B P Koirala Institute of Health Sciences

Dharan, Nepal

PHASE – 1, MBBS

Multi System Seminar [MSS], Schedule

11th May 2017 to 16th June 2017

Unit '6'

VENUE: LT- 2, New Academic Block [Time: 10.00 AM]

FOR MODERATORS AND RESOURCE FACULTIES:

a. Moderators are requested to moderate all the student speakers of concerned topic before presenting in the seminar.
b. Resource faculties are requested to provide guidance to the student speakers by attending the MSS & taking part in discussion.
c. Faculties are requested to attend the Multisystem seminars and participate in the post seminar discussion.

FOR STUDENT SPEAKERS:

a. Maximum time allotted for each speaker is 15 minutes. The bell will ring after 12 minutes & at the end of 15 minutes the speaker will be asked to stop the presentation.
b. The speakers should speak loud and clear.
c. The speakers are expected to prepare well for the seminars on the allotted topics.
d. The names of the Moderator & Resource Faculty are provided in the schedule below and students should approach them for guidance during preparation for the seminars. The students are expected to meet the resource faculty for guidance immediately after getting the objectives.
e. All student speakers should coordinate with moderator together before the presentation.

NOTE:

a. Students who fail to coordinate with resource faculty and moderator or fail to present the topic will not be allowed to sit for Unit '6' internal examination.
b. Students will be evaluated for their presentation.

B. P. KOIRALA INSTITUTE OF HEALTH SCIENCES, DHARAN, NEPAL

Program Coordinator Office

MBBS Programme, Phase-I

MULTISYSTEM SEMINAR TOPICS

S.N	SEMINAR TOPICS/SUBTOPICS	DISCIPLINE	MODERATOR/RESOURCE FACULTY	SPEAKER
1	**11-05-2017 (THURSDAY)**			
	BRONCHIAL ASTHMA	**(ANATOMY)**	**DR. SHAMSHER SHRESTHA**	
	a. Gross anatomy of lung	Anatomy	Dr. S. Shrestha	Abhinav Khamboo
	b. Histology of the bronchial tree	Anatomy	Dr. S. Shrestha	Sarweshwari Singh
	c. Mechanism of respiration and airway resistance	Physiology	Dr. K.R. Pandey	Aman Srivastava
	d. Pathophysiology of the disease	Pathology	Dr. S. Karki	Anoushka Rai
	e. Drugs used in the management	Pharmacology	Dr. D. R. Panday	Ashish Shahi
2	**12-05-2017 (FRIDAY)**			
	HYPERTENSION	**(PHYSIOLOGY)**	**DR. P. SUBEDI**	
	a. Microanatomy of blood vessels	Anatomy	Dr. S. Shah	Chandan Kumar Bhagat
	b. Regulation of BP	Physiology	Dr. P. Subedi	Diwakar Chaudhary
	c. Classification & etiopathogenesis of hypertension	Pathology	Dr. S. Karki	Jenisha Shrestha
	d. Drugs in management of hypertensive crisis	Pharmacology	Dr. D. R. Panday	Miroj Suyal
	e. Epidemiology & prevention of hypertension	Community Medicine	Dr. P. Pyakurel	Paru Khadka
3	**14-05-2017 (SUNDAY)**			
	ALCOHOLIC LIVER DISEASE (ALD)	**(BIOCHEMISTRY)**	**DR. B.K.LAL DAS**	
	a. Normal physiology of liver	Physiology	Mrs. D. Limbu	Prashant Bahadur Khatri
	b. Metabolism of alcohol	Biochemistry	Dr. B.K.Lal Das	Ranjana Jasaraj
	c. Liver function tests and it's interpretation	Biochemistry	Dr. J.K. Baranwal	Santosh Prasain
	d. Pathological changes in ALD	Pathology	Dr. R. Shah	Shiwangi Kashyap
	e. Morphology of ALD	Pathology	Dr. R. Shah	Sujit Kumar Shah
4	**15-05-2017 (MONDAY)**			
	HIV/AIDS	**(MICROBIOLOGY)**	**DR. ANUP POUDYAL**	
	a. Epidemiology, Virology & Immunology	Community Medicine	Dr. K.R. Sharma	Swapnil Regmi
	b. HIV and TB Co-infection	Microbiology	Dr. A. Poudyal	Akash kumar chauhan
	c. AIDS and opportunistic infection	Microbiology	Dr. A. Poudyal	Aakash Yadav
	d. Diagnosis	Microbiology	Dr. A. Poudyal	Amrit Basnet
	e. Management	Int. Medicine	Dr. K. Dahal	Anuj Balyan
2.00	**CLIP**	**CLIP EVALUATION : BATCH I : A/M, B/S, C/P, D/OBG**		HOSPITAL
5	**16-05-2017 (TUESDAY)**			
	CERVICAL CANCER	**(PATHOLOGY)**	**DR. A. PRADHAN**	

	a. Anatomy of cervix	Anatomy	Dr. G. Yadav	Avinash Kumar Singh
	b. Structure of HPV	Microbiology	Dr. R. Baral	Deep Jyoti
	c. Epidemiology with special reference	Community Medicine	Dr. P. Pyakurel	Ema Subba
	d. Etiopathogenesis of cervical cancer	Pathology	Dr. A. Pradhan	Khyati
	e. Diagnosis	Pathology	Dr. A. Pradhan	Mridul Dahal
	f. Clinical features, Prevention and Treatment	Obstetrics & Gynaecology	Dr. Rabindra Bhatta	Pooja Kumari
2.00	**CLIP**	**CLIP EVALUATION : BATCH II : B/M, C/S, D/P, A/OBG**		HOSPITAL
6	**17-05-2017 (WEDNESDAY)**			
	WORM INFESTATION	**(PHARMACOLOGY)**	**DR. K. CHAPAGAIN**	
	a. Classification, Clinical Manifestation and complication	Microbiology	Dr. D. Halwai	Pratibha Dhakal
	b. Lab diagnosis	Microbiology	Dr. D. Halwai	Karan Yadav
	c. Drug used in intestine – I	Pharmacology	Dr. K. Chapagain	Saugat Khatri
	d. Drug used in intestine – II	Pharmacology	Dr. K. Chapagain	Shreya Vatsa
	e. Prevention of worm infestation	Community Medicine	Dr. R. B. Sah	Sumit Yadav
7	**18-05-2017 (THURSDAY)**			
	TUBERCULOSIS	**(COMMUNITY MEDICINE)**	**DR. V. KHANAL**	
	a. Epidemiology	Community Medicine	Dr. V. Khanal	Tanvi Bhardwaj
	b. Pathogenesis of Tuberculosis	Pathology	Dr. R. Shah	Abhijeet kumar singh
	c. Etiology & diagnosis of TB	Microbiology	Dr. S. siwakoti	Aawish Bhandari
	d. Treatment of tuberculosis – I	Pharmacology	Dr. D. S. Rai	Ananya Madhu
	e. Treatment of tuberculosis – II	Pharmacology	Dr. D. S. Rai	Anupam Raj Nepal
8	**19-05-2017 (FRIDAY)**			
	PREGNANCY & PARTURITION	**(PHYSIOLOGY)**	**DR. A. JHA**	
	a. Fertilization of ovum & implantation of embryo	Anatomy	Dr. P. Yadav	Ayushi Deo
	b. Alteration in physiological parameters during pregnancy	Physiology	Dr. A. Jha	Deepak Kumar Mandal
	c. Parturition: causes/mechanism	Physiology	Dr. A. Jha	Harsh Kumar
	d. Nutrition during pregnancy	Community Medicine	Mr. B.K. Yadav	Kiran Thapa
	e. Drugs contra-indicated in pregnancy	Pharmacology	Dr. B. Koirala	Mukesh Kumar Singh
9	**21-05-2017 (SUNDAY)**			
	CHRONIC KIDNEY DISEASE	**(ANATOMY)**	**DR. SARUN KOIRALA**	
	a. Gross anatomy of kidney	Anatomy	Dr. S. Koirala	Prabhat Kapadi
	b. Microanatomy of kidney	Anatomy	Dr. S. Koirala	Pratik Sharma
	c. Physiology of renal excretion	Physiology	Dr. R. Khadka	Rishabh Surana
	d. Acid base balance by the kidney	Biochemistry	Dr. S.K. Khan	Shailabh Kumar
	e. Chronic glomerulonephritis	Pathology	Dr. S. Pokharel	Shubham
	f. Renal function test	Biochemistry	Mr. K.D. Mehta	Sunit Chhetri
	g. Management & pharmacological aspect of CRF	Pharmacology	Dr. D. Sarraf	Danish Chaudhary
10	**22-05-2017 (MONDAY)**			
	DIABETES MELLITUS (DM)	**(BIOCHEMISTRY)**	**PROF. DR. N. BARAL**	

	a. Insulin secretion & its role in metabolism	Physiology	Dr. S. Gupta	Abhishek ranjan
	b. Biochemical alteration in DM	Biochemistry	Prof. Dr. N. Baral	Abhishek
	c. Etiopathogenesis of DM	Pathology	Dr. R. Shah	Ananya Tiwari
	d. Lab diagnosis of DM	Biochemistry	Dr. O. Sherchan	Anushka Agrawal
	e. Trends of treatment in DM	Pharmacology	Dr. D. R. Panday	Bal Krishna Gyawali
2.00	**CLIP**	**CLIP EVALUATION : BATCH III : C/M, D/S, A/P, B/OBG**		HOSPITAL
11	**23-05-2017 (TUESDAY)**			
	BLEEDING AND COAGULATION DISORDER	**(PATHOLOGY)**	**DR. S. DHAKAL**	
	a. Histology of blood vessels	Anatomy	Dr. L. Khanal	Deepak Kumar Shah
	b. Normal haemostasis & coagulation cascades	Physiology	Dr. A. Jha	Harshita Sinha
	c. Lab approach to a case of platelet disorder	Pathology	Dr. S. Karki	Kshitij Bansal
	d. Lab approach to a case of coagulation disorder	Pathology	Dr. S. Dhakal	Nabin Kumar Chaudhary
	e. Management	Pharmacology	Dr. R. Kushwaha	Prabin Bhusal
2.00	**CLIP**	**CLIP EVALUATION : BATCH IV : D/M, A/S, B/P, C/OBG**		HOSPITAL
12	**24-05-2017 (WEDNESDAY)**			
	INFLUENZA VIRUS INFECTION	**(MICROBIOLOGY)**	**DR. S. SIWAKOTI**	
	a. Epidemiology of Influenza(Bird Flu & Swine Flu)	Community Medicine	Dr. S. Uprety	Priyanka Kumari
	b. Virology	Microbiology	Dr. S. Siwakoti	Roshan Rawan
	c. Diagnosis	Microbiology	Dr. S. Siwakoti	Sheetal Sinha
	d. Outbreak investigation	Community Medicine	Dr. S. Uprety	Shubhankar Singh
	e. Drugs use in Influenza Infection	Pharmacology	Dr. R. Kushwaha	Supriya Kumari
	f. Prevention and Prophylaxis	Microbiology	Dr. S. Siwakoti	Tejesh Kumar
13	**25-05-2017 (THURSDAY)**			
	LEPROSY	**(PHARMACOLOGY)**	**DR. B. KOIRALA**	
	a. Prevalence & Transmission	Community Medicine	Dr. R. B. Sah	Bishwesh jha
	b. Clinical types & features	Dermatology	Dr. P. Pandey	Abhishek Chaudhary
	c. Histopath spectrum	Pathology	Dr. S. Pokharel	Anil Kumar Sah
	d. Lab diagnosis	Microbiology	Dr. A. Poudyal	Arjun Baral
	e. Treatment of leprosy	Pharmacology	Dr. B. Koirala	Barsha Agrawal
14	**26-05-2017 (FRIDAY)**			
	MYOCARDIAL INFARCTION	**(ANATOMY)**	**DR. NIVEDITA PANDEY**	
	a. Blood supply of the heart	Anatomy	Dr. N. Pandey	Digamber Gupta
	b. Conductive system of heart	Anatomy	Dr. N. Pandey	Hashir Shakil
	c. ECG changes in myocardial infarction	Physiology	Dr. P. Subedi	Kshitij Gyan
	d. Pathophysiology of Myocardial infarction	Pathology	Dr. A. Pradhan	Nidhi Rani
	e. Lab diagnosis & biochemical markers for Myocardial infarction	Biochemistry	Mr. S. Pandey	Prabin Pandey
	f. Drugs for treatment of patients with Myocardial infarction	Pharmacology	Dr. R. Kushwaha	Rahul Kumar Singh
15	**28-05-2017 (SUNDAY)**			
	OSTEOPOROSIS	**(PHYSIOLOGY)**	**DR. A. JHA**	
	a. Physiology of bone & bone	Physiology	Dr. A. Jha	Rumit Jha

	remodeling			
	b. Hormonal regulation of calcium metabolism	Biochemistry	Mrs. S. Shrestha	Shekhar Jaiswal
	c. Pathology of osteoporosis	Pathology	Dr. S. Dhakal	Shuvam Kumar Agrawal
	d. Clinical features & complication	Pathology	Dr. S. Dhakal	Shrey Sidhant
	e. Prevention & treatment of post menopausal osteoporosis	Pharmacology	Dr. D. Sarraf	Udit Raitani
16	**30-05-2017 (TUESDAY)**			
	PEPTIC ULCER / ACID PEPTIC DISEASE(APD)	**(PATHOLOGY)**	**DR. P. UPADHYAYA**	
	a. Microanatomy of stomach	Anatomy	Dr. S. Shah	Mahesh singh danga
	b. Physiology of HCL secretion	Physiology	Dr. K. R. Pandey	Abhishek Maskara
	c. Pathology of peptic ulcer	Pathology	Dr. P. Upadhyaya	Anil Kumar Yadav
	d. Role of microbes in APD	Microbiology	Dr. A. Sharma	Arya Kumari
	e. Pharmacological management of APD	Pharmacology	Dr. D. Sarraf	Bibek Subedi
17	**31-05-2017 (WEDNESDAY)**			
	THYROID DISORDERS	**(BIOCHEMISTRY)**	**DR. R.K. CHAUDHARY**	
	a. Applied anatomy of thyroid	Anatomy	Dr. G.Yadav	Dil Bahadur Gurdhami
	b. Physiological actions of thyroid hormone	Physiology	Dr. S. Gupta	Hemachandran
	c. Pathophysiology of endemic goiters	Pathology	Dr. S. Karki	Kumar Aveechal
	d. Iodine metabolism & thyroid hormone synthesis	Biochemistry	Dr. R.K. Chaudhary	Nimesh Lageju
	e. Thyroid function tests	Biochemistry	Dr. J.K. Baranwal	Prabind Gupta
18	**01-06-2017 (THURSDAY)**			
	ARBOVIRAL INFECTIONS	**(MICROBIOLOGY)**	DR. N.R. BHATTARAI	
	a. Arboviruses: Definition/Classification	Microbiology	Dr. N.R. Bhattarai	Rahul Mahaseth
	b. Arboviral infection prevalent in Nepal: Japanese Encephalitis, Dengue fever	Community Medicine	Dr. S. Uprety	Sagar Panthi
	c. Emerging Arboviral infection of international concern: Zika Virus	Microbiology	Dr. N.R. Bhattarai	Shivani Sharad
	d. Prevention of Arboviral infection	Community Medicine	Dr. S. Uprety	Siddha Raj Rokaya
19	**02-06-2017 (FRIDAY)**			
	TREATMENT OF URINARY TRACT INFECTION (UTI)	**(PHARMACOLOGY)**	**DR. D. S. RAI**	
	a. Etiology of UTI	Microbiology	Dr. L. B. Shrestha	Sushant Chaudhary
	b. Complications of UTI-Pyelonephritis	Pathology	Dr. P. Upadhyaya	Ukesh Kusi
	c. Clinical Features and Diagnosis	Microbiology	Dr. L. B. Shrestha	Keshav Raj Pandey
	d. Treatment of UTI	Pharmacology	Dr. D. S. Rai	Aishwarya Mall
20	**04-06-2017 (SUNDAY)**			
	MENINGITIS	**(ANATOMY)**	**DR. SHAMSHER SHRESTHA**	
	a. Gross anatomy of meninges & subarachnoid space	Anatomy	Dr. S. Shrestha	Anjuri
	b. Ventricular systems of the brain	Anatomy	Dr. S. Shrestha	Ashim Anand

	c. CSF production, circulation & Quickensted's test	Physiology	Dr. P. Subedi	Bishal Chaudhary
	d. Etiopathogenesis of meningitis	Pathology	Dr. P. Upadhyaya	Dilip Gupta
	e. Biochemical parameters of CSF	Biochemistry	Prof. Dr. M. Lamsal	Ila Paudel
21	**05-06-2017 (MONDAY)**			
	CUSHING SYNDROME	**(PHYSIOLOGY)**	**DR. R. KHADKA**	
	a. Histology of adrenal cortex	Anatomy	Dr. P. Yadav	Lokendra Awasthi
	b. Functions of adrenal cortex esp. Cortisol	Physiology	Dr. R. Khadka	Nimisha Jose
	c. Synthesis and release of Cortisol in laboratory diagnosis of Cushing syndrome	Biochemistry	Dr. B.K. Lal Das	Pradeep Khatiwada
	d. Diagnostic features of Cushing syndrome	Internal medicine	Dr. R. Chhetri	Rajan Singh
	e. Principle of Treatment of Cushing syndrome	Pharmacology	Dr. K. Chapagain	Samiksha Malla
22	**06-06-2017 (TUESDAY)**			
	ALZHEIMER'S DISEASE	**(BIOCHEMISTRY)**	**DR. O. SHERCHAND**	
	a. Gross anatomy of brain	Anatomy	Dr. L. Khanal	Shivani Singh
	b. Memory mechanism	Physiology	Dr. R. Khadka	Silan Bhandari
	c. Etiopathogenesis of Alzheimer's Disease	Pathology	Dr. S. Karki	Sushant Kumar
	d. Biochemistry and molecular changes in Alzheimer's Disease	Biochemistry	Dr. O. Sherchand	Utsav Dulal
	e. Principle of Treatment of Alzheimer's Disease	Pharmacology	Dr. D.S. Rai	Prashant Kumar Gupta
23	**07-06-2017 (WEDNESDAY)**			
	CIRRHOSIS OF LIVER	**(PATHOLOGY)**	**DR. R. SHAH**	
	a. Macro/Micro anatomy of liver	Anatomy	Dr. S. Shah	Akash Gurung
	b. Etiopathogenesis	Pathology	Dr. R. Shah	Ankur Acharya
	c. Morphology & complications	Pathology	Dr. R. Shah	Ashish Bhandari
	d. Treatment	Internal medicine	Dr. B. Bartaula	Bishal Raj Shah
24	**08-06-2017 (THURSDAY)**			
	BACTERIAL ZOONOSIS	**(MICROBIOLOGY)**	**DR. ABHILASHA SHARMA**	
	a. Definition Classification	Microbiology	Dr. A. Sharma	Divya Darshan
	b. Anthrax: Epidemiology, Pathogenesis, Clinical Features, Lab diagnosis, Management	Microbiology	Dr. A. Sharma	Ira Mehta
	c. Plague: Epidemiology, Pathogenesis, Clinical Features, Lab diagnosis, Management	Microbiology	Dr. A. Sharma	Madhuresh Gupta
	d. Bacterial Zoonosis causing acute febrile illness - Rickettsial - Brucellosis	Microbiology	Dr. A. Sharma	Nishan Bhandari
	e. Prevention of bacterial Zoonosis	Community Medicine	Dr. K. R. Sharma	Pramod Pathik
25	**09-06-2017 (FRIDAY)**			
	ANTIMICROBIAL RESISTANCE (BACTERIAL DRUG RESISTANCE)	**(PHARMACOLOGY)**	**DR. D. SARRAF**	
	a. Mechanism of action of antimicrobials	Pharmacology	Dr. D. Sarraf	Rajesh Bhatt
	b. Mechanism of antimicrobial	Microbiology	Dr. L. B. Shrestha	Sandesh Rai

	resistance			
	c. Acquisition speed of antimicrobial resistance	Microbiology	Dr. L. B. Shrestha	Shivanshee
	d. Problem of antimicrobial resistance	Microbiology	Dr. L. B. Shrestha	Sirjan Subedi
	e. Control of antimicrobial drug resistance	Microbiology	Dr. L. B. Shrestha	Sushovan Mahat
	f. Rational use of antimicrobial agents	Pharmacology	Dr. D. Sarraf	Vivek Kumar
26	**11-06-2017 (SUNDAY)**			
	OBESITY	**(PHYSIOLOGY)**	**DR. K. R. PANDEY**	
	a. Genetic basis of obesity	Anatomy	Dr. L. Khanal	Sapna
	b. Role of leptin in obesity	Physiology	Dr. K. R. Pandey	Akshay
	c. Pathological consequences of obesity	Pathology	Dr. P. Upadhyaya	Anmol Bhattarai
	d. Obesity: prevention & control strategies	Community Medicine	Dr. P. Pyakure	Ashish Kumar Jha
27	**12-06-2017 (MONDAY)**			
	PANCREATITIS	**(ANATOMY)**	**DR. SARUN KOIRALA**	
	a. Gross & Microanatomy of Pancreas	Anatomy	Dr. S. Koirala	Brahamdev Mahato
	b. Physiological function of Pancreas	Physiology	Mrs. D. Limbu	Divya Raj
	c. Etiopathogenesis of pancreatitis & its complications	Pathology	Dr. S. Karki	Jag Mohan Osti
	d. Pancreatic function test	Biochemistry	Mrs. S. Shrestha	Manish Ghimire
	e. Management of Pancreatitis	Surgery	Dr. Binaya Timilsina	Nistha Agrahari
28	**13-06-2017 (TUESDAY)**			
	VACCINE	**(MICROBIOLOGY)**	**DR. RATNA BARAL**	
	a. Adjuvant	Biochemistry	Dr. S.A. Khan	Prasanna Subedi
	b. Conventional bacterial vaccines	Microbiology	Dr. R. Baral	Ramita Chaulagain
	c. Conventional viral vaccines	Microbiology	Dr. R. Baral	Sandhya Regmi
	d. Modern approach to vaccines	Microbiology	Dr. R. Baral	Shiwangee Priyadarshini
	e. Evaluation of vaccine efficacy in the field	Community Medicine	Dr. V.K. Khanal	Srista Manandhar
29	**14-06-2017 (WEDNESDAY)**			
	DEPRESSION	**(PHARMACOLOGY)**	**DR. D. R. PANDAY**	
	a. Etiology of Depression	Psychiatry	Dr. Suraj Nepal	Sveta Das
	b. Limitations of older drugs and role of newer drugs- TCA and SSRI	Pharmacology	Dr. D. R. Panday	Shauryan Singh
	c. Limitations of older drugs and role of newer drugs – MAOI and Lithium	Pharmacology	Dr. D. R. Panday	Amardeep Narayan Bharti
	d. General principles of drug treatment and non pharmacological treatment of Depression	Psychiatry	Dr. R. Kumar	Anshuman Karak
30	**15-06-2017 (THURSDAY)**			
	IRON DEFICIENCY ANEMIA	**(PATHOLOGY)**	**DR. N. SHAH**	
	a. Classification of Anemia	Pathology	Dr. P. Paudyal	Ashutosh Pandey
	b. Iron Metabolism	Biochemistry	Mr. B. Gelal	Daniella Karen David

	c. Pathogenesis & morphology of Iron Deficiency Anemia	Pathology	Dr. A. Pradhan	Durga Neupane
	d. Anemia associated with parasites	Microbiology	Mr. T. Pandit	Karan Chaudhary
	e. Laboratory approach to a case of anemia	Pathology	Dr. N. Shah	Mithilesh Yadav
	f. Treatment of Iron Deficiency Anemia	Pharmacology	Dr. B. Koirala	Piyush Kamal
	16-06-2017 (FRIDAY)			
31	**TUMOR OF BREAST**	**(BIOCHEMISTRY)**	**PROF. DR. M. LAMSAL**	
	a. General anatomy and lymphatic drainage of breast	Anatomy	Dr. P. Yadav	Prashant Bhatta
	b. Risk factors/Regulation of cell cycle / Proto-oncogene	Biochemistry	Prof. Dr. M.Lamsal	Ravi Shankar Mandal
	c. Lab diagnosis and staging of breast cancer	Pathology	Dr. N. Shah	Saroj Kumar Bhagat
	d. Pharmacological management of breast cancer	Pharmacology	Dr. K. Chapagain	Shreya Khandelwal
	e. Epidemiology and Preventive aspects of breast cancer	Community Medicine	Dr. S. S. Budhathoki	Amitesh Kislay
SELF STUDY FROM 17-06-2017-18-06-2017				
19-06-2017 (MONDAY) UNIT '6' INTERNAL EXAMINATION				
20-06-2017 (TUESDAY) FHE EVALUATION				

NUMBERS OF TOPIC FOR THE DEPT ARE AS FOLLOWS:

S.No.	Department	Number
1	Anatomy [1,9,14,20,27]	5
2	Physiology [2,8,15,21,26]	5
3	Biochemistry [3,10,17,22,31]	5
4	Pathology [5,11,16,23,30]	5
5	Microbiology [4,12,18,24,28]	5
6	Pharmacology [6,13,19,25,29]	5
7	Community Medicine [7]	1
	Total topics	31

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CLINICAL POSTING SCHEDULE				
15-05-2017 (MONDAY)	2.00	CLIP	CLIP EVALUATION : BATCH I : A/M, B/S, C/P, D/OBG	HOSPITAL
16-05-2017 (TUESDAY)	2.00	CLIP	CLIP EVALUATION : BATCH II : B/M, C/S, D/P, A/OBG	HOSPITAL
22-05-2017 (MONDAY)	2.00	CLIP	CLIP EVALUATION : BATCH III : C/M, D/S, A/P, B/OBG	HOSPITAL
23-05-2017 (TUESDAY)	2.00	CLIP	CLIP EVALUATION : BATCH IV : D/M, A/S, B/P, C/OBG	HOSPITAL

Total Topic: 31
Total Sub topic: 157
Total Students: 151+6 repeaters = 157

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Dr. Anju Pradhan
Program Coordinator
MBBS, Phase I

SEMINAR TOPIC & SUB TOPIC / OBJECTIVES & REFERENCES
MSS, 2016-2017
2nd Year MBBS [Batch 2015]

S.N	SEMINAR TOPIC AND SUB TOPIC	OBJECTIVES AND REFERENCES
1	**Bronchial Asthma (Anatomy)**	
	a. Gross anatomy of lung	**Obj:-** 1. Gross anatomy of lung & trachea-bronchial tree **Ref:** 1. Gray's anatomy - 39th ed. Or 2. Concise Text Book of Anatomy- B.K.Khan Or 3. Anatomy- A K Datta
	b. Histology of the bronchial tree	**Obj:-** 1. Microanatomy of trachea-bronchial tree **Ref:** 1. Gray's anatomy - 39th ed. Or 2. Concise Text Book of Anatomy- B.K.Khan Or 3. Anatomy- A K Datta
	c. Mechanism of respiration and airway resistance	**Obj:-** 1. To describe the mechanism of inspiration and expiration (Mechanical, neural & chemical) 2. To describe the physical and physiological factors regulating airway resistance and bronchial tube diameter. **Ref:** 1. Understanding Medical Physiology, RL Bijlani & S.Manjunatha 4th ed. 2. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 3. Ganong's review of medical physiology 25th edition.
	d. Pathophysiology of the disease	**Obj:-** 1. Pathophysiology of bronchial asthma 2. Model for allergic asthma 3. Morphology of bronchial asthma **Ref:** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 679-683
	e. Drugs used in the management	**Obj:-** 1. Management of different types of bronchial asthma. 2. Precaution. **Ref:** 1. Goodman & Gilman 11th Ed. 2. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition. 3. Harrison's Principles of internal medicine. Latest Edition.
2	**Hypertension (Physiology)**	
	a. Microanatomy of blood vessels	**Obj:-** 1. Microanatomy of blood vessels **Ref:-** 2. General Anatomy- A K Datta or 3. Tissues of the body- L. G. Clarke
	b. Regulation of BP	**Obj:-** 1. To explain the Neural regulation of BP **Ref:-** 1. Understanding Medical Physiology, RL Bijlani & S.Manjunatha 4th ed. 2. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 3. Ganong's review of medical physiology 25th edition.

	c. Classification & Etiopathogenesis of hypertension	**Obj:-** 1. Type and causes of hypertension 2. Mechanism of essential hypertension 3. Vascular Pathology in Hypertension 4. Effects on cardiovascular, renal & other systems **Ref:-** 1. Robbins & Cortran: Pathologic Basis of Disease,9th Ed. Page no. 487-491
	d. Drugs in management of hypertensive crisis	**Obj:-** 1. Explain with examples the rationale behind the use of poly-therapy in hypertension. 2. Mention the individualized stepped care therapy of hypertension. 3. Mention the drug treatment of hypertensive emergencies. **Ref:-** 1. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition Clinical Pharmacology- Laurence.
	e. Epidemiology & prevention of hypertension	**Obj:-** 1. To understand the magnitude of the problem of hypertension 2. To explain the various risk factors for hypertension 3. To describe the different approaches in the prevention of hypertension **Ref:-** 1. Park's Textbook of Preventive and Social Medicine. K Park – 19th edition 2. Textbook of Preventive and Social Medicine. M.C Gupta, B.K. Mahajan – 3rd edition – 2003 3. Maxcy – Rosenan Last – Public Health and preventive Medicine. 14th edition
3	**Alcoholic Liver Disease (ALD) (Biochemistry)**	
	a. Normal physiology of liver	**Obj:-** 1. To describe the structure of liver highlighting on functional unit of liver. 2. To list the function of liver & describe them. 3. To describe the effects of Extirpation of liver. **Ref:-** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. Text book of applied physiology, Samson Wright 13th ed.
	b. Metabolism of alcohol	Obj:- 1. To describe how ethanol is metabolized in the body. 2. To interpret the biochemical findings in ALD. <u>Ref:</u> 1. Tietz Textbook of Clinical Chemistry (3rd edition)
	c. Liver function tests and it's interpretation	Obj:- 1. To enumerate biochemical parameters for diagnosis of ALD 2. To interpret the liver function tests. <u>Ref:</u> 3. Tietz Textbook of Clinical Chemistry (4th edition)
	d. Pathological changes in ALD	**Obj:-** 1. Pathogenesis of alcoholic liver disease **Ref:** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 843-845
	e. Morphology of ALD	**Obj:-** 1. Morphology of alcoholic liver disease

		2. Complication of alcoholic liver disease **Ref:** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 842-845
4	**HIV/AIDS (Microbiology)**	
	a. Epidemiology, Virology & Immunology	**Objectives of Epidemiology** **1.** To know the burden of disease in terms of prevalence and incidence(global, South East Asia Region and Nepal) 2. To know the high risk group of HIV/AIDS 3. To elucidate the difference between concentrated epidemic and general epidemic **Ref:** 1. K. Park. Text Book of Preventive and Social Medicine 19th Ed. 2. Department of Health Services, Nepal. Annual Report 2007/2008 3. www.ncasc.gov.np 4. CDC Atlanta and WHO website **Objectives of Virology:-** 1. Able to draw a labeled diagram of HIV virus 2. Able to Classify the important antigenic and enzymatic markers of HIV virus **Ref:** 1. Internet source: http://w3.whosea.org/bct/332/diagnosis1.htm 2. http://www.sfaf.org.aids101/hiv_testing.html 3. Topley and Wilson's (Vol-1) • Diagnostic Microbiology (Bailey and Scott's , New edition) **Objectives of Immunology:** 1. Understand the immunological evolution and immune responses in HIV infected patients. 2. Explain the immunological basis of HIV immune deficiency in adults and children **Ref:** 1. Fiald's Virology, Latest Edition
	b. HIV and TB Co-infection	**Obj:** 1. Impact of TB infection in HIV patients 2. To know and understand about TB-HIV co-infection in relation to interaction and prevalence **Ref:** 1. Fiald's Virology, Latest edition
	c. AIDS and opportunistic infection	**Obj:-** 1. Agents associated with opportunistic infection in AIDS patient. 2. Basis of WHO clinical classification (stage) of AIDS 3. Opportunistic and CD4 count **Ref:** 1. Harrison's Principle of Internal Medicine
	d. Diagnosis	**Obj:-** 1. Able to know the importance of safety measures collection and transport of sample for the detection of HIV infection. 2. Able to know the important types of antigen detection test and Molecular test. 3. Able to know the commonly used antibody test. 4. Able to know the specific issues in pregnant women and new bon children related to detection of HIV infection. 5. Interpret the antibody test result 6. Able to understand the significance of monitoring for HIV

		infection. 7. Able to know the significance of culture isolation **Ref:** 1. Internet source: http://w3.whosea.org/bct/332/diagnosis1.htm 2. http://www.sfaf.org.aids101/hiv_testing.html 3. Topley and Wilson's (Vol-1) 4. Diagnostic Microbiology (Bailey and Scott's , New edition)
	e. Management	**Obj:** 1. Indication of starting ART 2. Different ART regimens 3. Role of prophylaxis against different infection 4. Management of opportunistic infections **Ref:** 1. Harrison's Principle of Internal Medicine, 18th Edition. **2.** National Anti-Retroviral guidelines 2013 (www.ncare.gov.np)
5	**Cervical Cancer (Pathology)**	
	a. Anatomy of cervix	**Obj:** 1. Gross anatomy of uterus. **Ref:** 1. Gray's anatomy 39th edition. **2.** Text book of human anatomy by B.D.Chaursia.
	b. Structure of HPV	**Obj:** 1. To know the structure & properties of HPV. **Ref:** 1. Text book of Microbiology, 9th Ed., Ananthanarayan & Paniker 2. Medical Microbiology, Jawetz, Melnich and Adelberg
	c. Epidemiology with special reference	**Obj:** 1. To know the magnitude problem of cervical cancer. 2. To know the risk per cervical cancer. **Ref:** 1. K Park. Text book of preventive and social medicine, 23rd edition. **2.** WHO website.
	d. Etiopathogenesis of cervical cancer	**Obj:** 1. Etiopathogenesis of Cervical Cancer. **Ref:** **1.** Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no.
	e. Diagnosis	**Obj:** 1. Biopsy related changes of cervical intraepithelial lesion and cervical cancer 2. Methods of detection **Ref:** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no
	f. Clinical features, Prevention and Treatment	**Obj:** 1. Clinical features, methods of screening & treatment. **Ref:** 1. Shaw's Gynecology.
6	**Worm Infestation (Pharmacology)**	
	a. Classification, clinical manifestation & complication	**Obj:** 1. Know the basis of classification 2. Know the life cycle and morphology 3. Clinical manifestations **Ref:**

		1. Text book of Medical Parasitology- Subash Chandra Parija 2. Parasitology-K.D. Chatterjee 3. Diagnostic Medical Parasitology-Lynne shore Garcia 4th Edition 4. Medical Parasitology-R.L. Ichhupujani Rajesh Bahtia, Jypee
	b. Lab diagnosis	**Obj:** 1. Collection , transportation and processing of specimen 2. Lab diagnosis of worm infestation **Ref:** 1. Text book of Medical Parasitology- Subash Chandra Parija 2. Parasitology-K.D. Chatterjee Diagnostic Medical Parasitology-Lynne shore Garcia 4th Edition 3. Medical Parasitology-R.L. Ichhupujani Rajesh Bahtia, Jypee
	c. Drug used in intestine – I	**Obj:** 1. Name antihelmentic drugs. 2. Categories them as vermifuse or vermicide. 3. Discuss the brief pharmacology of Albendazole/ Mebendazole. **Ref:** 1. Basic and Clinical Pharmacology- Betram G. Katzung. Latest edition.
	d. Drug used in intestine – II	**Obj:** 1. Mention the treatment of Neurocysticercosis. 2. Discuss the role of purging in T-solium infection. 3. Discuss briefly about Praziquantel. **Ref:** 1. Current Medical Diagnosis of Treatment. Latest Edition 2. Basic and Clinical Pharmacology- Betram G. Katzung. Latest edition. 3. Essential of Medical Pharmacology. KD Tripathi. Latest edition.
	e. Prevention of worm infestation	**Obj:** 1. To describe the prevention & control strategies of worm infestation. **Ref:** 1. K. Park. Text Book of Preventive and Social Medicine 19th Ed. 2. Department of Health Services, Nepal. Annual Report 2007/2008
7	**Tuberculosis (Community medicine)**	
	a. Epidemiology	**Obj:-** 1. To describe the epidemiology of tuberculosis with special reference to Nepal. 2. Burden of MDR TB in Nepal. 3. To know the DOTS program and new regimen for the treatment of tuberculosis. **Ref:** 1. K. Park. Text Book of Preventive and Social Medicine 19th Ed. 2. National tuberculosis control program of Nepal 3. SAARC journal of TB/HIV 4. TB/HIV. A clinical manual- WHO 5. Department of Health Services, Nepal. Annual Report 2007/2008
	b. Pathogenesis of Tuberculosis	**Obj:** 1. Pathogenesis of primary tuberculosis

		2. Morphology of Tuberculosis **Ref:** **1.** Robbins & Cotran: Pathologic Basis of Disease, 9th Ed. Page no. 371-376
	c. Etiology & diagnosis of TB	**Obj:-** 1. Etiology of tuberculosis 2. Conventional and recent advances in the diagnosis of tuberculosis **Ref:** 1. Topley and Wilson's – Vol.3 2. Principles and practice of infectious disease.-Mandell (Vol. 1 &2) 3. Manual of clinical Microbiology
	d. Treatment of tuberculosis – I	**Obj:-** 1. Classification 2. Role of INH, rifampicin and pyrazinamide in therapy. 3. DOTS therapy and its importance. **Ref:** 1. Goodman & Gilman. The Pharmacological basis of therapeutic, 11th Edition 2. Current Medical Diagnosis of Treatment latest edition. 3. Essential of Medical Pharmacology latest Ed. KD Tripathi.
	e. Treatment of tuberculosis – II	**Obj:-** 1. Category wise treatment regimens 2. Treatment of MAC. 3. Chemoprophylaxis **Ref:** 1. Goodman & Gilman. The Pharmacological basis of therapeutic, 11th Edition 2. Current Medical Diagnosis of Treatment latest edition. 3. Essential of Medical Pharmacology latest Ed. KD Tripathi.
8	**Pregnancy & Parturition (Physiology)**	
	a. Fertilization of ovum & implantation of embryo	**Obj:-** 1. Fertilization of ovum & implantation of embryo **Ref:-** 1. Embroyology : Langman or 2. The developing Human - Moore & Persaud 7th ed 3. Williams Obstetrics 24th Ed. Section 3 – Implantation & Placental
	b. Alteration in physiological parameters during pregnancy	**Obj:-** 1. To outline the overall response of mother to pregnancy 2. To describe briefly the cardiovascular, respiratory, hematological, renal, metabolic / endocrine changes during pregnancy. 3. To describe the mechanism of development of pre-eclampsia/ eclampsia **Ref:-** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. Williams Obstetrics 24th Ed. Section 2 – Maternal Physiology
	c. Parturition: causes/ mechanism	**Obj:-** 1. List the hormones of parturition & describe their role on it. 2. To describe the phases of parturition. 3. To describe the mechanism of initiation of parturition. **Ref:-** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed..

		2. Ganong's review of medical physiology 25th edition. 3. Williams Obstetrics 24th Ed. Section 2 – Maternal Physiology
	d. Nutrition during pregnancy	**Obj:-** 1. Explain situation of maternal nutrition status in the country 2. State nutritional requirement during pregnancy 3. Develop a food plan (balanced Diet) for a women during pregnancy 4. Suggest dietary sources of important nutrients for pregnant mother 5. Discuss the effect of nutrition on pregnancy and pregnancy outcome 6. List components of nutrition intervention programe combating to maternal nutrition deficiencies in Nepal. 7. Explain the channel of nutrition intervention programe for mother in the country. **Ref:-** 1. Mother and child health nutrition- NIN Publication 2. nutritive value of Indian foods-NiN publication Hyderabad 3. Food and Nutrition – M Swaminathan, BAPPCO publication 4. preventive and social medicine – Mahajan and Gupta 5. Annual Report- DHS, MOH, Govt of Nepal
	e. Drugs contra- indicated in pregnancy	**Obj:-** 1. Teratogenecity with list of important tertogenic drugs. 2. Risk category of drugs during pregnancy. **Ref:-** 1. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition 2. Clinical Pharmacology- Laurence. 3. Essential of Medical Pharmacology, KD Tripathi latest edition.
9	**Chronic Kidney Disease (Anatomy)**	
	a. Gross anatomy of kidney	**Obj:-** 1. Gross anatomy of kidney **Ref:** 1. Gray's anatomy - 39th ed. Or 2. Concise Text Book of Anatomy- B.K.Khan Or 3. Anatomy- A K Datta
	b. Microanatomy of kidney	**Obj:-** 1. Microanatomy of kidney and renovascular system **Ref:** 1. Gray's anatomy - 39th ed. Or 2. Concise Text Book of Anatomy- B.K.Khan Or 3. Anatomy- A K Datta
	c. Physiology of renal excretion	**Obj:-** 1. To describe the process of Glomerular filtration 2. To describe the Tubular functions 3. To describe the mechanism of formation of Concentrated & diluted urine **Ref:-** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition.
	d. Acid base balance by the kidney	**Obj:-** 1. To describe the regulatory functions of the kidneys. 2. To describe the role of kidneys in maintenance of electrolyte, acid base and water homeostasis. 3. To calculate acid base composition and preparation of buffer. **Ref:**

		1. Varley's Practical Clinical Chemistry (6th edition) 2. Tietz's Textbook of Clinical Chemistry (3rd edition)
	e. Chronic glomerulonephritis	**Obj:** 1. Causes of CGN 2. Morphology of CGN **Ref:-** 1. Robins and Cotran Pathologic Basic of Disease, 9th ed pg. 925 2. Suggestion – delete tubulointerstetial disease from objective and references
	f. Renal Function Text	**Obj:** 1. To know the types of test used to assess the function of kidney 2. To know the concept of clearance and its utility **Ref:** **1.** Tietz's Textbook of Clinical Chemistry (3rd edition)
	g. Management & pharmacological aspect of CRF	**Obj:** 1. Outline of management of CRF 2. Role of Pharmacological agents in CRF **Ref.:-** 1. Goodman & Gilman 11th Ed. 2. Current Medical Diagnosis of Treatment. Latest Edition. 3. Harrison's Principles of internal medicine. Latest Edition.
10	**Diabetes Mellitus (DM) (Biochemistry)**	
	a. Insulin secretion & its role in metabolism	**Obj:-** 1. To describe the mechanism of insulin secretion 2. To describe the mechanism of insulin action 3. To describe the role of insulin in carbohydrate, fat and protein metabolism in normal person and diabetic patients. **Ref:-** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. Williams text book of Endocrinology 12th ed. 4. Harper's illustrate Biochemistry 30th ed.
	b. Biochemical alteration in DM	**Obj:-** 1. Outline the mechanism of ketone bodies formation and ketoacidosis. 2. Mechanism of atherosclerosis in diabetes mellitus **Ref:** 1. Harrison's Principle of Internal Medicine
	c. Etiopathogenesis of DM	**Obj:-** 1. Pathogenesis of the complication of DM 2. Morphology of the complications of DM **Ref:** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 1115-1119
	d. Lab diagnosis of DM	**Obj:-** 1. To plan laboratory tests in diagnosis and monitoring diabetes mellitus (type, severity and regular monitoring). 2. To interpret the laboratory report in diagnosis of DM. **Ref:** 1. Tietz Textbook of Clinical Chemistry (3rd edition)
	e. Trends of treatment in DM	**Obj:-** 1. Monocomponent insulin and their importance. 2. Newer insulin delivery systems. 3. Status of metfomin and thiazolidimdiones in therapy. 4. Outline of treatment of type 2 DM. **Ref:** 1. Goodman & Gilman. The Pharmacological basis of

		therapeutic,11th Edition 2. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition. 3. Harisons text book of Internal Medicine. Current ed.
11	**Bleeding & Coagulation Disorder (Pathology)**	
	a. Histology of blood vessels	**Obj:-** 1. Histology of blood vessels **Ref:** 1. Gray's anatomy - 39th ed. Or 2. General Anatomy- A K Datta
	b. Normal haemostasis & coagulation cascades	**Obj:-** 1. To overview the steps of haemostasis 2. To describe the coagulation cascade (Extrinsic & intrinsic pathways) 3. To describe the Anticlotting Mechanisms **Ref:-** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. Text book of Physiology, Berne & Levy 6th ed.
	c. Lab approach to a case of platelet disorder	**Obj:-** 1. Methods to establish thrombocytopenia 2. Differentiate numerical and functional disorders 3. Peripheral and bone marrow examination and immunological methods **Ref:** 1. Robbins & Cortran: Pathologic Basis of disease, 9th Ed. Page no. 657-661
	d. Lab approach to a case of coagulation disorder	**Obj:-** 1. Screening test to differentiate hereditary and acquired disorders 2. Test to establish the diagnosis **Ref:** 1. Robbins & Cortran: Pathologic Basis of disease, 9th Ed. Page no. 661-665
	e. Management	**Obj:-** 1. Discuss the mechanism and uses of Vit K. 2. Discuss the role of amionocaproic acid in bleeding disorder. 3. Briefly discuss the uses and rationale of desmopressin in bleeding disorder 4. Discuss about various clotting factors in bleeding disorder. **Ref:** 1. Basic and Clinical Pharmacology- Betram G. Katzung. Latest edition. 2. Current Medical Diagnosis of Treatment, Latest Edition.
12	**Influenza Virus Infection (Microbiology)**	
	a. Epidemiology of Influenza (Bird Flu & Swine Flu)	**Obj:-** 1. To know the geographic distribution of H5N1 and H1N1 including South East Asian Region. 2. To know about agent, host & environmental factors of Avian Influenza a. Morbidity and mortality related to H5N1 and H1N1 in human b. Preparedness & Prevention of H5N1 and H1N1. c. Approaches to control an outbreak of H5N1 and H1N1 **Ref:-** 1. Harrison Principle of Internal Medicine, 15th Edition.

		2. Web site: www.who.int 3. Web site: www.cdc.gov
	b. Virology	**Obj:-** 1. Know the viral structure **Ref:-** 1. Medical virology, 4th edition David O. white, Frank J Fenner, Academic press. 2. Medical Microbiology, Jawetz, Melnich and Adelberg 3. WHO guidelines
	c. Diagnosis	**Obj:-** 1. Know the ideal specimens, their collection , transport and landing 2. Virological diagnosis of Bird flu. **Ref:-** 1. Medical virology, 4th edition David O. white, Frank J Fenner, Academic press. 2. Medical Microbiology, Jawetz, Melnich and Adelberg 3. WHO guidelines
	d. Outbreak investigation	**Obj:-** 1. To know the geographic distribution of H5N1 and H1N1 including South East Asian Region. 2. To know about agent, host & environmental factors of Avian Influenza 3. Morbidity and mortality related to H5N1 and H1N1 in human 4. Preparedness & Prevention of H5N1 and H1N1. 5. approaches to control an outbreak of H5N1 and H1N1 **Ref:-** 1. Harrison Principle of Internal Medicine, 15th Edition. 2. Web site: www.who.int 3. Web site: www.cdc.gov
	e. Drugs used in Influenza infection	**Obj:** 1. Role of medical therapy in influenza **Ref:** 1. Harrison's principle of Int-Medicine, 18th Edition (www.who.int, www.cdc.gov)
	f. Prevention & prophylaxis	**Obj:** 1. Role of medical therapy in influenza 2. Role of vaccine in Influenza **Ref:** **1.** Harrison's principle of Int-Medicine, 18th Edition (www.who.int, www.cdc.gov)
13	**Leprosy (Pharmacology)**	
	a. Prevalence & Transmission	**Obj:-** 1. To describe the epidemiological situation of Leprosy in Nepal 2. To understand the national Leprosy Control Program **Ref:-** 1. Park K. Textbook of Preventive & Social Medicine. 19th edition 2. Annual Report – 2007/2008, Department of Health Services, Nepal
	b. Clinical types & features	**Obj:-** 1. Sign & Symptom **Ref:-** 1. Essential of medical Pharmacology, KD Tripathi- latest edition. 2. Dermatology in general medicine latest Ed.
	c. Histopath spectrum	**Obj:-**

		1. Intermediate Leprosy (I) 2. Tuberculoid Leprosy (TT) & Borderline Tuberculoid (BT) 3. Lepromatous Leprosy (LL) & Borderline (BB) & (BL) 4. Type I & II reactions **Ref:-** 1. Hand book of Leprosy, 5th Ed. Page no. 385-387 2. Lever's Histopathology of the skin, 10th Ed, Page no. 558-567
	d. Lab diagnosis	**Obj:-** 1. Methods used in diagnosis **Ref**:- 1. Text Book of Microbiology by P.Chakraborty 2. Jawetz's, Review of medical microbiology 3. Harrison's principles of internal medicine.18th Ed, page No. 1363-1364 **4.** Infectious diseases by Barbara et al
	e. Treatment of leprosy	**Obj:-** 1. Enumerate the drug used in leprosy. 2. Discuss the mechanism of action, adverse effect, precaution and contraindication. 3. Mention the drug regimens for leprosy. 4. Role of corticosteroid in leprosy. **Ref:-** 1. Essential of medical Pharmacology, KD Tripathi- latest edition. 2. Dermatology in general medicine latest Ed.
14	**Myocardial Infarction (Anatomy)**	
	a. Blood supply of the heart	**Obj:-** 1. Coronary circulation **Ref:** 1. Gray's anatomy - 39th ed. Or 2. Concise Text Book of Anatomy- B.K.Khan Or 3. Anatomy- A K Datta
	b. Conductive system of heart	**Obj:-** 1. Conductive System & heart **Ref:** 1. Gray's anatomy - 39th ed. Or 2. Concise Text Book of Anatomy- B.K.Khan Or 3. Anatomy- A K Datta
	c. ECG changes in myocardial infarction	**Obj:-** 1. To describe the mechanism of current of injury. 2. To describe the changes in ECG of acute anterior wall infarction & its vectorial analysis. 3. To describe the changes in ECG of acute posterior wall infarction & its vectorial analysis. **4.** To describe the changes in ECG of old recovered myocardial infarction. **Ref:** 1. Understanding Medical Physiology, RL Bijlani & S.Manjunatha 4th ed. 2. Textbook of Medical Physiology, Guyton & Hall 13th ed..
	d. Pathophysiology of myocardial infarction	**Obj:-** 1. Role of lipids, injury & cells in atherogenesis 2. Morphology of atheroma & its complications **Ref:** 1. Robbins & Cotran: Pathological Basis of Disease, 9th Ed. Page 491-501
	e. Lab diagnosis & biochemical	**Obj:-**

	markers for myocardial infarction	1. To list and classify the serum markers of myocardial damage. 2. To interpret the lab findings in patients with myocardial infarction. **Ref:** 1. Tietz Textbook of Clinical Chemistry (4th edition) 2. Varley's Practical Clinical Chemistry (6th edition)
	f. Drugs for treatment of patients with myocardial infarction	**Obj:-** 1. Pharmacological and non-pharmacological measures. 2. Role of following drugs in Post MI. a. Antiplatelet agents b. Beta blocked c. ACE inhibitors d. Hypolipidemic agents. **Ref:** 1. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition. 2. Avery's drug treatment 4th Ed. 3. Current Medical Diagnosis of Treatment. Latest edition. 4. Harrison's Principles of internal medicine 16th ed. 2004.
15	**Osteoporosis (Physiology)**	
	a. Physiology of bone & bone remodeling	**Obj:-** 1. To describe the bone cells including their function 2. To describe the process of bone formation 3. To describe the process of bone resorption 4. To describe the advantages of bone remodeling **Ref:-** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. William's Endocrinology 12th ed.
	b. Hormonal regulation of calcium metabolism	**Obj:-** 1. To describe the roles of hormones involved in regulation of calcium metabolism. **Ref:** 1. Tietz Textbook of Clinical Chemistry (3rd edition) 2. Harper's Biochemistry (25th edition)
	c. Pathology of osteoporosis	**Obj:-** 1. Causes of generalized osteoporosis 2. Pathogenesis of osteoporosis **Ref:** 1. Robbins & Cortran: Pathological Basis of Disease, 9th Ed. Page no. 1187
	d. Clinical features & complication	**Obj:-** 1. Clinical features of senile and postmenopausal osteoporosis. 2. Complication of senile and postmenopausal osteoporosis. **Ref:** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 1187-1189
	e. Prevention & treatment of post menopausal osteoporosis	**Obj:-** 1. Drugs for prevention of postmenopausal osteoporosis with their rationality. 2. Mention the drugs used in the treatment of post menopausal osteoporosis with their basis. **Ref:** 1. Goodman & Gilman. The Pharmacological basis of therapeutic, 11th Edition. 2. Text book of Gynecology. DC Dutta, current edition.

16	**Peptic Ulcer / Acid Peptic Disease(APD) (Pathology)**	
	a. Microanatomy of stomach	**Obj:-** 1. Microanatomy of stomach **Ref:** 1. Gray's anatomy - 39th ed. Or 2. Concise Text Book of Anatomy- B.K.Khan Or 3. Anatomy- A K Datta
	b. Physiology of HCL secretion	**Obj:-** 1. Mechanism of gastric acid secretion 2. Regulation of gastric acid secretion 3. Phases of gastric acid secretion 4. Effect of parasympathetic on gastric acid secretion **Ref:-** 1. Principle of Medical Physiology (Sabyasachi Sircar) 2. Review of Medical Physiology, W.F.Ganong 3. Text book of physiology. AC Guyton
	c. Pathology of peptic ulcer	**Obj:-** 1. Definition & pathogenesis of peptic ulcer 2. Morphology of peptic ulcer 3. Complication **Ref:** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 766-768
	d. Role of microbes in APD	**Obj:-** 1. Microorganisms associated with peptic ulcer with special reference to Helicobacter pylori and its pathogenesis **Ref:** 1. Mandell's principle and practice of infectious diseases. 2. Topley and wilson's Microbiology (Bacteriology) 3. Text Book of Microbiology by P.Chakraborty
	e. Pharmacological management of APD	**Obj:-** 1. Classify the drugs used in peptic ulcer 2. Proton pump inhibitors a. Give a few examples b. Discuss the rationale for use in peptic ulcer c. Mention ADR 3. Mention the regimens for eradication of H. Pylori infection and discuss the rationale of combination therapy. **Ref:** 1. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition.
17	**Thyroid Disorders (Biochemistry)**	
	a. Applied Anatomy of thyroid	**Obj:** 1. Applied Anatomy of Thyroid **Ref:** 1. concise text book of anatomy B.K. Khan or 2. Anatomy- A K Datta
	b. Physiological actions of thyroid hormone	**Obj:** **1.** To describe the effect of thyroid hormone on CVS, CNS, growth and development and metabolism **Ref:** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. Williams Text Book of Endocrinology 12th ed.
	c. Pathophysiology of endemic goiters	**Obj:** 1. Classification of Goiter

		2. Pathogenesis of Goiter 3. Morphology of Goiter **Ref:** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 1090-1092.
	d. Iodine metabolism & thyroid hormone synthesis	**Obj:** 1. Sources and requirement of Iodine 2. Iodine Deficiency Disorder **Ref:** 1. Review of Medical Physiology, W. F. Ganong 2. Williams TB of Endocrinology 3. Wemer's the thyroid
	e. Thyroid function tests	**Obj:** 1. To enumerate various Thyroid Function Tests and describe biochemical procedures and principles underlying Thyroid Function Tests. 2. To explain laboratory diagnosis and interpretation of Thyroid Function Tests in Thyroid Dysfunction. **Ref:** 1. Tietz Textbook of Clinical chemistry (5th Edition) 2. Clinical Biochemistry 2nd edition [Marshall William J.]
18	**Arboviral Infections (Microbiology)**	
	a. Arbovirus: Definition/Classification	**Obj:** 1. Able to define Arbovirus 2. Able to know the taxonomic classification of some important Arbovirus 3. Able to list important Arbovirus, its infection and vectors **Ref:** 1. Ananthanarayan and Paniker's , text book of Microbiology, 9th Edition
	b. Arboviral infection prevalent in Nepal: Japanese Encephalitis and Dengue fever	**Obj:** 1. To know the geographic distribution of JE, Dengue in the context of Nepal 2. To know about the agent, host and environmental factor related to these infections 3. Able to describe the Arbovirus, host vector transcycle 4. To describe the pathogenesis of JE, Dengue fever. **Ref:** 1. dohs.gov.np/wpcontent/uploads/2014/Annual Report_2070_71.pdf 2. Ananthanarayan and Paniker's, test book of Microbiology 9th edition **3.** Mandell, Douglas and Bennett's: Principles and Practice of infectious Diseases, vol 1 and 2, 7th edition
	c. Emerging Arboviral infection of international concern: Zika virus	**Obj:** 1. Able to highlight the threat, recent outbreak of Zika virus 2. Able to describe- Mode of transmission a. Nature of Vector b. Clinical manifestation c. Approach of lab diagnosis 3. Able to know the safety preventive measures from Zika virus (special concern to pregnancy) 4. Able to know the measures of vector control 5. Able to highlight safety sexual precautions **Ref:** **1.** **www.who.int/emergencies/Zikavirus** **2.** **www.cdc.gov.np**

	d. Prevention of Arboviral infection	**Obj:** 1. To describe the preventive &control measure for Arboviral Infection 2. To asses various control measure adapted by Nepal Government for Arboviral Infection 3. Able to know the immune prophylaxis **Ref:** 1. Park's Textbook of Preventive & social medicare. 22nd Edition 2. Annual Depart. 69/70, DOH, Gov. Nepal 3. Ananthanarayan and Paniker's, test book of Microbiology 9th edition **4.** Mandell, Douglas and Bennett's: Principles and Practice of infectious Diseases, vol 1 and 2, 7th edition
19	**Treatment of Urinary Tract Infection (UTI) (Pharmacology)**	
	a. Etiology of UTI	**Obj:** 1. To know the common uropathogens causing UTI. 2. To know the virulence factors of uropathogens. **Ref:** 1. Ananthanarayan and Paniker's, test book of Microbiology 9th edition 2. Mandell, Douglas and Bennett's: Principles and Practice of infectious Diseases, vol 1 and 2, 7th edition.
	b. Complications of UTI - Pyelonephritis	**Obj:** 1. Morphology of acute and chronic Pyelonephritis **Ref:** 1. Robin, 9th ed. Pg.
	c. Clinical Features and Diagnosis	**Obj:** 1. Able to know the clinical features of UTI. 2. To know the approach of lab diagnosis of UTI. **Ref:** **1.** Mandell, Douglas and Bennett's: Principles and Practice of infectious.
	d. Treatment of UTI	**Obj:** 1. List drugs used in UTI 2. Discuss mechanism of action, ADR, precautions of drug used in UTI **Ref:** 1. Essentials of Medical Pharmacology, 7th Edition
20	**Meningitis (Anatomy)**	
	a. Gross anatomy of meninges & subarachnoid space	**Obj:-** 1. Meninges and sub-arachnoid space **Ref.:-** 1. Grays' Anatomy/ Snells' Neuroanatomy, Barr and Murrays' Neuroanatomy
	b. Ventricular systems of the brain	**Obj:-** 1. Part of ventricular system **Ref.:-** 1. Grays' Anatomy/Snells' Neuroanatomy, Barr and Murrays' Neuroanatomy
	c. CSF production, circulation & Quickensted's test	**Obj:-** 1. To describe the mechanism of formation of CSF: Describe with a diagram 2. To describe the circulation and absorption of CSF: Describe with a diagram 3. To explain the Regulation of CSF pressure 4. To list the potential sites of obstruction to CSF flow

		5. To describe the physiological significance of Quickensted's test **Ref.:-** 1. Understanding Medical Physiology, RL Bijlani & S.Manjunatha 4th ed. 2. Textbook of Medical Physiology, Guyton & Hall 13th ed..
	d. Etiopathogenesis of meningitis	**Obj:-** 1. Causative agents of meningitis 2. Pathogenesis of various types of meningitis **Ref.:-** 1. Robbins: Pathologic Basis of Disease-9th Ed. Pg. 1272-1273 2. Harrison's: Principles of Internal Medicine- 18th Ed, Pg.2419-2424,2434-2444
	e. Biochemical parameters of CSF	**Obj:-** 1. To describe normal composition of Cerebrospinal fluid [CSF]. 2. To explain various laboratory tests of CSF. 3. To explain change in composition of CSF in various diseases affecting CNS. **Ref:** 1. Tietz Textbook of Clinical Chemistry (4th edition)
21	**Cushing Syndrome (Physiology)**	
	a. Histology of adrenal cortex	**Obj:** 1. Microanatomy of adrenal cortex. **Ref:** 1. Text book of histology by Indervir singh. **2.** Wheater's functional histology.
	b. Functions of adrenal cortex esp. Cortisol	**Obj:** 1. To explain in detail the effects of Cortisol in a. Metabolism of carbohydrate, protein & fat. b. Food intake & fat deposition. c. Blood cells (role in anti-inflammation, allergic reaction & immunity) d. Different systems viz; CVS, CNS, MSK, GIT, Renal System and connective tissues. **Ref:** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. **2.** William's text book of endocrinology, 13th edition.
	c. Synthesis and release of Cortisol in laboratory diagnosis of Cushing syndrome	**Obj:** 1. To elucidate the mechanism of Cortisol synthesis & secretion. 2. To outline/ enumerate the biochemical parameters for diagnosis of Cushing syndrome. **3.** To interpret the above parameters. **Ref:** 1. Tietz's text book of clinical chemistry and molecular diagnostics, 5th ed.
	d. Diagnostic features of Cushing syndrome	**Obj:** 1. To enlist signs and symptoms in Cushing syndrome patients. **Ref:** 1. Kasper, D.L. et al. 2015. Harrison's principles of internal medicine, 19th ed. 2. Foster, C., W.U.D. medicine, N.Mistry, P. F. Peddi, and S. Sharma. 2004. The Washington manual of medical therapeutics, 35th ed.
	e. Principle of Treatment of Cushing syndrome	**Obj:** 1. To find the causes of Cushing syndrome 2. Treatment based on the cause.

		Ref: 1. Goodman and Gillman's The Pharmacological basis of Therapeutics, 12th Edition 2. Katzung, B., S. Masters, and A.Trevor. 2014.Basic and clinical pharmacology, 13th ed. **3.** Tripathi, T.D. 2013. Essentials of medical pharmacology, 7th ed.
22	**Alzheimer's Disease (Biochemistry)**	
	a. Gross anatomy of brain	**Obj:** 1. Features of cerebral hemisphere. **Ref:** 1. Snell's neuroanatomy. **2.** Gray's anatomy 39th edition.
	b. Memory mechanism	**Obj:** 1. To define memory. 2. To define short-term memory and its underlying mechanism. 3. To define long-term memory and its underlying mechanism. 4. To explain the mechanism of memory consolidation. **Ref:** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. Understanding Medical Physiology, RL Bijlani & S.Manjunatha 4th ed. 4. Text book of medical physiology, Sircar
	c. Etiopathogenesis of Alzheimer's Disease	**Obj:** **1.** Pathogenesis of Alzheimer's Disease **2.** Morphology of Alzheimer's Disease **Ref:** 1. Robins, 9th ed. Pg.1288 – 1292.
	d. Biochemistry and molecular changes in Alzheimer's Disease	**Obj:** **1.** To describe the biochemical and molecular changes in Alzheimer's Disease **Ref:** 1. Marshaff's Biochemistry **2.** Harper's review of Biochemistry
	e. Principle of Treatment of Alzheimer's Disease	**Obj:** **1.** Mention drugs used to treat Alzheimer's Disease **Ref:** **1.** Goodman and Gillman's The Pharmacological basis of Therapeutics, 12th Edition
23	**Cirrhosis of Liver (Pathology)**	
	a. Macro/Micro anatomy of liver	**Obj:-** 1. Micro anatomy of liver **Ref:-** 1. Gray's anatomy - 39th ed. Or 2. Concise Text Book of Anatomy- B.K.Khan Or 3. Anatomy- A K Datta
	b. Etiopathogenesis	**Obj:-** 1. Pathogenesis of cirrhosis 2. Classification of cirrhosis **Ref:-** 1. Robbins of Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 823-825, 827-828
	c. Morphology & complications	**Obj:-** 1. Morphology of alcoholic cirrhosis 2. Morphology of non – alcoholic cirrhosis

		3. Clinical features & complication of cirrhosis **Ref:-** 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 842-843, 845-851, 828-830
	d. Treatment	**Obj:** **1.** enumerate the drugs used in the treatment of cirrhosis **Ref:** 1. Katzung's Book of Pharmacology, 11th Edition
24	**Bacterial Zoonosis (Microbiology)**	
	a. Definition Classification	**Obj:** 1. Able to define bacterial Zoonosis 2. Able to list the important bacte4rial zoonotic pathogens 3. Able to classify the bacterial Zoonosis a. On vector borne basis b. On the basis of some bacteria as the agent of bioterrorism **Ref:** 1. Ananthanarayan and Paniker's, test book of Microbiology 9th edition **2.** Mandell, Douglas and Bennett's: Principles and Practice of Infectious Diseases, Vol 1 and 2, 7th edition
	b. Anthraxa; Epidemiology, Pathogenesis, Clinical features, Lab diagnosis, Management	**Obj:** 1. Able to know morphological features of Bacillus anthracis 2. Able to describe its mode of transmission, infection 3. Able to know the epidemiology aspect of Anthrax 4. Able to describe virulent factors of B. anthracis, its pathogenesis 5. Able to describe different modes of clinical manifestation of Anthrax 6. Able to describe laboratory approach of diagnosis 7. Able to know antimicrobial therapy of Anthrax **Ref:** **1.** Ananthanarayan and Paniker's, test book of Microbiology 9th edition **2.** Mandell, Douglas and Bennett's: Principles and Practice of Infectious Diseases, Vol 1 and 2, 7th edition
	c. Plague: epidemiology, Pathogenesis, Clinical features, lab diagnosis, Management	**Obj:** 1. Able to know the general morphological features of Yersina pentis, as an etiological agent of Plague 2. Able to know its mode of transmission 3. Able to describe the epidemiology aspect of plague 4. Able to describe the virulent factor of Y. pestis its pathogenesis 5. Able to describe different forms of clinical presentation 6. Able to know the laboratory approach of diagnosis. 7. Able to enlight the early treatment plan with antibiotics for reduction plague mortality 8. Able to know the prophylaxis for domestic plague **Ref:** **1.** Ananthanarayan and Paniker's, test book of Microbiology 9th edition **2.** Mandell, Douglas and Bennett's: Principles and Practice of Infectious Diseases, Vol 1 and 2, 7th edition
	d. Bacterial Zoonosis causing acute febrile illness: • Rickettsial	**Obj:** 1. Able to highlight the etiological agent – typhus fever, spotted fever, scrub typus 2. To know the morphological features Brucella species causing

	• Brucellosis	Brucellosis 3. Able to know the mode of transmission 4. Able to describe different clinical presentation of human infection of brucellosis **Ref:** **1.** Ananthanarayan and Paniker's, test book of Microbiology 9th edition
	e. Prevention of bacterial Zoonosis	**Obj:** 1. To explain preventive measure about Bacterial Zoonosis 2. To explain magnitude of problem of Bacterial Zoonosis 3. Able to know the various preventive measures of bacterial Zoonosis: 4. Safety standard precaution concern hand hygiene 5. Disposal of animal carcass. 6. Able to describe the various methods of vector control **Ref:** 1. Park's Textbook of Preventive and Social Medicine 22nd Edition. 2. Manson's Tropical disease 22nd edition. **3.** www.who/internationa;/ www.cdc.gov.np
25	**Antimicrobial Resistance (Bacterial Drug Resistance) (Pharmacology)**	
	a. Mechanism of action of antimicrobials	**Obj:-** 1. Classify antibacterial agents based on their mechanism of action. 2. Explain the mechanism of action of categories of antibiotics and applied aspects with regard to spectrum, efficacy etc. **Ref:** 1. Integrated Pharmacology. 2. Pharmacology, Lippincott's Illustrated Reviews.
	b. Mechanism of antimicrobial resistance	**Obj:-** 1. Mechanisms with example how various antimicrobials are rendered ineffective by various microorganisms. **Ref.** **1.** Mandell, Douglas and Bennett's Infectious Diseases, Vol-1 2. Topley Wilson's Vol-1
	c. Acquisition speed of antimicrobial resistance	**Obj:-** 1. Mechanisms of acquisition of drug resistance and its dissemination **Ref:-** 1. Mandell, Douglas and Bennett's Infectious Diseases, Vol-1 2. Topley Wilson's Vol-1
	d. Problem of antimicrobial resistance	**Obj:-** 1. Epidemiology of infections caused by drug resistant bacteria 2. Effect of drug resistance on the health system **Ref:-** 1. Mandell, Douglas and Bennett's Infectious Diseases, Vol-1 2. Topley Wilson's Vol-1
	e. Control of antimicrobial drug resistance	**Obj:-** 1. Describe the problem of MRSA, PPNG and ESBL along with resistance pattern of clinical isolates in BPKIHS 2. Describe methods to prevent spread of resistance **Ref:-** 1. Mandell, Douglas and Bennett's Infectious Diseases, Vol-1 2. Topley Wilson's Vol-1
	f. Rational use of antimicrobial agents	**Obj:-** 1. Consequences of irrational use of antimicrobial agents

		2. Causes of irrational use of antibiotics 3. Steps of rational use of antibiotics **Ref:-** **1.** Essentials of Medical Pharmacology.
26	**Obesity (Physiology)**	
	a. Genetic basis of obesity	**Obj:-** **1.** Genetic basis of obesity **Ref:-** 1. To contact Dr. CB JHA , Dept of Anatomy
	b. Role of leptin in obesity	**Obj:-** **1.** to describe the hypothalamic regulation of food intake and its disorders with reference to obesity. **Ref:-** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. Text book of Physiology, Berne & Levy 6th ed.
	c. Pathological consequences of obesity	**Obj:-** 1. Neurohumoral mechanism of regulation of energy balance 2. Consequences of obesity **Ref:-** 1. Robins & Cotran: Pathologic Basis of Disease, 9th Ed. Page no. 444-448
	d. Obesity: prevention & control strategies	**Obj:-** 1. To explain various risk factors of obesity. 2. To describe prevention and control of obesity **Ref:-** 1. Park's test book of Preventive and Social Medicine. K Park – 19th ed.
27	**Pancreatitis (Anatomy)**	
	a. Gross & Microanatomy of Pancreas	**Obj:** 1. Gross & microanatomy of pancreas. **Ref:** 1. Text book of histology by Indervir singh. 2. Wheater's functional histology. **3.** Gray's anatomy 39th edition.
	b. Physiological functions of Pancreas	**Obj:** 1. To list the exocrine & endocrine secretions of pancreas 2. To describe the exocrine function of pancreas 3. To explain the regulatory mechanism of pancreatic secretions. **Ref:** 1. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 2. Ganong's review of medical physiology 25th edition. 3. William's text book of endocrinology, 13th edition.
	c. Etiopathogenesis of pancreatitis & its complications	**Obj:** 1. Etiopathogenesis of Acute and chronic pancreatitis. **Ref:** 1. Robins 9th ed. Pg:884,888
	d. Pancreatic function test	**Obj:** 1. To enlist & interpret the pancreatic function test. **Ref:** 1. Tietz text book of clinical chemistry.
	e. Management of Pancreatitis	**Obj:** 1. To access the severity of acute pancreatitis. 2. To describe the medical and surgical management of acute pancreatitis. **Ref:**

		1. Bailey & Love's Short practice of surgery, 26th Ed. **2.** Sabiston text book of surgery, 20th Ed.
28	**Vaccine (Microbiology)**	
	a. Adjuvant	**Obj:-** 1. To define adjuvant and to understand possible mechanisms of actions of adjuvant. 2. To list types of adjuvant and to explain its future prospects. 3. To outline undesirable effects of adjuvant and to explain their risk in the development of safe adjuvant vaccines. **Ref.:-** 1. Vaccines: Prospects and perspectives. Harminder Singh and Rajeshn Bhatia. 2. Textbook of Immunology: Kuby
	b. Conventional bacterial vaccines	**Obj:-** 1. To be able to describe various bacterial vaccines available under the headings: a. Description b. Manufacture / constituent c. Dosage d. Results of vaccination e. Future **Ref.:-** 1. Vaccines authors: Plotkin. Ovenstein saunders publication 2. Infectious disease clinics of North America, March 1999 3. Dermatology clinics 21 (2003) 349-369
	c. Conventional viral vaccines	**Obj:-** 1. To be able to describe various viral vaccines available under the headings: a. Description b. Manufacture / constituent c. Dosage d. Results of vaccination e. Future **Ref.:-** 1. Vaccines authors: Plotkin. Ovenstein saunders publication 2. Infectious disease clinics of North America, March 1999 3. Dermatology clinics 21 (2003) 349-369
	d. Modern approach to vaccines	**Obj:-** 1. To be able to describe the newer vaccine approaches in terms of technology and delivery system **Ref.:-** 1. Vaccines authors: Plotkin. Ovenstein saunders publication 2. Infectious disease clinics of North America, March 1999 3. Dermatology clinics 21 (2003) 349-369
	e. Evaluation of vaccine efficacy in the field	**Obj:-** 1. To know the efficacy of different vaccines in the field. 2. To learn the importance of sensitivity & specificity of different Vaccines. 3. To understands the epidemiological method to test the efficacy of vaccines **Ref.:-** **1.** CDC (Centre for Disease Control). Atlanta Website, WHO Website and relevant articles in journals. **2.** CDC (Centre for Disease Control). Atlanta Website, WHO Website and relevant articles in journals. 3. Park's test book of Preventive and Social Medicine. K Park – 17th edition – 2002

		4. Text book of Preventive and Social Medicine. Mc Gupta, BK Mahajan – 3rd edition – 2003 5. Essential Preventive Medicine. Ghai OP, Gupta P 6. Relevant Journals and publications 7. Park 8. Annual Report 9. Park K. Textbook of Preventive & Social Medicine. 17th edition Annual Report – 2004/2005, Department of Health Services, HMG, Nepal
29	**Depression (Pharmacology)**	
	a. Etiology of Depression	**Obj:** 1. To know different etiological factors related to depression. **Ref:** 1. Kaplan & Sadock's Synopsis of Psychiatry 11th Ed.
	b. Limitations of older drugs and role of newer drugs- TCA and SSRI	**Obj:** 1. Discuss MOA, ADR & Precaution of TCA & SSRI. **Ref:** 1. Essentials of medical Pharmacology, 7th edition
	c. Limitations of older drugs and role of newer drugs – MAOI and Lithium	**Obj:** 1. Discuss MOA, ADR & Precaution of MAOI and Lithium. **Ref:** 1. Essentials of medical Pharmacology, 7th edition
	d. General principles of drug treatment and non pharmacological treatment of Depression	**Obj:** 1. To know different types of non-pharmacological therapies used in T/t of Depression. **Ref:** 1. Shorter oxford text book of psychiatry 5th edition (Michael Gelder, Paul Harrison, Philip Cowen; page: 249-251)
30	**Iron Deficiency Anemia (Pathology)**	
	a. Classification of Anemia	**Obj:** **1.** Classification of anemia**.** **Ref:** 1. Robins & Cotran: Pathologic Basis of Disease, 9th Ed. Page no. 651-652
	b. Iron Metabolism	**Obj:** 1. To describe the absorption, transportation & storage of iron. 2. To explain the recent theories of iron metabolism. **Ref:** 1. Marshall's clinical chemistry. **2.** Tietz's text book of clinical chemistry.
	c. Pathogenesis and morphology of Iron Deficiency Anemia	**Obj:** 1. Etiopathogenesis of Iron Deficiency Anemia 2. Morphology of Iron Deficiency Anemia **Ref:** 1. Ref: Robins, 9th ed. Pg. 651 – 652
	d. Anemia associated with parasites	**Obj:** 1. To know the common parasites associated with anemia. **Ref:** 1. Text book of Medical Parasitology- Subash Chandra Parija 2. Parasitology-K.D. Chatterjee 3. Diagnostic Medical Parasitology-Lynne shore Garcia 4th Edition
	e. Laboratory approach to a case of anemia	**Obj:** **1.** Explain the silent laboratory parameter of Iron deficiency anemia

		2. To compare the Laboratory Test result of Iron deficiency Anemia with other types of Anemia **Ref:** **1.** Robins, 9th ed. Pg. 629 – 655,Harrison's 18th ed.)
	f. Treatment of Iron Deficiency Anemia	**Obj:** 1. Classify Iron preparation used for IDA. 2. Discuss MOA, ADR & Precautions of drugs used to treat IDA **Ref:** 1. Essential of Pharmacology 7th Edition.
31	**Tumor of Breast (Biochemistry)**	
	a. General anatomy and lymphatic drainage of breast	**Obj:** 1. Gross anatomy of breast. **Ref:** 1. Gray's anatomy 39th edition. **2.** Text book of human anatomy by B.D. Chaurasia.
	b. Risk factors/Regulation of cell cycle / Proto-oncogene	**Obj:** 1. To describe the stages, control & its regulations of cell cycle. 2. To know about oncogene, proto-oncogenes. 3. To enlist tumor markers related to disease. **Ref:** 1. Harper's review of biochemistry. **2.** Tietz's text book of clinical chemistry.
	c. Lab diagnosis and staging of breast cancer	**Obj:** **1.** Gross and microscopic features of carcinoma of breast **Ref:** 1. Robins, 9th ed. Pg.1062– 1064
	d. Pharmacological management of breast cancer	**Obj:** 1. List drugs used to treat breast cancer. 2. Discuss MOA, ADR & Precautions of drugs used to treat Breast Cancer. **Ref:** 1. Essential of Pharmacology 7th Edition.
	e. Epidemiology and Preventive aspects of breast cancer	**Obj:** 1. To know the Magnitude of breast cancer (Globally and reference to Nepal) 2. To know Risk facts of breast cancer 3. To know the prevention methods in breast cancer **Ref:** 1. Parks Textbook of preventive & social medicine 23rd ed 2. WHO websites 3. CDC web sites 4. Nepal Cancer society web site

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MBBS, Phase I