in adults & its importance
<b>Lect.08</b>	Rheumatic fever
<b>Lect.09</b>	Presentation and haemodynamics of various Valvular lesions including investigations, Diagnosis, D/D treatment & Prevention.
<b>Lect.10</b>	Infective endocarditis
<b>Lect.11/12</b>	C.A.D, (Coronary artery disease)
<b>Lect.13</b>	Pericardial diseases and cardiomyopathy Lect.14: Hypertension
<b>Lect.15</b>	Examination.

**GASTROENTEROLOGY, HEPATOBILIARY SYSTEM & PANCREAS: 6<sup>Th</sup> SEMESTER**

<b>Lect.01</b>	Introduction to GIT Oral Cavity Ulcers Bleeding Pigmentation Oral manifestation of systemic diseases
<b>Lect.2/3</b>	Oesophagus, Inflammation, Dysphagia
<b>Lect.4/5</b>	Stomach, Peptic ulcers, Aetiopathogenesis Clinical features Investigations D/D and management Acute and Chronic gastritis
<b>Lect.6/7</b>	Small and large intestine diseases Secretions & functions MAS Mal –absorption-syndrome Tuberculosis of Abdomen
<b>Lect.08</b>	Ulcerative colitis & Crohn's disease
<b>Lect.09</b>	Liver. Introduction LFT & their interpretation
<b>Lect.10/11</b>	Hepatitis - Acute & Chronic
<b>Lect.12/13</b>	Cirrhosis of liver
<b>Lect.14</b>	Gall bladder diseases
<b>Lect. 15/16</b>	Pancreas Functions Investigations Acute and Chronic pancreatitis Manifestation and D/D & treatment.
<b>Lect.17/18</b>	Misc. & Revision.
<b>Lect.19</b>	Examination.



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### RESPIRATORY SYSTEM : 6 TH SEMESTER

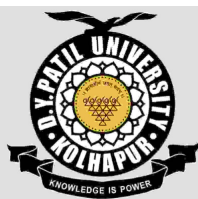
<b>Lect. 1</b>	Applied Anatomy and physiology of R.S.
<b>Lect. 2</b>	P.F.T. ( Pulmonary Function Testing)
<b>Lect. 3</b>	Resp. Infection- Pneumonias.
<b>Lect. 4</b>	Chronic bronchitis and emphysema
<b>Lect. 5/6</b>	Bronchiectasis and lung abscess.
<b>Lect. 7</b>	Bronchial asthma
<b>Lect. 8</b>	Malignancies
<b>Lect. 9</b>	Mediastinum and its disorders.
<b>Lect. 10</b>	Pleural disease - Emphasis on pneumothorax
<b>Lect. 11</b>	Pleural effusion.
<b>Lect. 12</b>	Occupational lung disease. Its concept and short review
<b>Lect. 13</b>	Revision - Fungal & Parasitic diseases
<b>Lect. 14</b>	Respiratory emergencies & Introduction to mechanical ventilators

### Collagen Vascular Disorders

<b>Lect.1</b>	Allergy - Concept & hypersensitivity, Autoimmunity
<b>Lect.2</b>	Collagen disease.
<b>Lect.3</b>	Rheumatoid arthritis
<b>Lect.4</b>	Sero negative arthritis
<b>Lect.5</b>	Revision HIV , Alcohol related disease
<b>Lect.6</b>	Examination

### TUBERCULOSIS: 6<sup>th</sup> SEMESTER

<b>Lect. 1</b>	History and introduction
<b>Lect.2/3</b>	Pathogenesis and pathology
<b>Lect. 4</b>	Role of host related factors
<b>Lect. 5</b>	Microbiology of AFB
<b>Lect. 6</b>	Clinical features of pulmonary tuberculosis and its investigations
<b>Lect. 7</b>	Anti – Tubercular drugs Pharmacology & Schedules of treatment.
<b>Lect. 8/9</b>	Resistant tuberculosis DOTS Prophylaxis - Drugs /BCG/ Tuberculin test. HIV & TB.
<b>Lect. 10</b>	Extra - pulmonary tuberculosis Plural effusion Empyema Others
<b>Lect. 11/12</b>	Revision
<b>Lect. 13</b>	Examination



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### NEUROLOGY: 7<sup>th</sup> SEMESTER

<b>Lect. 1</b>	Introduction Applied anatomy & physiology History taking in neurology
<b>Lect. 2</b>	Investigations
<b>Lect. 3/4</b>	CVD ( Cerebro Vascular Disease) Types & its differential diagnosis Predisposing factors Diagnosis and management
<b>Lect. 5</b>	: S.O.L. (Space Occupying Lesions)
<b>Lect. 6</b>	Encephalitis and meningitis
<b>Lect. 7</b>	Epilepsy
<b>Lect. 8</b>	Cerebellar syndrome
<b>Lect. 9</b>	Parkinsonism
<b>Lect. 10</b>	Paripheral neuropathy
<b>Lect. 11</b>	Muscle disorders in brief
<b>Lect. 12/13</b>	Spinal cord disorders
<b>Lect. 14</b>	CSF Formation and absorption Status in various disorders
<b>Lect. 15</b>	Examination.

### HEMATOLOGY: 7 TH SEMESTER

<b>Lect. 1</b>	Introduction Cell line of hemopoisis Stimulating factors Physiology and Anatomy of RBCs. Apheresis : Indications, procedure and complication Blood Substitutes : Crystalloids & colloids, Plasma products
<b>Lect. 2</b>	Anemias Introduction Classification Symptoms & signs in general Basic investigations & its interpretation
<b>Lect. 3</b>	Microcytic hypochromic anaemias Fe Kinetics C/F, investigations of Fe deficiency. Treatment of Fe deficiency. D/D - Sideroblastic / thalasemic.
<b>Lect. 4</b>	Macrocytic anaemias Kinetics of B-12 and Folic acid C/F, investigations and management of B-12 / FA deficiency.
<b>Lect. 5</b>	Anaemias (continued) Brief of Chronic infections and inflammation Hemolytic anaemias Lect.06: Hemoglobinopathies

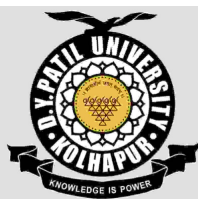


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<b>Lect. 7</b>	Hypoplastic / Aplastic anemia Definition Classification Diagnosis and management
<b>Lect. 8</b>	Introduction to WBCs. Agranulocytosis - Aetiology & its significance Leukemias ( AML, ALL, CML, CLL)
<b>Lect. 9</b>	Management of leukemia
<b>Lect.10</b>	Lymphomas Hodgkin's disease / NHL (Non-Hodgkin's lymphoma)
<b>Lect.11</b>	Approach to a patient with bleeding disorders Recognition Investigations Physiology of Platelets Therapy
<b>Lect.12</b>	Blood groups & Blood Transfusion & Component Therapy
<b>Lect.13-14</b>	Revision
<b>Lect. 15</b>	Examination

#### ENDOCRINOLOGY: 8 TH SEMESTER

<b>Lect. 1</b>	Introduction - Hormones Concept Types Action Endocrine system General Control
<b>Lect. 2/3</b>	Pituitary Anatomy Regulation Disorders of Ant. Pituitary Acromegaly A.G. Syndrome Disorders of Post. Pituitary Hypopituitarism
<b>Lect. 4/5</b>	Thyroid Anatomy Regulation Goiter Hypothyroid state & hyperthyroid state Classifications Management
<b>Lect. 6/7</b>	Adrenal gland Anatomy Regulation Addison's & Cushing syndrome Recognition Investigations Management Pheocromocytoma
<b>Lect. 8</b>	Vit. D. Metabolism. Ca. Metabolism and its relations to parathyroid Diagnosis & management of related disorders.
<b>Lect. 9/10</b>	Diabetes Mellitus
<b>Lect. 11</b>	FSH < H. Oestrogens Progesterone's Significance Disorders Its recognition and diagnosis Management
<b>Lect. 12</b>	Multiple endocrine-syndrome and paraneoplastic syndrome Overview. Diabetes insipidus.



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### Miscellaneous

<b>Lect. 13/14</b>	Poisoning Suicidal / Homicidal / Accidental Chemical / Biological / Corrosives / Drugs Concepts of management Optimum Barbiturate DDT Organophosphorus Introduction to the concepts and techniques Potentials, applications and challenges. Planning of providing medical care during disaster. Acute radiation syndrome Acute poisoning with general industrial toxins. Medical Negligence and the law Indian Medical Council regulations with latest amendments Responsibilities towards Medico Legal Cases
<b>Lect. 15</b>	Hyperpyrexia and Heat exhaustion Aetiology Pathophysiology C / F. Types Management Preventive measures
<b>Lect. 16</b>	Electrical injury Types Manifestations Management Lightning
<b>Lect. 17</b>	Shock Types Pathophysiology / Complications Management Lect.18/19/20: Revision <b>Bioterrorism</b> :- The Clinician's Role in Bioterrorism/ Preparedness and Response/Communication with Authorities <b>Complementary and Alternative Medicine (Including Yoga)</b> :- Scientific Issues Financial Issues Specific CAM Modalities Palliative Medicine:- Leading Causes and Settings of Death Prognosis and Palliative Care Symptom Management Ethical Issues in Palliative Care Euthanasia
<b>Lect. 21</b>	Examination



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**NEPHROLOGY, NUTRITION: 8 TH SEMESTER NEPHROLOGY :**

<b>Lect. 1</b>	Anatomy & Physiology of Urinary system
<b>Lect. 2</b>	R.F.T. ( Renal Function Tests)
<b>Lect. 3</b>	Acute Glomerulonephropathy
<b>Lect. 4</b>	Chronic Glomerulonephropathy
<b>Lect. 5</b>	Infections of urinary system.
<b>Lect. 6</b>	Nephrotic syndrome
<b>Lect. 7</b>	Approach towards common problem i. Proteinuria ii. Hematuria iii. Renal colics
<b>Lect. 8</b>	Acute & Chronic renal failure Lect.09: Dialysis - Diet - Drugs. In renal failure
<b>Lect. 10</b>	Revision
<b>Lect. 11</b>	Examination

**Genetics (5 lectures)**

<b>Lect. 1</b>	Introduction
<b>Lect. 2</b>	Common genetic disorders
<b>Lect. 3</b>	Application of Genetic Engineering in Medicine
<b>Lect. 4/5</b>	Genetics for the Clinician:- Mutations in Clinical Conditions, Chromosomal disorders, Human Genome Project, Future Application of Genetics, Molecular Genetics of Cancer & Tumor immunology.

**NUTRITION**

<b>Lect.11</b>	Concepts of carbohydrate, proteins, fats, vitamins and minerals. Balanced diet.
<b>Lect.12</b>	Protein energy malnutrition.
<b>Lect.13/14</b>	Vitamin deficiency state Scurvy / Beriberi / Pellagra / Vit.A
<b>Lect.15</b>	Obesity / Asthenia Diagnosis Complications and management
<b>Lect.16</b>	Revision <b>Medical Diseases in Pregnancy:-</b> Common infections like Typhoid, chlorea, malaria, hypertension diabetes, Thromboembolic diseases, Prescribing in pregnancy. <b>Travel Medicine:-</b> Common diseases, Immunisation, Medical Documents during travel. <b>Hospital Administration &amp; Economics:-</b> Setting own hospital, Arranging finances, Government regulations (e.g. Labor Laws, biological waste) Arranging Staff & nurses.
<b>Lect.17</b>	Examination.

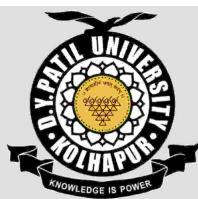


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Introduction of "Brain Death and Organ Donation" topic in subjects of Physiology , Preventive & Social Medicine, Psychiatry, Medicine & Surgery

Recommended Books:

1. Hutchinson's Clinical Methods by Hunter and Bomford,
2. The Principles and practice of Medicine - Sir Stanley Davidson
3. Text book of Medical Treatment - Dunlop and Alstead.
4. Savill's system of Clinical Medicine - E. C. Warner.
5. Principles of internal Medicine - Harrison.
6. API Text Book of Medicine.
7. Reference Book (Clinical Medicine) : "Clinical Examination in Medicine": Author: Dr. A. P. Jain



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**University Examinations in Medicine and Allied Subjects at a Glance**

**MEDICINE:-**

Theory 2 papers of 60 marks each <b>Paper I</b> - General Medicine <b>Paper II</b> - General Medicine (Including Psychiatry, Dermatology, STD shall contain one question on basic sciences and allied subject.)	120 marks
Oral (viva) interpretation of X-Ray, ECG etc.	20 marks
Oral (viva) interpretation of X-Ray, ECG etc.	100 marks
Internal Assessment (Theory 30 Marks, Practical 30 Marks)	60 marks
<b>Grand Total</b>	<b>300 marks</b>

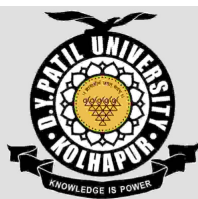
**THEORY:** 60 marks Duration Two and half hours (3.0) hours

<b>Section A</b> <b>15 marks : 30 minutes</b>	<b>B and C</b> <b>45 marks : 2hours &amp; 30 minutes</b>	
Thirty single MCQs- 1/2 mark each : 15 marks Separate paper Single based response MCQ will cover whole syllabus	One long questions (LAQ) of 8 marks. (will contain some preclinical/paraclinical aspects) Four /six (SAQ)short notes -3 marks each : 12 marks	Two long questions (LAQ) of 8 marks each = 16 marks. (will contain questions on ancillary subjects) Three /five (SAQ)short notes -3 marks each : 9 marks

*MCQ section A will be given to candidates at the beginning of the examination.*

*After 30 minutes Section A will be collected. Section B of paper will then be handed over to candidates.*





D. Y. Patil University

**PRACTICAL:** 100 marks

**Clinical:** One long case: 50 marks: 45 min. for taking case and 10 minutes for assessment

Two short cases 25 marks each: 10 min for taking case and 7 minutes for assessment

(Answer sheet will be provided only for Long case)

Oral (viva voce): 20 marks:

4 tables X 5 min. duration/5 marks each.

Table 1	Table 2	Table 3	Table 4
ECG	Imaging	Instruments	Emergency

**Marks of VIVA will be added to Theory marks**

**It is compulsory to obtain 50% marks in theory.**

**It is mandatory to obtain 50% marks in theory + viva/oral.**

**University (Final) Exam: General Medicine**

<b>Paper I (60 Marks) Time 3 hours.</b>	<b>Paper II (60 Marks) Time 3 hours.</b>
<b>Section A – Marks 15</b> MCQs – 30 Items each of ½ mark Time 30 minutes (Shall cover whole course syllabus stated in Section B and C of Paper I below)	<b>Section A – Marks 15</b> MCQs 30 Items each of ½ mark Maximum time 30 minutes (Shall cover whole course syllabus stated in Section B and C of Paper I below)
<b>Section B – (Total Marks 25)</b> Two long questions Each of 8 marks & 3 Short Answer Questions of 3 marks each. (3 out of 5 SAQs by choice. On course contents of - Cardiovascular System, Gastrointestinal System, Hepatobiliary System & Pancreas, Hematology, Hemato-oncology & Genetics)	<b>Section B – (Total Marks 25) <i>Two long Questions each of 8 marks and</i></b> 3 short answer questions (out of 5 SAQs) on course contents of Neurology, Psychiatry, Dermatology, Veneroleprology & Collagen Disorders
<b>Section C – (Total Marks 20)</b> One long Question of 8 marks and 4 (out of six) SAQs of 3 marks each on course contents of Endocrinology, infectious diseases/Tropical Disease, Miscellaneous  The Max Time for Section B & C shall be of 2 hrs. + 30 minutes	<b>Section C – (Total Marks 20 )</b> One long question of 8 marks and 4 (out of six) SAQs of 3 marks each on course contents on Respiratory Diseases, Tuberculosis & Clinical Nutrition and Nephrology  The Max time for section B and C shall be of 2 hrs. and 30 minutes



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**Final University Exam: Practical Exam:**

Shall comprise of total 120 marks with divisions as below :- (A) Clinical Bed side:

One Long case - 50 Marks

Long Case / The time for case taking

Two short cases - 25 Marks each

for student is 45 min. & for examination

Total - 100 Marks is 10 min.

Short Case/The same for each short case is 10 min. & 5 min. respectively

(B) Oral Viva Voce and interpretation of investigation materials (like X-Rays, ECGs, etc. – 20 marks

Viva at Two Tables Each for 10 marks. There should be even & balanced distribution of the course contents on these tables, between Internal & External examiners. This should include, specimens, instruments, microscopy & drugs on table no 1 & emergencies, radio-diagnostics, electro diagnostic & Biochemical Lab. investigations on table no 2 as applicable to the course contents of final M.B.B.S. Exam.

**(C) The marks of Internal Assessment shall be sent to the University before the commencement of the Theory Examination.**

Note – In the event when I.A. could not be held on the specified time due to technical reasons or otherwise, then it should be held during the vacation.



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# SYLLABUS OF OBSTETRICS & GYNAECOLOGY

These guidelines are based on MCI recommendations Teaching has to be done keeping in mind the goals and objectives to be achieved by medical student

## I. GOAL

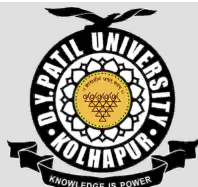
The broad goal of the teaching of undergraduate students in Obstetrics and Gynaecology is that he/she shall acquire understanding of anatomy, physiology and pathophysiology of the reproductive system & gain the ability to optimally manage common conditions affecting it.

## II. OBJECTIVES;

### A. KNOWLEDGE:.

At the end of the course, the student shall be able to:

- Outline the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affecting it.
- Detect normal pregnancy, labour puerperium and manage the problems he/she is likely to encounter therein,
- List the leading causes of maternal perinatal morbidity and mortality.
- Understand the principles of contraception and various techniques employed, methods of medical termination of pregnancy, sterilization and their complications.
- Identify the use, abuse and side effects of drugs in pregnancy, pre-menopausal and post-menopausal periods;
- Describe the national programme of maternal and child health and family welfare and their implementation at various levels.
- Identify common gynaecological diseases and describe principles of their management.
- State the indications, techniques and complications of surgeries like Caesarian Section, laparotomy, abdominal and vaginal hysterectomy, Fothergill's operation and vacuum aspiration for Medical Termination of Pregnancy (MTP)



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## **B. SKILLS**

At the end of the course, the student shall be able to :

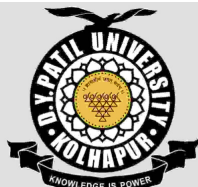
1. Examine a pregnant woman; recognize high-risk pregnancies AND make appropriate referrals
2. conduct a normal delivery, recognize complications and provide postnatal care;
3. Resuscitate the newborn and recognize the congenital anomalies
4. advise a couple on the use of various available contraceptive devices and assist in insertion and removal of intra-uterine contraceptive devices.
5. Perform pelvic examination, diagnose and manage common gynaecological problems including early detection of genital malignancies;
6. Make a vaginal cytological smear, perform a post coital test and wet vaginal smear examination for Trichomonas vaginalis, Moniliasis and gram stain for gonorrhoea;
7. interpretation of data of investigations like biochemical, histopathological, radiological ultrasound etc.

## **C. INTEGRATION**

The student shall be able to integrate clinical skills with other disciplines and bring about coordination of family welfare programme for the national goal of population control.

## **D. GENERAL GUIDELINES FOR TRAINING:**

1. attendance of a maternity hospital or the maternity wards of a general hospital including
  - i. antenatal care the management of the puerperium and a minimum period of 5 months in-patient and out-patient training including family welfare planning
2. of this period of clinical instruction, not less than one month shall be spent as a resident pupil in a maternity ward of a general hospital.



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3. during this period, the student shall conduct at least 10 cases of labour under adequate supervision and assist 10 other cases.
4. a certificate showing the number of cases of labour attended by the student in the maternity hospital and/or patient homes respectively, shall be signed by a responsible medical officer on the staff of the hospital and shall state:
  - (a) that the student has been present during the course of labour and personally conducted each case, making the necessary abdominal and other examinations under the supervision of the certifying officer who shall describe his official position.
  - (b) That satisfactory written histories of the cases conducted including wherever possible antenatal and postnatal observations, were presented by the student and initialed by the supervising officer

### LEARNING METHODS

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

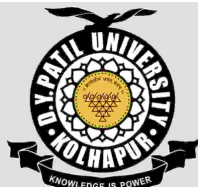
- Lectures - 130 hours
- Tutorials and revision - 170 hours
- Bedside clinics - 468 hours

### DIDACTIC LECTURES

SEMESTER	HOURS/WEEK	TOTAL
4	1 / WEEK	17
6	3 / WEEK	48
7	3 / WEEK	48
8	1 / WEEK	17
<b>Total</b>		<b>130</b>

### B) CLINICAL DEMONSTRATIONS, PRACTICAL DEMONSTRATIONS, SEMINARS ETC

SEMESTER	HOURS/WEEK	TOTAL
8	4 / WEEK	68
9	6 / WEEK	102
<b>Total</b>		<b>170</b>
<b>TOTAL TEACHING HOURS</b>		<b>300</b>

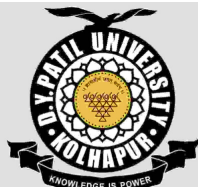


### **Suggested lecture program Distribution of syllabus in respective semesters**

This is suggested programme and can vary at institute Total 300 hours of teaching has to be done in OB GY including Tutorials Details of syllabus is given separately below after distribution as per semester

#### **4<sup>th</sup> & 5<sup>th</sup> Semester: OBSTETRICS:**

1. Applied anatomy of female genital tract.
2. Development of genital tract
3. Physiology of menstruation
4. Puberty and menopause
5. Physiology of ovulation/conception/implantation.
6. Early development of human embryo.
7. Structure, function and anomalies of placenta.
8. Physiological changes during pregnancy/diagnosis of pregnancy.
9. Antenatal care, nutrition in pregnancy, detection of high-risk pregnancy.
10. Normal labour - Physiology, mechanism, clinical course and management, pain relief in labour.
11. Normal puerperium and breast-feeding.
12. Examination and care of newborn.
13. Contraception - Introduction and basic principles
14. Maternal mortality and morbidity, prenatal mortality and morbidity. National health Programme - safe-motherhood, reproductive and child health, social obstetrics.
15. Term, Preterm, Livebirth, Stillbirth, abortion, period of viability including definitions of all above.
16. Basic Anatomy, relationship to other pelvic organs, applied anatomy as related to Obstetrics and Gynecological surgery.
17. Fertilization and gametogenesis
18. Basic embryology, factors influencing foetal growth and development
19. Clinical features, differential diagnosis, principles underlying the pregnancy tests.
20. Immunological tests and their interpretation, ultrasonography



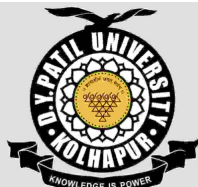
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21. Genital tract, cardiovascular system and hematology
22. Renal system, Respiratory and Gastrointestinal system
23. Objectives of antenatal care; assessment of period of gestation, detection of abnormality with the help of gravidogram, clinical monitoring of maternal and foetal well being detection of normal foetal pelvic relation (Obstetrical palpation), advise regarding nutrition, prescribing in pregnancy, immunization against tetanus, basic investigations.

6<sup>TH</sup> Semester: GYNAECOLOGY & FAMILY PLANNING

### **GYNAECOLOGY**

1. Development of genital tract, congenital anomalies and clinical significance, Chromosomal abnormalities and intersex.
2. Physiology of Menstruation, Menstrual abnormalities-Amenorrhoea, Dysmenorrhea, Abnormal Uterine Bleeding, DUB.
3. Puberty and its disorders, Adolescent Gynaecological problems.
4. Menopause & H R T.
5. Infections of genital tract, Leucorrhoea, Pruritus vulvae, Vaginitis, Cervicitis, PID, Genital TB, Sexually transmitted infections including HIV infection.
6. Benign & Malignant tumours of the genital tract. Leiomyoma, carcinoma cervix, carcinoma endometrium, chorio carcinoma, ovarian tumors. Benign & Malignant Lesions of Vulva
7. Radiotherapy & Chemotherapy in Gynaecology.
8. Other gynaecological disorders - Adenomyosis, Endometriosis
9. Genital Prolapse, Genital Tract displacement,
10. Urinary disorders in Gynaecology, Perineal tears, Genital Fistulae, RVF & VVF.
11. Definition and causes of polymenorrhagia, metrorrhagia, oligomenorrhoea and hypomenorrhoea. Causes of menorrhagia, evaluation and management.
12. Aetiopathology, classification, clinical aspects, diagnosis, investigation and principles of management. Hormone therapy & management options.
13. Causes in male and female; Physical examination of both female and male partners,



essential investigations and interpretation.

14. Management options; principles of Medically Assisted Reproductive Technology (MART)
15. Primary amenorrhoea
16. Secondary amenorrhoea
17. Aetiology, clinical features diagnosis, principles of management & preventive aspects.
18. UTERINE: Aetiology, clinical features, diagnosis, principles of management and preventive aspects.
19. OVARIAN: Aetiology, clinical features, diagnosis, principles of management & preventive aspects.
20. Aetiopathology; clinical features, principles of investigations and management
21. Implications in health and fertility
22. Genital injuries and fistula-Causes, prevention, clinical features & principles of management
23. Diseases of urinary system including stress incontinence, retention of urine, urinary tract infection, urethral syndrome, dysuria.
24. STD in the female- Aetiology, clinical features, differential diagnosis, principles of basic investigation and medical therapy.
25. Tuberculosis of female genital tract.

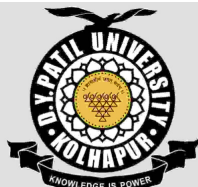
#### **FAMILY PLANNING:**

1. Demography and population Dynamics.
2. Contraception –
  - Temporary methods.
  - Permanent methods.
1. MTP Act and procedures of MTP in first & second trimester.
2. Emergency contraception. :

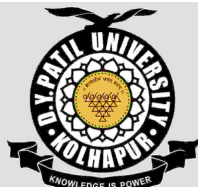
#### **7<sup>th</sup> & 8<sup>th</sup> Semester: OBSTETRICS & NEWBORN**

1. Complications in early pregnancy. Hyperemesis gravidarum/abortion/ectopic pregnancy/gestational trophoblastic disease.





2. Obstetrical complications during pregnancy. APH - Accidental hemorrhage. Placenta praevia.
3. Poly hydramnios / oligohydramnios, multifetal pregnancy.
4. Medical disorders in pregnancy.  
Anemia, Heart disease. Hypertensive disorder, PIH and Eclampsia, Diabetes, jaundice, pulmonary disease in pregnancy.
5. Infections in pregnancy Urinary tract diseases, sexually transmitted infections including HIV, malaria, TORCH etc.
6. Gynaecological and surgical conditions in pregnancy. Fibroid with pregnancy, ovarian tumours, acute abdomen, genital prolapse.
7. High risk pregnancy, pre-term labour, post term pregnancy, IUGR, IUFD, pregnancy wastages, Rh incompatibility, post caesarean pregnancy.
8. Induction of labour.
9. Abnormal position & presentation : Occipito posterior, Breech, Transverse, Face & Brow, Compound, Cord Presentation and prolapse.
10. Abnormal labour - abnormal uterine action, CPD. Obstructed labour, uterine rupture.
11. Third stage complications - Retained placenta, PPH, Shock, Uterine inversion, Fluid Embolism.
12. Puerperial Sepsis and Other Complications in puerperium.
13. Evaluation of Foetal Health during pregnancy and labour.
14. Drugs used in obstetric practice.
15. Operative procedures in Obstetrics: Caesarean Section, Instrumental Vaginal Delivery. Forceps, Vacuum,
16. Maternal Mortality and morbidity, Perinatal mortality and morbidity. National program - safe motherhood, reproductive and child health, Social Obstetrics.
17. Anemia in pregnancy Aetiology, classification, diagnosis, investigations, adverse effects in the mother and labour management.
18. Other medical disorders like heart disease, diabetes mellitus and renal disorders in pregnancy.
  - a. Clinical Features early detection, effect of pregnancy on the disease and impact of



the disease on pregnancy.

b. Complications of the diseases

19. Trophoblastic diseases: Aetiopathology, clinical features, differential diagnosis, principles of management & follow up.
20. Fibroid in Pregnancy, Ovarian tumour with pregnancy, Retroverted gravid uterus, Genital Prolapse and pregnancy & Cancer cervix with pregnancy
21. Monitoring and partogram
22. Definition, types, causes & management
23. MTP (1<sup>st</sup> & 2<sup>nd</sup> Trimester), different types and methods
24. Causes, clinical features, differential diagnosis of acute abdomen, conservative management of ectopic pregnancy and principles of surgical management.
25. Definition, early detection, investigations, principles and management of pregnancy induced hypertension
26. Aetiopathology, differential diagnosis of convulsions in pregnancy, complications and management of eclampsia.

#### NEW BORN:

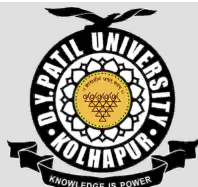
1. Examination and care of new born & low birth weight babies.
2. Asphyxia and neonatal resuscitation.
3. Diagnosis of early neonatal problems.
4. Birth injuries, jaundice, infection.
5. Anencephaly & Hydrocephalus and other Congenital Anomalies of fetus.

#### 8<sup>TH</sup> Semester: PREVENTIVE ONCOLOGY

1. Preventive Oncology
2. Principles of gynecological surgical procedures
3. Pre and post operative care in Gynecology
4. Ultra-sonography and Radiology, in Gynecology
5. Endoscopy in Gynecology
6. Drugs and hormones in Gynecology
7. Surgical procedures in obstetrics



8. Maternal mortality
9. Prenatal mortality
10. Recurrent pregnancy wastages
11. High risk pregnancy
12. Rural obstetrics
13. Drugs in Pregnancy
14. Drugs in obstetric practice
15. Definition and causes. Accidental haemorrhage-classification, aetiopathology, clinical features, differential diagnosis, complications and management.
16. Placenta previa-classification, aetiopathology, clinical features differential diagnosis, complications and management.
17. Occipito posterior
  - Face and brow Presentation
  - Breech Delivery
  - Transverse lie, unstable lie, cord prolapsed, compound presentation.
18. Causes, clinical features, investigations, diagnosis, complications and principles of management.
19. Prevention and management of atonic PPH.
20. Traumatic PPH, acute inversion of uterus, retained placenta.
21. Foetal distress and intrauterine foetal Death-Clinical features, causes, diagnosis, principles of management & prevention.
22. Rh iso immunization
23. Classification & recognition of uterine dysfunction.
24. Physiology, clinical features, complications, principles of management and prevention of puerperal sepsis.
25. PID (Pelvic Inflammatory disease)
26. Screening procedures in gynecology
27. Clinical aspects of menopause including HRT and postmenopausal bleeding per vaginum.
28. Hysterectomy including indication, pre operative preparation and post operative care.

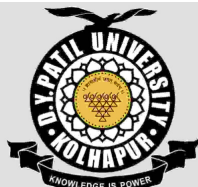


29. Benign lesions of the cervix
30. Benign lesions of vulva and vagina
31. Dysmenorrhoea and pre menstrual syndrome
32. Low back ache and diseases of broad ligament, fallopian tube and parametrium.
33. Malformations of genital tract.
34. Precancerous lesions of genital tract.
35. Choric carcinoma
36. Hormones in Gynecology
37. Laparoscopy in Gynecology
38. Chronic pelvic pain
39. Puberty and adolescent problems
40. Sex and intersexuality
41. Imaging techniques in gynecology

In addition, integrated teaching with other departments like anatomy, physiology, biochemistry, pathology, microbiology, Forensic Medicine and Preventive and Social medicine to be organized for selected topics.

#### **9<sup>th</sup> Semester: OBSTETRICS**

1. Legal aspects, indications, methods, complications & management of complications.
2. Condoms and OC pills, Copper 'T', Miscellaneous, Tubectomy and Laproscopic sterilization, Male contraception.
3. Vacuum extraction, Low forceps, indications and steps of operation- caesarean section.
4. Assisted breech delivery, external cephalic version.
5. Cervical encirclage, destructive operations and menstrual regulation.
6. Oxytocin, antihypertensives, tocolytics, anticonvulsants, maternal drug intake etc.
7. Causes and prevention of maternal morbidity and maternal mortality in hospital and community setting.
8. High risk pregnancy, immunology in obstetrics, shock in obstetrics, blood coagulation disorders in obstetrics.
9. Aetiopathology, clinical features, classification, screening procedures, investigations,



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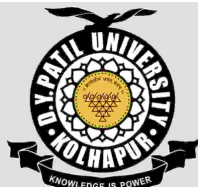
diagnosis and principles of management.

10. Dilatation & Curettage in Gynecology and fractional curettage.
11. Endometrial biopsy and tubal patency test.
12. Amputation of cervix, tracheorrhaphy.
13. Fothergill's operation
14. Vaginal hysterectomy with pelvic floor repair.
15. Abdominal hysterectomy.
16. Laparotomy for ovarian tumors.

#### **LIST OF TOPICS INTEGRATED TEACHING: 8<sup>TH</sup>**

##### **TERM**

1. Development of genital tract - any malformations of genital tract and their clinical significance - Anatomy
2. Fetal physiology - fetal circulation Physiology
3. fetal malformations - genesis- Embryology
4. CIN Pathology
5. ARF Physiology Medicine
6. Coagulation failure Pathology Medicine
7. Diabetes, heart disease Medicine
8. USG Radiology
9. Infections in pregnancy Microbiology
10. Medico-legal aspects Forensic Medicine
11. Nutrition in pregnancy and lactation PSM
12. Evidence based obstetrics PSM
13. Drugs in pregnancy Pharmacology



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### **SCHEME FOR EXAMINATION FOR FINAL MBBS**

#### **EXAMINATION IN OBSTETRICS AND GYNAECOLOGY *Methods – Internal assessment, Theory, Practical and Viva***

##### **Internal assessment: 40 (Theory 20 +Practical 20)**

- Marks of Internal Assessment should be sent to University before the commencement of Theory examination.
- Passing in internal assessment is essential for passing, as internal assessment is separate head of passing in examination.
- It will also be considered for grace marks as per existing rules
- Combined theory and practical of internal assessment will be considered for passing in internal assessment.

Student will be allowed to appear for both theory and practical exam independent of marks obtained in internal assessment but he if fails in that head even after including the grace marks he will be declared **“Fail in that Subject”**

##### **Internal assessment in Theory**

**Examinations during semesters:** This will be carried out by conducting two theory examinations during 6th and 8th semesters (100 marks each). Total of 200 marks to be converted into 10 marks.( A/10)

**Prelim examination:** This shall be carried out during 9th semester. Two theory papers of 40 marks each as per university examination. Total of 80 marks to be converted into 10 marks. (B/10) Total marks of internal assessment- Theory will be addition of A and B.



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### Internal assessment in Practical

#### Examinations at end of Clinical postings:

There will be practical examination at the end of each clinical posting of OBGY. Each examination will be of 50 marks. Total of all exams marks will be converted to 10 marks. (C/10)

#### Prelim examination:

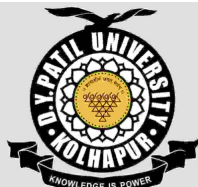
This will be conducted for 60 marks as per university pattern and marks will be converted to 10 (D/10). Total marks of internal assessment- Practical will be addition of C and D.

Evaluation **Methods - Theory, Practical and Viva** Pattern of theory examination including distribution of marks, questions and time

Pattern of theory examination including distribution of marks

1. There shall be two theory papers - Paper I and II, carrying 40 marks each.
2. Each paper will have three sections, A, B and C. Each paper will be of 2.5 hours duration.
3. Section A will be MCQ in each paper. Section B will have SAQ and Section C LAQ answer sheet.
4. MCQ section A will be given to candidates at the beginning of the examination.

After 30 minutes Section A will be collected. Section B & C of paper will then be handed over to candidates



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### PAPER I

Topics - Obstetrics including social obstetrics and newborn care

#### Section A: 30 min. duration

Twenty eight MCQs- /2 mark each: 14 marks

Single based response MCQ will cover whole syllabus of  
Paper I

#### Section B & C : 2 hours duration

**Section B** - Three /five (SAQ) short notes -4 marks each 12 marks

**Section C** - Two long questions (LAQ) of 7 marks each 14 marks  
(will contain some preclinical/Para clinical aspects)

### PAPER II:

Topics: Gynecology, Family Welfare and Demography

**Section A: 30 min. duration** 14 marks

Separate paper

Twenty eight MCQs- 1/2 mark each 14 marks

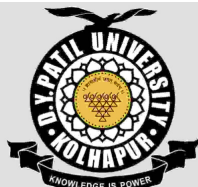
Single based response 14 marks

MCQ will cover whole syllabus of Paper II

**Section B & C: 2 hours duration** **Section B** - Three /five (SAQ) short notes -4 marks each 12 Marks

**Section C** - Two long questions (LAQ) of 7 marks each 14 Marks  
(will contain some preclinical/Para clinical aspects)





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### Scheme of Practical & Oral Examination for Obstetrics & Gynecology

#### PRACTICAL: Total – 60 Marks

1) LONG CASE: 40 Marks

- |                               |          |
|-------------------------------|----------|
| A) History                    | 10 Marks |
| B) Clinical Exam              | 10 Marks |
| C) Investigations & diagnosis | 10 Marks |
| D) Management                 | 10 Marks |

2) SHORT CASE: 10 Marks

- |                 |                 |
|-----------------|-----------------|
| A) Presentation | 05 Marks        |
| B) Discussion   | 05 Marks        |
|                 | <u>10 Marks</u> |

3) FAMILY PLANNING

**Total: 60 Marks**

4) ORAL / VIVA

20 Marks

- |                    |          |
|--------------------|----------|
| A) Obstetric Viva  | 10 Marks |
| B) Gynecology Viva | 10 Marks |

**TOTAL MARKS FOR PRACTICAL & ORAL (60+20) = 80 Marks**

**Marks of VIVA will be added to Theory marks it is mandatory to obtain 50% marks in theory + viva/oral.**



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# SYLLABUS OF ORTHOPEDICS

## **(A) KNOWLEDGE**

The student shall be able to:

1. Explain the principles of recognition of bone injuries and dislocation.
2. Apply suitable methods to detect and manage common infections of bones and joints.
3. Identify congenital, skeletal anomalies and their referral for appropriate correction or rehabilitation.
4. Recognize metabolic bone diseases as seen in this country:
5. Explain etiology, manifestations, and diagnosis of neoplasm affecting bones.

## **(B) SKILLS:**

At the end of the course, the student shall be able to:

1. Detect sprains and deliver first aid measures for common fractures and sprains and manage uncomplicated fractures of clavicle, Colles's forearm, phalanges etc.
2. Use techniques of splinting, plaster, immobilization etc.
3. Manage common bone infections, learn indications for sequestration, amputations and corrective measures for bone deformities;
4. Advise aspects of rehabilitation for Polio, Cerebral Palsy and Amputation.

## **(C) APPLICATION**

Be able to perform certain orthopedic skills, provide sound advice of skeletal and related conditions at primary or secondary health care level.

## **(D) INTEGRATION**

### **LEARNING METHODS**



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Lectures, Tutorials bedside clinics and lecture cum demonstrations Distribution  
of Teaching hours -

- Lectures - 50 hours
- Tutorials and revision - 50
- **Clinical postings in Orthopedics Total clinical Posting of 10 weeks of 180 hours**

5th Semester - 4 weeks

6th Semester - 4 weeks

9th Semester - 2 weeks

### **Course contents and suggested lecture program of Orthopaedics (Total 100 hours)**

This is suggested programme and can vary at institute

Total 100 hours of teaching has to be done in Orthopaedics including Tutorials

Details of syllabus is given separately below after distribution as per semester

▪ <b>6<sup>th</sup> Semester</b>	<b>Lectures</b>	<b>1 to 16</b>
▪ 8 th Semester	Lectures 1	17 to 32
▪ 8th Semester	Lectures 2	33 to 48

### **Topic: General Orthopedics**

#### **Lectures**

1. Introduction and scope of Orthopedics Traumatology and Orthopedic Diseases.  
Idea about Scheme of Examination.
2. Definition and Classification of Fracture and Dislocation Signs, symptoms and diagnosis of sprain, contusion fracture and dislocation.
3. First aid measures in Poly-trauma patient, spinal cord Injury patients and knowledge about various splints.
4. & 5 Principles of Management of sprain, Fracture and Dislocation with emphasis on various aspects of closed reduction, immobilization including internal fixation and rehabilitation.
- 6,7,8 Complications of fracture and its management with specific reference to malunion Delayed union, Non union, Myositis Ossificans, Sudeck's dystrophy, Volkman's ischaemia, Avascular Necrosis, Fat embolism, secondary Osteoarthritis and injury to Muscles, Tendon, nerve and Blood vessels.



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1. Plaster technique, plaster complications and plaster disease.
2. Fracture Healing in cortical and cancellous bones and factors affecting fracture healing.

**Topic: Orthopedic Traumatology**

1. Fracture clavicle, scapula, neck humerus and shaft humours.
2. Supracondylar fracture humerus with complications.
3. Fracture Forearm bones, Monteggia and Galeassi fracture dislocations, fracture olecranon head and neck radius.
4. Fracture scaphoid, Metacarpals and phalanges.
5. Colles fracture and Complications.
6. Dislocation (Acute and Recurrent) of shoulder and elbow.
7. Fracture of Vertebrae with complications.
8. Fracture of Pelvis with complications.
9. Fracture Neck femur and trochanteric fracture.
10. Fracture shaft femur and fractures around knee.
11. Meniscus and ligaments injury at knee.
12. Fracture Tibia-fibula, fracture in tarsals, Metatarsals and phalanges.
13. Fracture dislocation around ankle,
14. Dislocation of Hip, knee, ankle, tarsals and small bones in foot.

**Topic: Orthopaedic Diseases**

- 25,26 Congenital skeletal anomalies with emphasis on congenital Talipes Equino varus (CTEV). :-
27. Congenital dislocation of hip (CDH), Osteogenesis Imperfecta, spina
28. Bifida and Torticollis.
29. Osteochondritis – various types.
30. Post Polio Residual Palsy with stress on preventive and rehabilitation aspect.
31. Acute Osteomyelitis.
32. Chronic Osteomyelitis.
33. Pyogenic arthritis of Hip, knee. 33 & 34. Osteo-articular
34. Tuberculosis with special reference to Tuberculosis of Hip, knee and elbow.:-



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35. Tuberculosis spine and paraplegia.
36. Fungal Infections and leprosy in Orthopedics.
37. Cerebral palsy, Diagnosis and rehabilitation.
38. Rheumatoid arthritis.
39. Degenerative arthritis.
40. Nerve injuries and principles of management.
41. Amputation and Disarticulation – Indications methods and complications.
42. Metabolic bone disease : Rickets, Osteomalacia and Osteoporosis.
- 43 & 44 Tumours of bones and its classification. Benign :- Osteochondroma, Giant cell tumour Unicameral Bone cyst, Aneurysmal cyst.
- 45 & 46 Malignant- Osteogenic sarcoma, Ewing's tumour, Fibrosarcoma, Chondrosarcoma, Multiple Myeloma, Secondaries from Primary Carcinoma (Metastatic tumours)
47. Back ache,
48. Frozen shoulder, Tennis Elbow, Dequervain's disease, Dupuytren's Contracture Osgood – Schlatter's disease, planter fascitis.

#### **Practical and Lecture cum Demonstration Classes, in MBBS in Orthopedics**

Once a week class for two hours in 8<sup>th</sup>/9<sup>th</sup> semester

Topics of Demonstrations:-

1. Plaster technique and splint applications.
2. Traction application, Orthopedic appliances demonstration, Demonstration of Physiotherapy equipments.
3. Specimens of sequestrum and Tumours, Madura foot etc.
4. Common instruments and Implants.
5. 5 to 7 Common X-rays of traumatology, bony infection, joint infection and tuberculosis, Malunited Colle's fracture, forearm or Supracondylar Humerus fracture.
- 8 to 10. Chronic osteomyelitis case, knee effusion case, Non union case, Bony tumour case.

#### **Seminar Topics:-**

1. Osteomyelitis



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2. Tuberculosis.
3. Bone tumours
4. First aid and acute trauma Life saving (ATLS) measures.

**Tutorial Topics :-**

15. Supracondylar fracture Humerus.
16. Colle's fracture.
17. Fracture neck femur.
18. Spine examination, Pott's spine and paraplegia
19. CTEV.
20. Shoulder, Elbow and wrist examination.
21. Hip examination.
22. Knee, ankle foot examination.
23. Nerve examination and nerve injuries.

**Internal assessment:**

Two Term ending examination at the end of posting of 50 marks each Total 100 out of 450 marks under general surgery.



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# SYLLABUS OF PEDIATRICS

## **Pediatric including Neonatology**

The course includes systematic instructions in growth and development, nutritional needs of a child, immunization schedules and management of common diseases of infancy and childhood including scope for Social Pediatrics and counseling.

### **I. GOAL:**

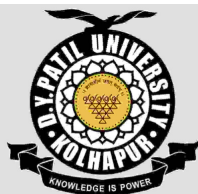
The broad goal of the teaching of undergraduate students in Pediatrics is to acquire adequate knowledge and appropriate skills for optimally dealing with major health problems of children to ensure their optimal growth and development.

### **II. OBJECTIVES:**

#### **(a) KNOWLEDGE:**

At the end of the course, the student shall be able to:

- (1) Describe the normal growth and development during foetal life, neonatal period, childhood and adolescence and outline deviations thereof;
- (2) Describe the common pediatric disorders and emergencies in terms of Epidemiology, aetiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation;
- (3) Age related requirements of calories, nutrients, fluids, drugs etc, in health and disease;
- (4) Describe preventive strategies for common infectious disorders, malnutrition, genetic and metabolic disorders, poisonings, accidents and child abuse;
- (5) Outline national Programmes relating to child health including immunization Programmes.



**(b) SKILLS:**

At the end of the course, the student shall be able to:

1. Take a detailed pediatric history, conduct an appropriate physical examination of children including neonates, make clinical diagnosis, conduct common bedside investigative procedures, interpret common laboratory investigation results and plan and institute therapy.
2. Take anthropometric measurements, resuscitate newborn infants at birth, prepare oral rehydration solution, perform tuberculin test, administer vaccines available under current national programmes, perform venesection, start an intravenous saline and provide nasogastric feeding;
3. Conduct diagnostic procedures such as a lumbar puncture, liver and kidney biopsy, bone marrow aspiration, pleural tap and ascetic tap;
4. Distinguish between normal newborn babies and those requiring special care and institute early care of all newborn babies including care of preterm and low birth weight babies, provide correct guidance and counseling in breast feeding;
5. Provide ambulatory care to all sick children, identify indications for specialized / inpatient care and ensure timely referral of those who require hospitalization :

**(c) INTEGRATION:**

The training in pediatrics should prepare the student to deliver preventive, promotive, curative and rehabilitative services for care of children both in the community and at hospital as part of team in an integrated form with other disciplines, e.g. Anatomy, Physiology, Forensic Medicine, Community Medicine and Physical Medicine and Rehabilitation.

**LIST OF LECTURE/ SEMINARS**

**Lectures: 6<sup>th</sup> Term**

1. Introduction of Pediatrics.
2. History taking in children.
3. Examination of Children.
4. Normal Growth

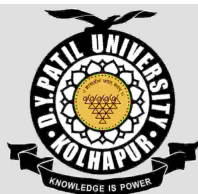




5. Normal Development.
6. Introduction to newborn and normal newborn baby.
7. Temperature regulation in newborn.
8. Breast feeding and lactation management.
9. Infant and child feeding ( include complimentary feeding)
10. Normal fluid and electrolyte balance in children.
11. Immunization.
12. PEM and its management.
13. Vitamin and micronutrient deficiencies.
14. Nutritional anaemia in infancy and childhood.
15. Acute diarrhoea.
16. Common exanthematous illness.
17. Childhood tuberculosis
18. Acute flaccid paralysis.
19. Diphtheria, Pertussis and Tetanus

**Lecturers: 8<sup>th</sup>/9<sup>th</sup> Term:**

1. Birth Asphyxia
2. Low Birth Weight Babies.
3. Neonatal Respiratory Distress.
4. Jaundice in newborn.
5. Neonatal Infections.
6. Neonatal convulsions.
7. Hypothyroidism in children.
8. Congestive heart failure - diagnosis and management.
9. Congenital heart disease.
10. Rheumatic heart disease.
11. Hypertension in children.
12. Acute respiratory infections.
13. Bronchial asthma.
14. Nephrotic syndrome



15. Acute glomerulonephritis and hematuria
16. Abdominal pain in children.
17. Chronic liver disease including ICC.
18. Haemolytic anaemia including thalassemia.
19. Leukaemias.
20. Bleeding and coagulation disorders with haemophilia.
21. Seizure disorders.
22. Cerebral Palsy.

**Other Lectures to be covered:**

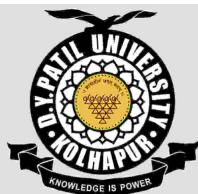
1. Fluid and electrolyte balance -pathophysiology and principles of Management.
2. Acid-base disturbances - pathophysiology and principles of management.
3. Adolescent growth and disorders of puberty.
4. Acute respiratory infections, Measles, Mumps, Chicken pox
5. Other childhood malignancies.
6. Mental retardation.
7. Approach to a handicapped child.
8. Behaviour disorders.
9. Meningitis.
10. Childhood tuberculosis.
11. HIV infection.
12. Malaria.
13. Neurocysticercosis.
14. Enteric fever.
15. RNTCP & DOTS
16. IMNCI.
17. Pediatric prescribing.
18. Common Childhood Poisonings.



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**Integrated Seminar Topics:**

- Convulsions
- Coma
- PUO
- Jaundice
- Portal hypertension
- Respiratory failure
- Shock
- Rheumatic Heart Disease
- Hypertension
- Diabetes mellitus
- Hypothyroidism
- Anemia
- Bleeding
- Renal failure
- Tuberculosis
- Malaria
- HIV infection
- Neurocysticercosis
- Perinatal asphyxia ( with obstetrics )
- Intrauterine growth retardation ( with obstetrics)



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## INTERNAL ASSESSMENT EXAMINATION PATTERN

(6<sup>th</sup> & 8<sup>th</sup> Terms)

A) Theory :- 50 Marks

B) Practical :- 50 Marks

### A) Theory Examination Pattern

- MCQ :- 30 (1/2 Each) :- 15 Marks
- LAQ-2 :- 20 (10 Each) :- 20 Marks
- SAQ-5/7 :- 15 (3 Each) :- 15 Marks

Total :- 50 Marks

### B) Practical Examination Pattern

- Case :- 25 Minutes :- 30 Marks
- Table Viva :- 10 Minutes :- 20 Marks

Total :- 50 Marks

### C) Table Viva

For 6<sup>th</sup> Term :- Nutrition + Immunization

For 8<sup>th</sup> Term :- Nutrition + Immunization + Drugs + Instruments + X-Ray



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### PRELIMINARY EXAMINATION PATTERN

- A) Theory :- 100 Marks (Paper 80 + Viva 20)
- B) Practical :- 100 Marks

#### A) Theory Examination Pattern

- MCQ :- 30 (1/2 Each) :- 15 Marks
- LAQ-3 :- 30 (10 Each) :- 30 Marks
- SAQ-5/7 :- 35 (7 Each) :- 35 Marks
- Add-Practical Table Viva :- 20 Marks

**TOTAL:- 100 MARKS**

#### B) Practical Examination Pattern

- Long Case :- 40 Minutes :- 60 Marks
- Short Case :- 20 Minutes :- 40 Marks

**TOTAL:- 100 MARKS**

#### C) Table Viva :- 02 Tables :- 20 Marks

(Will be added in Preliminary Theory)

1. Nutrition + Immunization + Drugs
2. Instruments + X-Ray



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**INTERNAL ASSESSMENT SCHEME**

**THIRD YEAR – PART – II**

Sr. No.	Subject	1 <sup>st</sup> Term End			2 <sup>nd</sup> Term End			Preliminary Examination		
		Semester	Theory	Pract.	Semester	Theory	Pract.	Semester	Theory	Pract.
			(A)	(B)		(C)	(D)		(E)	(F)
1	Pediatric	6 <sup>th</sup>	50	50	8 <sup>th</sup>	50	50	9 <sup>th</sup>	100	100

- For Pediatric Theory marks to be send to the University out of 10

$$= \frac{A + C + E}{20} = \frac{50 + 50 + 100}{20} = \frac{200}{20} = 10$$

- For Pediatric Practical marks to be send to the University out of 10

$$= \frac{B + D + F}{20} = \frac{50 + 50 + 100}{20} = \frac{200}{20} = 10$$



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## FINAL EXAMINATION PATTERN

- A) Theory :- 80 Marks**  
**B) Practical :- 100 Marks**

### A) Theory Examination Pattern

- MCQ :- 30 (1/2 Each) :- 15 Marks
- LAQ-3 :- 30 (10 Each) :- 30 Marks
- SAQ-5/7 :- 35 (07 Each) :- 35 Marks

**Total :- 80 Marks**

### B) Practical Examination Pattern

- Long Case :- 40 Minutes :- 50 Marks
- Short Case :- 20 Minutes :- 30 Marks

**Total :- 80 Marks**

- C) Table Viva :- 02 Tables :- 20 Marks**

**Total :- 100 Marks**

01. Will be added in Final Theory &

02. Internal Assessment added in Gross Total

03. Separate passing in Practical Examination

1. NUTRITION + IMMUNIZATION + DRUGS
2. INSTRUMENTS + X-RAY



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# SYLLABUS OF PSYCHIATRY

## I. Goals:

The aim of teaching of the undergraduate student in Psychiatry is to impart such knowledge and skills that may enable him to diagnose and treat common Psychiatric disorders, handle Psychiatric emergencies and to refer complications/unusual manifestation of common disorders and rare Psychiatric disorders to the specialist.

## II. OBJECTIVES:

### (a) KNOWLEDGE:

At the end of the course, the student shall be able to:

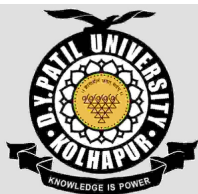
1. Comprehensive nature and development of different aspects of normal human behavior like learning, memory, motivation, personality and intelligence;
2. Recognize differences between normal and abnormal behavior;
3. Classify psychiatric disorders;
4. Recognize clinical manifestations of the following common syndromes and plan their appropriate management of organic psychosis, functional psychosis, schizophrenia, affective disorders, neurotic disorders, personality disorders, psycho physiological disorders, drug and alcohol dependence, psychiatric disorders of childhood and adolescence;
5. Describe rational use of different modes of therapy in psychiatric disorders.

### (b) SKILL

The Student shall be able to:

1. Interview the patient and understand different methods of communications in patient-doctor relationship;
2. Elicit detailed psychiatric case history and conduct clinical examination for assessment of mental status;
3. Define, elicit and interpret psycho-pathological symptoms and signs;
4. Diagnose and manage common psychiatric disorders;





5. Identify and manage psychological reactions and psychiatric disorders in medical and surgical patients in clinical practice and in community setting.

**(c) INTEGRATION:**

Training in Psychiatry shall prepare the students to deliver preventive, promotive, curative and re-habilitative services for the care of patients both in the family and community and to refer advanced cases for a specialized Psychiatry / Mental Hospital. Training should be integrated with the departments of Medicine, Neuro-Anatomy, Behavioral and Forensic Medicine.

**4<sup>th</sup> or 5<sup>th</sup> semester 5 lectures**

1. Motivation (including) frustration, conflicts etc.) Emotion (including mind-body relationship)
2. Learning (different types) memory (Types of memory, cause of forgetting etc.)
3. Intelligence, including M.R. and sifted child.
4. Personality-Different types with mental mechanisms
5. Difference between normal and abnormal behaviour. Doctor-Patient relationship and communication skills

**In 8<sup>th</sup> & 9<sup>th</sup> Semester remaining 15 lectures.**

1. Psychiatric classification. Difference between functional and organic psychosis. Difference between psychosis and neurosis.
2. Schizophrenia including drugs and rehabilitation.
3. Affective disorders including pharmacotherapy
4. Affective disorders including non-pharmacotherapy treatment.
5. Anxiety disorders-Generalised anxiety, disorders, panic disorders.
6. O.K.D. and Phobias.
7. Somatoform disorders.
8. Alcohol dependence
9. Psycho-Physiological disorders.
10. Scholastic problems.



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11. Behavioural disorders.
12. Sexual disorders.
13. Psychiatric emergencies including suicide and organic brain disorders.
14. Psychotherapies including behavior therapy.
15. Allied substances of abuse
16. Child Psychiatry.

Introduction of “Brain Death and Organ Donation” topic in subjects of Physiology, Preventive & Social Medicine, Psychiatry, Medicine & Surgery



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# SYLLABUS OF SKIN & V.D.

## I. Goals:

The aim of teaching the Undergraduate students in Dermatology, S.T.D. and Leprosy is to impart such knowledge and skills that may enable him to diagnose and treat common ailments and to refer rare diseases or complications and unusual manifestations of common diseases to the specialist.

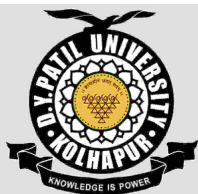
## II. OBJECTIVES:

1. Demonstrate good knowledge of common skin diseases, clinical manifestations, bedside investigations with special emphasis on clinical diagnosis.
2. Demonstrate comprehensive knowledge of various modes of topical therapy.
3. Describe the mode of action of commonly used dermatological drugs, their doses, side effects, toxicity, indications and contraindications and interactions.
4. Describe commonly used modes of managements including the medical and surgical procedure available for the treatment of various diseases and to offer a comprehensive plan of management for a given disorder.

### **Knowledge**

Must Know:

1. Principles of diagnosis
2. Pyodermas
3. Scabies and pediculosis
4. Fungal infections- dermatophytosis, candidiasis
5. Papulosquamous disorders-psoriasis, lichen planus, pityriasis rosea
6. Viral infections- herpes simplex, chicken pox, herpes zoster, warts, molluscum contagiosum
7. Dermatitis and eczema
8. Tuberculosis of the Skin



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9. Pruritis, urticaria/angioedema, drug eruptions (fixed drug eruptions, erythema multiforme, Stevens Johnson syndrome, toxic epidermal necrolysis)
10. Vesiculobullous disorders-pemphigus, Bullous Pemphigoid, Dermatitis Herpetiformis.
11. Leprosy-clinical features, diagnosis, complications and management.
12. Syphilis-primary and secondary
13. Donovanosis, chancroid, lymphogranuloma venerum, and HIV infection.
14. Gonorrhoea and Non gonococcal urethritis
15. Basic concepts of topical therapy
16. Commonly used systemic drugs-mode of action, their doses, side effects, toxicity, indications, contraindications and interactions.
17. Cosmetology, Lasers and Lights, Dermatosurgery

Desirable to know:

1. Acne, alopecia, ichthyosis, vitiligo, pellagra, phrynodema
2. Benign and malignant tumors of the skin
3. Congenital syphilis and other minor STDs.
4. Collagen vascular disorders-lupus erythematosus, scleroderma, dermatomyositis.

### **Skills**

Must have

1. History taking and examination skill to come to a clinical diagnosis
2. To demonstrate anesthesia in skin patches and to recognize thickened nerves
3. Simple Bedside Clinical tests and investigative procedures such as gram staining. KOH examination, tissue smear, Giemsa stained smear, slit skin smear for AFB.
4. To take a skin biopsy for diagnostic purposes.
5. Skills to manage common dermatological disorders and emergencies.

**Desirable to know**

1. Patch testing
2. Dark ground microscopy
3. HIV Counseling



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# SYLLABUS OF SURGERY

These guidelines are based on MCI recommendations.

Teaching has to be done keeping in mind the goals and objectives to be achieved by medical student

## **SURGERY and allied specialties-**

### **(i) GOAL:**

The broad goal of the teaching of undergraduate students in Surgery is to produce graduates capable of delivering efficient first contact surgical care.

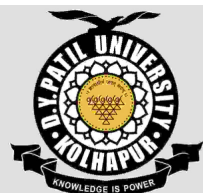
### **(ii) OBJECTIVES:**

The departmental objectives, syllabus and skills to be developed in the department of surgery during undergraduate medical education are presented herewith. These are prepared taking into consideration of various aspects and institutional goals given below:

1. A medical student after graduation may have different avenues of his/her professional career and may work either as a first contact physician in a private, semi-private or public sector or may take up further specialization in surgery or other specialties.
2. He may have to work in different settings such as rural, semi-urban or urban which may have deficient or compromised facilities.
3. These are based on the various health services research data in our community.
4. These are also based on following institutional goals in general;

At the end of the teaching/ training the undergraduate will be able to:

- Diagnose and manage common health problems of the individual and the community appropriate to his/her position as a member of the health team at primary, secondary and tertiary levels.
- Be competent to practice curative, preventive, promotive and rehabilitative medicine and understand the concepts of primary health care.
- Understand the importance and implementation of the National Health Programmes in the context of national priorities.



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- Understand the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude required for professional responsibilities.
- Develop the ability for continued self-learning with a scientific attitude of mind and acquire further expertise in any chosen area of medicine.

#### **A. KNOWLEDGE**

At the end of the course, the student shall be able to:

1. Describe aetiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children;
2. Define indications and methods for fluid and electrolyte replacement therapy including blood transfusion.
3. Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics.
4. Describe common malignancies in the country and their management including prevention.
5. Enumerate different types of anaesthetic agents, their indications, mode of administration, contraindications and side effects

#### **B. SKILLS**

At the end of the course, the student should be able to

1. Diagnose common surgical conditions both acute and chronic, in adult and children.
2. Plan various laboratory tests for surgical conditions and interpret the results;
3. Identify and manage patients of haemorrhagic; septicaemic and other types of shock.
4. Be able to maintain patent air-way and resuscitate:
  - a. A critically injured patient.
  - b. Patient with cardio-respiratory failure;
  - c. A drowning case.
5. Monitor patients of head, chest, spinal and abdominal injuries, both in adults and children



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6. Provide primary care for a patient of burns;
7. Acquire principles of operative surgery, including pre-operative, operative and post operative care and monitoring;
8. Treat open wounds including preventive measures against tetanus and gas gangrene.
9. Diagnose neonatal and paediatric surgical emergencies and provide sound primary care before referring the patient to secondary/territory centers;
10. Identify congenital anomalies and refer them for appropriate management.

In addition to the skills referred above in item (1) to (10), he shall have observed / assisted / performed the following:

- i. Incision and drainage of abscess;
- ii. Debridement and suturing open wound;
- iii. Venesection;
- iv. Excision of simple cyst and tumours.
- v. Biopsy and surface malignancy
- vi. Catheterisation and nasogastric intubation;
- vii. Circumcision
- viii. Meatotomy;
- ix. Vasectomy;
- x. Peritoneal and pleural aspirations;
- xi. Diagnostic proctoscopy;
- xii. Hydrocoele operation;
- xiii. Endotracheal intubation
- xiv. Tracheostomy and cricothyroidotomy;
- xv. Chest tube insertion.

#### **Human values, and Ethical practice**

- Adopt ethical principles in all aspects of his clinical practice. Professional honesty and



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integrity are to be fostered. Surgical care is to be delivered irrespective of the social status, caste, creed or religion of the patient.

- Develop communication skills, in particular the skill to explain various options available in management
- Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues and specialist in the field when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek a second opinion

### C. INTEGRATION

The undergraduate teaching in surgery shall be integrated at various stages with different pre and para and other clinical departments.

### LEARNING METHODS

Lectures, Tutorials bedside clinics and lecture cum demonstrations Distribution of Teaching hours -

- **Lectures - 160 hours**
- **Tutorials and revision - 140 hours**
- **Bedside clinics - 468 hours five clinical postings totalling 26 weeks including Anaesthesiology**
- **Clinical postings in General Surgery -**
  - 3rd Semester - 6 weeks
  - 5th Semester - 4 weeks
  - 7th Semester - 4 weeks
  - 8th Semester - 6 weeks
  - 9th Semester - 6 weeks

**Sequential organization of contents and their division -**

### GENERAL SURGERY LECTURES





**4<sup>th</sup> Term**

General Surgery: Part I 16 Lectures

**6<sup>th</sup> Term 3 modules**

Module I

Vascular Surgery 8  
Tropical Surgery 4  
Gen. Surgery Remaining 16 Lectures

Module 2

Head and Neck surgery  
Endocrine surgery 16 Lectures

Module (3)

Breast surgery 4  
Plastic & Reconstructive Surgery 6  
Neurosurgery 6 16 Lectures

**7<sup>th</sup> Term: 3 modules**

Module (1)

Cardio Thoracic surgery 8  
Pediatric surgery 8 16 Lectures

Module (3)

Liver )  
Spleen )  
Pancreas )  
Biliary Tract )  
Portal Hypertension ) 16 Lectures

Module (3)

Upper Gastro intestinal Tract + Peritoneum 16 Lectures

**8<sup>th</sup> Term 4 modules**

Module (1)

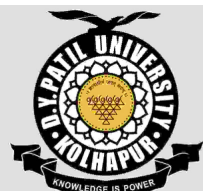
Lower G.I. tract  
Abdominal wall,  
Incisional Hernia 16 Lectures

Module (2)

Upper GUT 16 Lectures  
Organ transplantation

Module (3)

Lower GUT 16 Lectures



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Hernia, Hydrocoele

160 Hours

**9<sup>th</sup> Term**

Revision Lectures/tutorials/lecture cum demonstrations

48

**208**

**TUTORIALS**

6<sup>TH</sup> Term      Surgical pathology      32

8<sup>th</sup> Term      Operative Surgery + Instruments      32

9<sup>th</sup> Term      Imaging sciences-  
Interpretation of Investigations      28

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300

**Course contents- General Surgery - including pediatric surgery**

**COURSE CONTENTS**

**I. A. GENERAL PRINCIPLES**

1. Wound healing and management, scars: Hypertrophic scar and keloid; First aid management of severely injured.
2. Asepsis, antisepsis, sterilisation.
3. Surgical sutures, knots, drains, bandages and splints.
4. Surgical infections and rational use of antibiotics: Causes of infection, prevention of infection, common organisms causing infection.
5. Boils, cellulitis, abscess, necrotising fascitis.
6. Tetanus and Gas gangrene: Prevention of Tetanus and Gas Gangrene.
7. Chronic specific infections: Tuberculosis, Filariasis, and Leprosy.
8. Antibiotic therapy.
9. Hospital infection.
10. AIDS and Hepatitis B; Occupational hazards and prevention.

**I. B.**

1. Mechanism and management of missile, blast and gunshot injuries.



2. Surgical aspects of diabetes mellitus.
3. Bites and stings.
4. Organ transplantation - Basic principles.
5. Nutritional support to surgical patients.

## II. RESUSCITATION.

1. Fluid electrolyte balance.
2. Shock: Aetiology, pathophysiology and management.
3. Blood transfusion: Indication and hazards.
4. Common postoperative complications.

## III. COMMON SKIN AND SUBCUTANEOUS CONDITIONS.

1. Sebaceous cyst, dermoid cyst, lipoma, haemangioma, neurofibroma, premalignant conditions of the skin, basal cell carcinoma, naevi and malignant melanoma.
2. Sinus and fistulae. Pressure sores; prevention and management.

## IV. ARTERIAL DISORDERS.

1. Acute arterial obstruction: diagnosis and initial management; types of gangrene; diagnosis of chronic arterial insufficiency with emphasis on Burger's disease, atherosclerosis and crush injuries.
2. Investigations in cases of arterial obstruction. Amputations;
3. Vascular injuries: basic principles of management.

## V. VENOUS DISORDERS.

1. Varicose veins: diagnosis and management; deep venous thrombosis: diagnosis, prevention, principles of therapy; thrombophlebitis.

## VII. LYMPHATICS AND LYMPH NODES.

1. Diagnosis and principles of management of lymphangitis, lymphedema, acute and chronic lymphadenitis; cold abscess, lymphomas, surgical manifestations of filariasis.

## VII. BURNS.

1. Causes, prevention and first aid management; pathophysiology; assessment of depth and surface area, fluid resuscitation; skin cover; prevention of contractures.

## VIII. SCALP, SKULL AND BRAIN.

1. Wounds of scalp and its management: recognition, diagnosis and monitoring of patients



with head injury including unconsciousness; Glasgow coma scale recognition of acute / chronic cerebral compression.

IX. ORAL CAVITY, JAWS, SALIVARY GLANDS.

1. Oral cavity: I) Cleft lip and palate; Leukoplakia; retention cyst; ulcers of the tongue.

II) Features, diagnosis and basic principles of management of carcinoma lip, buccal mucosa and tongue, prevention and staging of oral carcinomas.

2. Salivary glands: I) Acute sialoadenitis, neoplasm: diagnosis and principles of treatment.

IX. B. Epulis, cysts and tumours of jaw: Maxillofacial injuries; salivary fistulae

X. NECK.

1. Branchial cyst; cystic hygroma.

2. Cervical lymphadenitis: Non-specific and specific, tuberculosis of lymphnodes, secondaries of neck.

X. B. Thoracic outlet syndrome: diagnosis.

XI. THYROID GLAND

1. Thyroid: Surgical anatomy, physiology, investigations of thyroid disorders; types, clinical features, diagnosis and principles of management of goitre, thyrotoxicosis and malignancy, thyroglossal cyst and fistula.

XI. B. Thyroiditis, Hypothyroidism.

XII. PARATHYROID AND ADRENAL GLANDS.

1. Clinical features and diagnosis of hyperparathyroidism, adrenal hyperfunction/hypofunction.

XIII. BREAST.

1. Surgical anatomy; nipple discharge; acute mastitis, breast abscess; mammary dysplasia; gynaecomastia; fibroadenomas.

2. Assessment and investigations of a breast lump.

3. Cancer breast: diagnosis, staging, principles of management.

XIV. THORAX.

1. Recognition and treatment of pneumothorax, haemothorax, pulmonary embolism:



Prevention/recognition and treatment, flail chest; Stove in chest; Postoperative pulmonary complications.

XIV. B. Principles of management of pyothorax; cancer lung.

XV. HEART AND PERICARDIUM.

1. Cardiac tamponade
2. Scope of cardiac surgery.

XVI. OESOPHAGUS.

1. Dysphagia: Causes, investigations and principles of management.
2. Cancer oesophagus : Principles of management.

XVII. STOMACH AND DUODENUM.

1. Anatomy; Physiology, Congenital hypertrophic pyloric stenosis; aetiopathogenesis, diagnosis and management of peptic ulcer, cancer stomach; upper gastrointestinal haemorrhage with special reference to bleeding varices and duodenal ulcer.

XVIII. LIVER

1. Clinical features, diagnosis and principles of management of: Amoebic liver abscess, hydatid cyst and portal hypertension, Liver trauma.

XVIII. B. Surgical anatomy; primary and secondary neoplasms of liver.

XIX. SPLEEN

1. Splenomegaly: causes, investigations and indications for splenectomy: splenic injury.

XX. GALL BLADDER AND BILE DUCTS

1. Anatomy, physiology and investigations of biliary tree; clinical features, diagnosis, complications and principles of management of cholelithiasis and cholecystitis; obstructive jaundice.

XX. B. Carcinoma of gall bladder, choledochal cyst.

XXI. PANCREAS.

1. Acute pancreatitis: Clinical features, diagnosis, complications and management.
2. Chronic pancreatitis, pancreatic tumours.

XXII. PERITONEUM, OMENTUM, MESENTERY AND RETROPERITONEAL SPACE.

1. Peritonitis: Causes, recognition and principles of management; intraperitoneal abscess.

XXII B. Laparoscopy and laparoscopic surgery.



XXIII. SMALL AND LARGE INTESTINES

1. Diagnosis and principles of treatment of: Intestinal amoebiasis, tuberculosis of intestine, carcinoma colon; lower gastrointestinal haemorrhage; Enteric fever, parasitic infestations.

XXIII. *B. Ulcerative colitis, premalignant conditions of large bowel.*

XXIV. *INTESTINAL OBSTRUCTION.*

1. Types, aetiology, diagnosis and principles of management; paralytic ileus.

XXV. *ACUTE ABDOMEN.*

1. Causes, approach, diagnosis and principles of management.

XXVI. *APPENDIX*

1. Diagnosis and management of acute appendicitis, appendicular lump and abscess.

XXVII. *RECTUM.*

1. Carcinoma rectum: diagnosis, clinical features and principles of management; indications and management of colostomy.

XXVII. *B. Management of carcinoma rectum; prolapse of rectum.*

XXVIII. *ANAL CANAL.*

1. Surgical anatomy. Clinical features and management of: fissure, fistula in ano, perianal and ischiorectal abscess and haemorrhoids; Diagnosis and referral of anorectal anomalies.

XXVIII. *B. Anal carcinoma.*

XXIX. *HERNIAS.*

1. Clinical features, diagnosis, complications and principles of management of: Umbilical, Inguinal, epigastric and femoral hernia.
2. Omphalitis.

XXIX. *B. Umbilical fistulae, Burst abdomen, ventral hernia.*

XXX. *GENITO- URINARY SYSTEM.*

1. Symptoms and investigations of the urinary tract.

XXXI. *KIDNEY AND URETER*

1. Investigations of renal mass; diagnosis and principles of management of urolithiasis, hydronephrosis, pyonephrosis, and perinephric abscess, congenital anomalies of



kidney & Ureter and renal tumours.

2. Renal tuberculosis.

XXXII. URINARY BLADDER.

1. Causes, diagnosis and principles of management of haematuria, anuria and acute retention of urine.

XXXIII. PROSTATE AND SEMINAL VESICLES.

1. Benign prostatic hyperplasia: diagnosis and management.

XXXIII. B. Carcinoma prostate.

XXXIII. URETHRA AND PENIS

1. Diagnosis and principles of management of Phimosi, paraphimosis and carcinoma penis.

2. Principles of management of urethral injuries.

3. Urethral strictures.

XXXV. TESTES AND SCROTUM

1. Diagnosis and principles of treatment of undescended testis; torsion testis; Hydrocoele, hematocele, pyocoele, varicocele, epididymo-orchitis and testicular tumours.

XXXVI PAEDIATRIC SURGERY

1. Oesophageal atresia and Intestinal atresia
2. Anorectal malformations
3. Constipation in children: Hirschsprung's disease, Acquired megacolon,
4. Congenital diaphragmatic hernia
5. Extrophy, Epispadias complex and hypospadias
6. Spinal diastrophism and Hydrocephalus
7. Urinary tract infections in children- Vesicoureteral reflux, posterior urethral Valves, Vesico Ureteral Junction obstruction/Duplex ureter, Obstructive uropathy in Children : Hydronephrosis, Hydroureteronephrosis
8. Testicular Maldevelopment
9. Umbilical Hernia, Exomphalos: Major/minor
10. Wilm's Tumours: Neuroblastoma, Ganglioneuroma, Ganglioneuroma, Endo-



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dermal Sinus Tumours.

11. Hamartomas in Children: Lymphangioma and Cystic hygroma, Haemangioma.

Biliary Atresia and Surgical jaundice

### **Suggested lecture program**

#### **Distribution of syllabus in respective semesters**

This is suggested programme and can vary at institute

Total 300 hours of teaching has to be done in General Surgery including Tutorials

Details of syllabus is given separately below after distribution as per semester

#### **4th Semester: 16 Lectures**

- 1) Introduction to Surgery
- 2) Body response to injury
- 3) Wound and wound healing
- 4) Acute infection, Boils, Carbuncle etc
- 5) Chronic infections
- 6) Tetanus and Gas gangrene
- 7) Neoplasm General Consideration
- 8) Surgical Nutrition
- 9) Pre operative and Post operative Care
- 10) Sepsis and Anti Sepsis
- 11) Burns
- 12) Shock
- 13) Fluid and Electrolyte Balance
- 14) Monitoring of surgical Patients
- 15) Hemostasis and Blood transfusion.

### **6<sup>th</sup> Term 3 modules**

#### **Module I General surgery**

- a. Polytrauma





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- b. Missiles and their effects & blast injuries
- c. Management of war wounds
- d. Surgical diseases skin conditions
- e. Minimally invasive surgery
- f. Principal of Radiotherapy
- g. OT Techniques
- h. AIDS in surgery
- i. Foot including Diabetic Foot
- j. Hand and hand infection

**k. Vascular Surgery**

**\* ARTERIAL DISORDERS.**

1. Acute arterial obstruction: diagnosis and initial management; types of gangrene; diagnosis of chronic arterial insufficiency with emphasis on Burger's disease, athreosclerosis and crush injuries.
2. Investigations in cases of arterial obstruction. Amputations;
3. Vascular injuries: basic principles of management.
4. Surgically correctable Hypertension

**I. VENOUS DISORDERS.**

1. Varicose veins: diagnosis and management; deep venous thrombosis: diagnosis, prevention, principles of therapy; thrombophlebitis.

**m. LYMPHATICS AND LYMPH NODES.**

Diagnosis and principles of management of lymphangitis, lymphedema, acute and chronic lymphadenitis; cold abscess, lymphomas, surgical manifestations of filariasis.

□ **Module 2**

**HEAD, FACE, NECK**

**8 lectures**

1. ORAL CAVITY, JAWS, SALIVARY GLANDS.



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1. Oral cavity:
  - I) Cleft lip and palate; Leukoplakia; retention cyst; ulcers of the tongue.
  - II) Features, diagnosis and basic principles of management of carcinoma lip, buccal mucosa and tongue, prevention and staging of oral carcinomas.
2. Salivary glands:
  - I) Acute sialoadenitis, neoplasm: diagnosis and principles of treatment
  - II) Salivary fistulae
2. Epulis, cysts and tumours of jaw: maxillofacial injuries
3. NECK
  1. Branchial cyst; cystic hygroma.
  2. Cervical lymphadenitis : Non specific and specific,
  3. Tuberculosis of lymphnodes, secondaries of neck.
  4. Thoracic outlet syndrome: diagnosis.

## **2. ENDOCRINE SURGERY**

**8 lectures**

### **A. THYROID GLAND**

- i. Thyroid: Surgical anatomy, physiology, investigations of thyroid disorders; types, clinical features, diagnosis and principles of management of goitre, thyrotoxicosis and malignancy, thyroglossal cyst and fistula.
- ii. Thyroiditis, Hypothyroidism.

### **B. PARATHYROID AND ADRENAL GLANDS.**

Clinical features and diagnosis of hyperparathyroidism,  
Tumours of the adrenal gland  
Adrenal hyperfunction/ hypofunction

### **C. Diseases of thymus**

## **□ Module 3**

### **1. NEURO-SURGERY**

**6 lectures**

1. Head injury
2. Intracranial tumours & other ICSOL



3. Congenital anomalies of brain & spinal cord
4. Surgery of peripheral nerves & diseases

## **2. Surgery of Breast**

**5 lectures**

1. Surgical anatomy; nipple discharge; acute mastitis, breast abscess; mammary dysplasia; gynaecomastia; fibroadenomas.
2. Assessment and investigations of a breast lump.
3. Cancer breast : diagnosis, staging, principles of management

## **3. PLASTIC & RECONSTRUCTIVE SURGERY**

**6 lectures**

1. Management of burns
2. Skin grafting including flaps
3. Injuries of the hand
4. Infections of the hand

### **7th Semester Module (1)**

Cardio Thoracic surgery

Pediatric surgery

8

#### **□ *CARDIO-THORACIC SURGERY***

1. Injuries of the chest
2. Tumours of the lung & bronchial tree
3. congenital heart disease
4. Acquired heart disease
5. Surgery of ischaemic heart disease
6. Diseases of pericardium
7. Cardiac arrest

#### **Pediatric Surgery**

1. Oesophageal atresia and Intestinal atresia
2. Anorectal malformations
3. Constipation in children: Hirschsprung's disease, Acquired megacolon,
4. Congenital diaphragmatic hernia
5. Extrophy, Epispadias complex and hypospadias
6. Spinal diastrophism and Hydrocephalus



7. Urinary tract infections in children- Vesicoureteral reflux, posterior urethral Valves, Vesico Ureteral Junction obstruction/Duplex ureter, Obstructive uropathy in Children: Hydronephrosis, Hydroureteronephrosis
8. Testicular Maldescent
9. Umbilical Hernia, Exompholos: Major/minor
10. Wilm's Tumours: Neuroblastoma, Ganglionioneuloblastoma, Ganglioneuroma, Endo-dermal Sinus Tumours.
11. Hamartomas in Children: Lymphangioma and Cystic hygroma, Haemangioma.
12. Biliary Atresia and Surgical jaundice

## Module 2

### ☐ **TROPICAL SURGERY**

1. Surgical consideration in Amoebiasis & Enteric fever
2. Filariasis, Dracontiasis & Ascariasis
3. Hydatid disease
4. Leprosy, Madura foot, Tropical ulcer Actinomycosis
5. Minimal Invasive Surgery

### ☐ **HEPATOBIILIARY PANCREATIC SURGERY +SPLEEN**

#### A.LIVER

- ☐ Clinical features, diagnosis and principles of management of: Amoebic liver abscess, Liver trauma
- ☐ Surgical anatomy; primary and secondary neoplasms of liver.

#### SPLEEN

- ☐ Splenomegaly: causes, investigations and indications for splenectomy: splenic injury.

#### GALL BLADDER AND BILE DUCTS

- ☐ Anatomy, physiology and investigations of biliary tree; clinical features, diagnosis, complications and principles of management of cholelithiasis and cholecystitis; obstructive jaundice.



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- ☐ Carcinoma of gall bladder, choledochal cyst.

#### PANCREAS.

- ☐ Acute pancreatitis: Clinical features, diagnosis, complications and management.
- ☐ Chronic pancreatitis, pancreatic tumours. PORTAL

#### HYPERTENSION

- ☐ Clinical presentation, Investigation and management

### Module 3

#### Upper gastrointestinal Tract and Peritoneum

- ☐ PERITONEUM, OMENTUM, MESENTERY AND RETROPERITONEAL SPACE.
  - 1. Peritonitis: Causes, recognition and principles of management;
  - 2. Intraperitoneal abscess
- ☐ OESOPHAGUS
  - 1. Dysphagia: Causes, investigations and principles of management.
  - 2. Cancer oesophagus: Principles of management.
- ☐ STOMACH AND DUODENUM.

Anatomy; Physiology, Congenital hypertrophic pyloric stenosis; aetiopathogenesis, diagnosis and management of peptic ulcer, cancer stomach; upper gastrointestinal haemorrhage with special reference to bleeding varices and duodenal ulcer.
- ☐ SMALL INTESTINES
  - 1. Diagnosis and principles of treatment of, tuberculosis of intestine.

### 8<sup>th</sup> Semester

#### Module 1

#### Lower gastrointestinal Tract and abdominal wall

- ☐ Acute Abdomen



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□ **INTESTINAL OBSTRUCTION.**

Types, aetiology, diagnosis and principles of management; paralytic ileus  
Aetiology, Clinical Features. Investigations and management

□ **Abdominal Wall**

Features, diagnosis, complications and principles of management of: umbilical, epigastric hernia., incisional; hernia ventral hernia

□ **LARGE INTESTINES**

Ulcerative colitis, premalignant conditions of large bowel carcinoma colon; lower gastrointestinal haemorrhage, parasitic infestations.

□ **APPENDIX**

Diagnosis and management of acute appendicitis, Appendicular lump and abscess.

□ **RECTUM.**

Carcinoma rectum: diagnosis, clinical features and principles of management; indications and Management of colostomy. Management of carcinoma rectum; Prolapse of rectum.

□ **ANAL CANAL**

Surgical anatomy. Clinical features and management of: fissure, Fistula in ano, perianal and ischiorectal abscess and haemorrhoids; Diagnosis and referral of anorectal anomalies. Anal carcinoma.

□ **Umbilicus and Abdominal wall**

Umbilical fistulae, Burst abdomen, ventral hernia.

**Module 2**

**Upper genito-urinary Tract and Organ Transplantation**

□ **GENITO- URINARY SYSTEM.**

□ **Symptoms and investigations of the urinary tract.**

□ **KIDNEY AND URETER**

Anatomy and Embryology of Kidney and ureter Congenital anomalies of kidney & Ureter Investigations of renal mass; Diagnosis and principles of management



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of urolithiasis, Hydronephrosis, pyonephrosis, perinephric abscess, Renal tumours. Renal tuberculosis.

### Module 3

#### Upper genito-urinary Tract and Hernia

□ URINARY BLADDER.

Causes, diagnosis and principles of management of haematuria, Anuria and Acute retention of urine.

□ PROSTATE AND SEMINAL VESICLES.

Benign prostatic hyperplasia: diagnosis and management. Carcinoma prostate.

□ URETHRA AND PENIS

Diagnosis and principles of management of Phimosis, paraphimosis and. Principles of management of urethral injuries. Urethral strictures. Carcinoma penis

□ TESTES AND SCROTUM.

Diagnosis and principles of treatment of undescended testis; torsion testis; Hydrocoele, hematocele, pyocoele, Varicocele, epididymo-orchitis and Testicular tumours

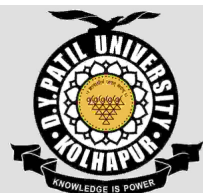
□ HERNIAS.

□ Clinical features, diagnosis, complications and principles of management of: Umbilical, Inguinal, epigastric and femoral hernia.

Introduction of “ Brain Death and Organ Donation” topic in subjects of Physiology , Preventive & Social Medicine, Psychiatry, Medicine & Surgery

#### RECOMMENDED BOOKS FOR GENERAL SURGERY

##### TEXT BOOKS:



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1. Charles V. Mann, R.C.G. Russel, Norman S., Williams, Bailey and Love's Short Practice of Surgery, 23<sup>rd</sup> Edition, 2000 Chapman and Hall.
2. K.Das: Clinical Methods in Surgery, 8<sup>th</sup> Edition, 1968, Suhas Kumar Dhar, Calcutta.
3. JSP Lumley: Hamilton Bailey's Physical Signs 18<sup>th</sup> Edn Butterworth/Heinemann. 1997,
4. Somen Das ; A Practical Guide to Operative Surgery, 4<sup>th</sup> Edition, 1999, s. Das, Calcutta
5. Love Co Boiloy: 26<sup>th</sup> Edition, 2013.
6. K. Das Clinical methods in surgery: 10<sup>th</sup> Edition, 2012
7. Hamilton Bailey's Physical Sign: 6<sup>th</sup> year
8. Somen Das A Practical Guide to operative surgery 6<sup>th</sup> wailthing 2014
9. Pye's Surgical Handicraft 1<sup>st</sup> 1986
10. Sabisten Tenbook of Surgery 19<sup>th</sup> 2012
11. Schwartz 10<sup>th</sup> 2014
12. Farqharson's 10<sup>th</sup> 2014
13. Bruce M. Dick Tent Book at Surgical Pathology
14. Last's Anatomy 12<sup>th</sup>, 2011

#### REFERENCE TEXT BOOKS

1. James Kyle: Pye's Surgical handicraft, Indian edition, k.m. Varghese Company David C.
2. Sabiston; Text Book of surgery: The Biological basis of Modern Surgical Practice, 15<sup>th</sup> Edition, 1971, W.B. Saunders.
3. Seymour I. Schwartz, G. Tom Shines, Frank C. Spencer, Wendy Cowles Husser: Principles of Surgery, Vol. 1 & 2, 7<sup>th</sup> Edition, 1999, Mc Graw Hill
4. R.F. Rintoul: Farqharson's Text Book of Operative Surgery, 8<sup>th</sup> Edition, 1995, Churchill Livingstone.
5. Sir Charles Illingworth, Bruce m. Dick: A Text Book of Surgical Pathology, 12<sup>th</sup> Edition, 2979, Churchill Livingstone.
6. R.W.H. McMinn: Last's Anatomy: Regional and Applied; 10<sup>th</sup> Edition, 1999, Churchill Livingstone

**Criteria of passing in various surgical subjects at III MBBS Examination**





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Sr. No.	Subject	Theory Paper / Oral/ Practical / Internal Assessment		Maxim um Marks in each of the subject	Minimum marks required to pass in each part of any subject		Minimum marks required to pass in each subject out of
01)	Otorhinolaryngology	a) Theory	Paper - I	40	20	25	50 100
		b) Oral		10			
		c) Practical		30		15	
		d) Internal	Theory	10		10	
			Practical	10			
02)	General Surgery	a) Theory	Paper I	60	60	70	150 300
			Paper II	60			
		b ) Oral		20			
		c) Practical		100		50	
		d) Internal	Theory	30	30		
			Practical	30			
03)	Obstetrics and Gynaecology	a) Theory	Paper1	40	40	50	100 200
			Paper2	40			
		b ) Oral		20			
04)	Ophthalmology	a) Theory	Paper - I	40	20	25	50 100
		b) Oral		10			
		c) Practical		30		15	
		d) Internal Assessment	Theory	10		10	
			Practical	10			

**It is compulsory to obtain 50% marks in theory.**

It is mandatory to obtain 50% marks in theory+ viva/oral.



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## FINAL MBBS EXAMINATION IN SURGERY

### **Evaluation:**

**Methods – Internal assessment, Theory, Practical and Viva**

### **Internal Assessment (Formative Assessment)**

Theory – 30 Practical - 30 Total 60

- Marks of Internal Assessment should be sent to University before the commencement of Theory examination.
- Passing in internal assessment is essential for passing, as internal assessment is separate head of passing in examination.
- It will also be considered for grace marks as per existing rules
- Combined theory and practical of internal assessment will be considered for passing in internal assessment.
- Student will be allowed to appear for both theory and practical exam independent of marks obtained in internal assessment but he if fails in that head even after including the grace marks he will be declared “Fail in that Subject”

### **Internal assessment in Theory -**

#### ***Examinations during semesters:***

This will be carried out by conducting two theory examinations during 6<sup>th</sup> and 8<sup>th</sup> Semesters (100 marks each)

Total of 200 marks to be converted into 15 marks.( A/15)

#### ***Prelim examination:***

This shall be carried out during 9<sup>th</sup> semester. Two theory papers of 60 marks each as per university examination Pattern Total of 120 marks to be converted into 15 marks. (B/15)

Total marks of internal assessment for Theory will be addition of A and B.



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### **Internal assessment in Practical-**

#### ***Examinations at end of Clinical postings:***

There will be practical examination at the end of each clinical posting of General Surgery. (3rd, 5th, 7th and 8th semester) Each examination will be of 50 marks.

Total of 4 examinations - 200 marks

These marks and marks from Orthopaedics 100, Radiology 50, Dentistry 50 and Casualty 50 will be added. - Total 450 marks will be converted to 15 marks.( C/15)

#### ***Prelim examination:***

This will be conducted for 120 marks as per university pattern and marks will be converted to 15 (D/15).

Total marks of internal assessment for Practical will be addition of C and D.

### **Record BOOK**

Case record will have to be entered in a record book. A combined record book of General surgery, Orthopaedics, Causality, Anaesthesiology, Dentistry and radiology will have to be maintained Minimum of five histories have to be recorded in each posting The certificate of satisfactory completion of all clinical posting will be required from Head Of the department of Surgery. This will be base on multiple similar certificates from all postings in all subjects In addition it will have details of all marks in posting ending exam on second page and calculation of internal assessment Record book will not carry any marks but it will be prerequisite for Appearing for examination.

### **Pattern of theory examination including distribution of marks Questions and Time**

#### **Theory**

1. There shall be two theory papers - Paper I and II, carrying 60 marks each.
2. Each paper will have three sections, A, B and C. Each paper will be of 3 hours duration.
3. Section A will be MCQ in each paper. Section B and C will have to be written in separate



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answer sheets. Both will have Long Answer Question ( LAQ) and Short Answer Questions (SAQ)

4. The topic covered in each section shall be as follows : -

**A. Paper I**

- Section A – MCQ: will cover whole syllabus of Paper I
- Section B- General principles of Surgery, Oncology, head, face, neck, Breast, Endocrine Surgery and Trauma
- Section C - Orthopedic surgery.

**B. Paper II**

- Section A – MCQ: will cover whole syllabus of Paper II
- Section B- Gastrointestinal Tract including colon rectum and anal canal  
o Liver, pancreas and biliary tract, Spleen. Pediatric Surgery
- Section C - Urology, Cardio thoracic surgery and Plastic surgery  
Dental surgery, Radiology and Radiotherapy, Anesthesiology.

**Paper I - 3 hrs - 60 marks**

Section-A - MCQ - 30 x ½ marks each – 15 marks

- 30 minutes
- Separate paper
- Single based response
- MCQ will cover whole syllabus of Paper I

Section-B - General Surgery 25 Marks

- 2 LAQS – 8 marks x 2 = 16 marks
- 3/5 SAQS – 3 marks = 9 marks

**Topics** - General principles of Surgery, Oncology, head, face, neck, Breast, Endocrine Surgery and Trauma.

**NB: Shall contain one question on basic Sciences and allied subjects.**

Sec. C –Orthopaedics Surgery: 20 marks

- o Topic; All topics in Orthopedics
- o Orthopedics examiner will set this part of paper and to be evaluated by Orthopedics examiner.



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- 1 LAQS ( Long answer questions) – 8 marks
- 4/6 SAQS( Short answer questions) x 3 marks each = 12 marks

**Time Sec. B & C – Two and half hours. Section B and C to be written in separate answer sheets.**

***MCQ section A will be given to candidates at the beginning of the examination. After 30 minutes Section A will be collected. Section B and C paper will then be handed over to candidates.***

**PAPER II - Time 3 hrs - 60 marks**

Section - A - MCQ - 30 x ½ marks – 15 marks

- 30 minutes
- Separate paper
- Single based response
- MCQ will cover whole syllabus of Paper II

Section - B – Marks- 25 marks

Topics: Gastrointestinal Tract including colon rectum and anal canal Liver, pancreas and Biliary tract, Spleen, Paediatric surgery.

- 2 LAQS – 8 marks x 2 = 16 marks
- One question clinical Problem solving.
- 3/5 SAQS – 3 marks = 9 marks

***NB: Shall contain one question on basic Sciences and allied subjects***

Section - C – Marks: 20 marks

Topics: Urology, Cardio thoracic surgery and plastic surgery Dental surgery, Radiology and Radiotherapy, Anesthesiology.

- 1 LAQS – 8 marks
- 4/6 SAQS x 3 marks each = 12 marks

**Time Sec. B & C – Two and half hours. Section B and C to be written in separate answer sheets.**



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***MCQ section A will be given to candidates at the beginning of the examination. After 30 minutes Section A will be collected. Section B and C paper will then be handed over to candidates.***

**PRACTICAL EXAMINATION - 120 marks**

**Clinical examination**

- Clinical cases
  - Long case I – Gen, Surgery. – 50 marks
  - Short case I - Orthopaedics – 25 marks
  - Short case II – Gen. Surgery -- 25 marks Time for Long cases- 30 minutes for taking history and clinical examination. 10 minutes for viva

Time for 2 short cases - 20 minutes for taking history and clinical examination. 10 minutes for viva.

**Viva examination** - Duration and topic distribution (Total 20 marks) · Tables – Viva will be directed towards **interpretation of investigation**

At two tables, each for ten marks. Time- 10 minutes at each table

- Instruments + Operations, – 10 marks
- Surgical Pathology, Imaging sciences and Orthopedics – 10 marks

**Marks of VIVA will be added to Theory marks it is compulsory to obtain 50% marks in theory. It is mandatory to obtain 50% marks in theory + viva/oral.**



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# SYLLABUS OF TUBERCULOSIS & RESPIRATORY DISEASES

## I. **GOAL:**

The aim of teaching the undergraduate student in Tuberculosis and Chest Diseases is to impart such knowledge and skills that may enable him/her to diagnose and manage common ailments affecting the chest with the special emphasis on management and prevention of Tuberculosis and especially National Tuberculosis control programme.

## II. **OBJECTIVES:**

### (a) **KNOWLEDGE:**

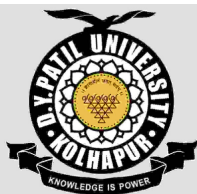
At the end of the course of Tuberculosis and Chest diseases, the student shall be able to:

1. demonstrate sound knowledge of common chest diseases, their clinical manifestations, including emergent situations and of investigative procedures to confirm their diagnosis'
2. demonstrate comprehensive knowledge of various modes of therapy used in treatment of respiratory diseases;
3. describe the mode of action of commonly used drugs, their doses, side-effects/toxicity, indications and contra-indications and interactions.
4. describe commonly used modes of management including medical and surgical procedures available for treatment of various diseases and to offer a comprehensive plan of management inclusive of National Tuberculosis Control Programme.

### (b) **SKILLS:**

The student shall be able to :

- 1) Interview the patient, elicit relevant and correct information and describe the history in chronological order;



- 2) Conduct clinical examination, elicit and interpret clinical findings and diagnose common respiratory disorders and emergencies;
- 3) Perform simple, routine investigative and office procedures required for making the bed side diagnosis, especially sputum collection and examination for etiologic organisms especially Acid Fast Bacilli (AFB), interpretation of the chest x-rays and respiratory function tests;
- 4) Interpret and manage various blood gases and PH abnormalities in various respiratory diseases.
- 5) Manage common diseases recognizing need for referral for specialized care, in case of inappropriateness of therapeutic response;
- 6) Assist in the performance of common procedures, like laryngoscopic examination, pleural aspiration, respiratory physiotherapy, laryngeal intubation and pneumo-thoracic drainage/aspiration

(c) **INTEGRATION:**

The broad goal of effective teaching can be obtained through integration with departments of Medicine, Surgery, Microbiology, Pathology, Pharmacology and Preventive and Social Medicine

Lect. 01:	History and introduction
Lect. 2/3:	Pathogenesis and pathology
Lect. 04:	Role of host related factors.
Lect. 05:	Microbiology of AFB
Lect. 06:	Clinical features of pulmonary tuberculosis
Lect. 07:	Anti-tuberculosis drugs -Pharmacology & schedules of drug therapy
Lect. 8/9:	Resistant tuberculosis DOTS Prophylaxis - Drugs / BCG / Tuberculin test. HIV & TB
Lect. 10 Extra -	Pulmonary tuberculosis, Pleural Effusion, Lymphnode TB, Genitourinary TB, Meningitis, Others
Lect. 11/ 12:	Revision
Lect. 13:	Examination





**Respiratory System:**

1. Applied anatomy & Physiology of R.S.
2. Lung function tests
3. Respiratory infections, pneumonias, fungus,
4. Bronchiectasis & lung Abscess.
5. Bronchial Asthma, Chrono Obstructive Patn Disease (COPD).
6. Lung & Pleural Malignancies.
7. Mediastinum & its disorders.
8. Pleural Diseases
9. Occupational Lung Disease
10. Respiratory emergencies.
11. Interstitial lung diseases.

**Lecture cum Demos ( Resp system)**

1. Lung function test and blood gas Analysis and Resp. alkalosis & Acidosis.
2. Chest bronchios emphysema
3. Suppurative lung diseases
4. Bronchogenic carcinoma & other malignancies with Mediastinal obstruction
5. Pleural disease - pneumothorax, pyopneumothorax, Pleural

**L.C.D. in T.B.**

1. Haemoptysis
2. Drug resistance
3. TB & HIV
4. Fibreoptic Bronchoscopy