

B P Koirala Institute of Health Sciences

Dharan, Nepal

PHASE – I, MBBS



2nd Year MBBS (Batch 2016)

MULTI SYSTEM SEMINAR

[MSS]

SCHEDULE

16th May 2018 to 11th June 2018

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
16-05-2018 (WEDNESDAY)				
PANCREATITIS		(ANATOMY)	DR. SHAMSHER SHRESTHA	
1	a. Gross & Microanatomy of Pancreas	Anatomy	Dr. S. Shrestha	Jeetendra Kumar
	b. Physiological function of Pancreas	Physiology	Ms. D. M. Limbu	Aditya Sinha
	c. Etiopathogenesis of pancreatitis & its complications	Pathology	Dr. P. Paudyal	Archana Jha
	d. Pancreatic function test	Biochemistry	Dr. K. D. Mehta	Bolbam Rajak
	e. Management of Pancreatitis	Pharmacology	Dr. D. R. Panday	Gautam Mandal
17-05-2018 (THURSDAY)				
OBESITY		(PHYSIOLOGY)	DR. K. R. PANDEY	
2	a. Genetic basis of obesity	Anatomy	Dr. P. Baral	Manisha Shrestha
	b. Role of leptin in obesity	Physiology	Dr. K. R. Pandey	Nidhi Kashyap
	c. Pathological consequences of obesity	Pathology	Dr. P. Paudyal	Prakriti Karki
	d. Obesity: prevention & control strategies	Community Medicine	Dr. S. S. Budhathoki	Rajat Gupta
18-05-2018 (FRIDAY)				
ALCOHOLIC LIVER DISEASE (ALD)		(BIOCHEMISTRY)	DR. B.K.LAL DAS	
3	a. Normal physiology of liver	Physiology	Ms. D. M. Limbu	Saloni Tripathi
	b. Metabolism of alcohol	Biochemistry	Dr. B.K. Lal Das	Siddhartha Kumar Shah
	c. Liver function tests and it's interpretation	Biochemistry	Dr. B.K. Lal Das	Sweta Singh
	d. Pathological changes in ALD	Pathology	Dr. R. Shah	Mahesh singh Danga
	e. Morphology of ALD	Pathology	Dr. R. Shah	Aishwarya Bajpai
20-05-2018 (SUNDAY)				
NEWER RESPIRATORY VIRUSES		(MICROBIOLOGY)	DR. ABHILASHA SHARMA	
4	a. Emergence of newer respiratory viruses and their microbiological aspects	Microbiology	Dr. A. Sharma	Arpan Katwal
	b. H1N1 and newer influenza viruses: virological aspects, pathogenesis, clinicoepidemiological features	Microbiology	Dr. A. Sharma	Chhakka Thapa
	c. MERS Co-V: virological aspects, pathogenesis, clinic-epidemiological features	Microbiology	Dr. A. Sharma	Girendra Yadav
	d. Laboratory diagnosis and preventive measures	Microbiology	Dr. A. Sharma	Mayank Ankur
	e. Outbreak investigation of viral respiratory illness	Community Medicine	Dr. P. Pyakurel	Nikesh Jaiswal
21-05-2018 (MONDAY)				
5				

	LEUKEMIA		(PATHOLOGY)	DR. PURBESH ADHIKARI	
	a. Genetic basis of leukemia		Anatomy	Dr. P. Baral	Pramit Khatiwada
	b. Origin & differentiation of hemopoetic cells		Physiology	Dr. R. Khadka	Raju Jaiswal
	c. Classification of leukemia		Pathology	Dr. P. Adhikari	Sanchari Banerjee
	d. Laboratory diagnosis		Pathology	Dr. P. Adhikari	Sidhartha Poddar
	e. Treatment		Pharmacology	Dr. R. Kushwaha	Sylvanae Satpathy
2.00	CLIP	CLIP EVALUATION : BATCH I : A/M, B/S, C/P, D/OBG			HOSPITAL
	22-05-2018 (TUESDAY)				
	URINARY TRACT INFECTION (UTI)		(PHARMACOLOGY)	DR. D. R. PANDAY	
6	a. Etiology of UTI		Microbiology	Dr. L.B. Shrestha	Sapna
	b. Complications of UTI- Pyelonephritis		Pathology	Dr. S. Pokharel	Amit Nepali
	c. Clinical Features and Diagnosis		Microbiology	Dr. L.B. Shrestha	Ashwini Gupta
	d. Treatment of UTI		Pharmacology	Dr. D. R. Panday	Christo Simon
2.00	CLIP	CLIP EVALUATION : BATCH II : B/M, C/S, D/P, A/OBG			HOSPITAL
	23-05-2018 (WEDNESDAY)				
	BRONCHIAL ASTHMA		(ANATOMY)	DR. SARUN KOIRALA	
7	a. Gross anatomy of lung		Anatomy	Dr. S. Koirala	Harsh Aggarwal
	b. Histology of the bronchial tree		Anatomy	Dr. S. Koirala	Meenakshi Kapoor
	c. Mechanism of respiration and airway resistance		Physiology	Dr. A. Jha	Nikhil Ranjan
	d. Pathophysiology of the disease		Pathology	Dr. N. Shah	Prashant Guragain
	e. Drugs used in the management		Pharmacology	Dr. D. R. Panday	Rajveer Singh
	24-05-2018 (THURSDAY)				
	HYPERTENSION		(PHYSIOLOGY)	DR. K. R. PANDEY	
8	a. Microanatomy of blood vessels		Anatomy	Dr. G. Yadav	Sandip Pandey
	b. Regulation of BP (part I+II)		Physiology	Dr. K. R. Pandey	Simran Arya
	c. Classification & etiopathogenesis of hypertension		Pathology	Dr. S. Pokharel	Tanishq Gaurav
	d. Drugs in management of hypertensive crisis		Pharmacology	Dr. K. Chapagain	Sarweshwari Singh
	e. Epidemiology & prevention of hypertension		Community Medicine	Dr. P. Pyakurel	Anandita
	25-05-2018 (FRIDAY)				
	ALZHEIMER'S DISEASE		(BIOCHEMISTRY)	DR. J.K. BARNAWAL	
9	a. Gross anatomy of brain		Anatomy	Dr. G. Yadav	Atishi Jyotika
	b. Memory mechanism		Physiology	Dr. P. Subedi	Cosmica Shah
	c. Etiopathogenesis of Alzheimer's Disease		Pathology	Dr. P. Paudyal	Himanshu
	d. Biochemistry and molecular changes in Alzheimer's Disease		Biochemistry	Dr. J.K. Barnawal	Mihir Saxena
	e. Principle of Treatment of Alzheimer's Disease		Pharmacology	Dr. D. S. Rai	Nima Dorje Yonjan
	27-05-2018 (SUNDAY)				
	MALARIA		(COMMUNITY MEDICINE)	DR. R. B. SAH	
10	a. Epidemiology of malaria in Nepal with special ref. to falciparum malaria control & prevention malaria in Nepal		Comm. Medicine	Dr. R. B. Sah	Prashanta Shrestha

	b. Immuno pathogenesis of falciparum	Microbiology	Dr. D. Halwai	Rinkal Agrawal
	c. Complications & diagnosis	Microbiology	Dr. D. Halwai	Saraswati Sharma
	d. Treatment of falciparum malaria	Pharmacology	Dr. D. R. Panday	Sishir Poudel
	e. Management of resistance malaria	Community Medicine	Dr. D. K. Yadav	Trishna Sharma
	28-05-2018 (MONDAY)			
	HEALTH CARE ASSOCIATED INFECTIONS (HAI) AND SSIs (SURGICAL SITE INFECTIONS)	(MICROBIOLOGY)	DR. RATNA BARAL	
11	a. Health care associated infections (HAI) and SSIs (Surgical site infections)	Microbiology	Dr. R. Baral	Abishek Ranjan
	b. CLABSIs (Centerline associated Blood Stream infections)	Microbiology	Dr. R. Baral	Ananya
	c. Ventilator associated pneumonia (VAP)	Microbiology	Dr. R. Baral	Ayush Anand
	d. Catherized associated Urinary tract infections (CAUTIs)	Microbiology	Dr. R. Baral	Daphilia Warjri
	e. Hospital infection control and Prevention	Microbiology	Dr. R. Baral	Ira Kumari
2.00	CLIP	CLIP EVALUATION : BATCH III : C/M, D/S, A/P, B/OBG		HOSPITAL
	29-05-2018 (TUESDAY)			
	ANTIMICROBIAL RESISTANCE (BACTERIAL DRUG RESISTANCE)	(PHARMACOLOGY)	DR. D. SARRAF	
12	a. Mechanism of action of antimicrobials	Pharmacology	Dr. D. Sarraf	Mohammad Faiz Ansari
	b. Mechanism of antimicrobial resistance	Microbiology	Dr. A. Poudyal	Nishad Bhatta
	c. Acquisition speed of antimicrobial resistance	Microbiology	Dr. A. Poudyal	Pratiksha K.C.
	d. Problem of antimicrobial resistance	Microbiology	Dr. A. Poudyal	Ritesh Kumar Sarraf
	e. Control of antimicrobial drug resistance	Microbiology	Dr. A. Poudyal	Shailani Thakur
	f. Rational use of antimicrobial agents	Pharmacology	Dr. D. Sarraf	Soumya Priyadarshini
2.00	CLIP	CLIP EVALUATION : BATCH IV : D/M, A/S, B/P, C/OBG		HOSPITAL
	30-05-2018 (WEDNESDAY)			
	CERVICAL CANCER	(PATHOLOGY)	DR. ANJU PRADHAN	
13	a. Anatomy of cervix	Anatomy	Dr. L. Khanal	Upendra Parajuli
	b. Structure of HPV	Microbiology	Dr. L.B. Shrestha	Mukesh kumar Singh
	c. Epidemiology with special reference	Community medicine	Ms. L. Subedi	Ananya Raman
	d. Etiopathogenesis of cervical cancer	Pathology	Dr. A. Pradhan	Ayush Vardhan Dubey
	e. Diagnosis	Pathology	Dr. A. Pradhan	Debojit Routh
	f. Clinical features, Prevention and Treatment	Obstetrics & Gynecology	Dr. R. Bhatta	Kanishk Agarwal
	31-05-2018 (THURSDAY)			
14	MYOCARDIAL INFARCTION	(ANATOMY)	DR. SANDIP SHAH	

	a. Blood supply of the heart	Anatomy	Dr. S. Shah	Nakul Regmi
	b. Conductive system of heart	Anatomy	Dr. S. Shah	Nishan Aryal
	c. ECG changes in myocardial infarction	Physiology	Dr. K. R. Pandey	Praveen Mandal
	d. Etiopathogenesis of Myocardial infarction	Pathology	Dr. S. Karki	Rochana Acharya
	e. Lab diagnosis & biochemical markers for Myocardial infarction	Biochemistry	Dr. M. Lamsal	Shambhavi
	f. Drugs for treatment of patients with Myocardial infarction	Pharmacology	Dr. D. Sarraf	Srishti
	01-06-2018 (FRIDAY)			
	PREGNANCY & PARTURITION	(PHYSIOLOGY)	DR. RITA KHADKA	
15	a. Fertilization of ovum & implantation of embryo	Anatomy	Dr. P. Yadav	Aaditya Kumar Mishra
	b. Alteration in physiological parameters during pregnancy	Physiology	Dr. R. Khadka	Ankita Tripathi
	c. Parturition: causes/mechanism	Physiology	Dr. R. Khadka	Bijayanand Yadav
	d. Nutrition during pregnancy	Community Medicine	Mr. B. K. Yadav	Dev Ashish Bhattarai
	e. Drugs contra-indicated in pregnancy	Pharmacology	Dr. B. Koirala	Kriti Jha
	03-06-2018 (SUNDAY)			
	DIABETES MELLITUS (DM)	(BIOCHEMISTRY)	DR. R. K. CHAUDHARY	
16	a. Insulin secretion & its role in metabolism	Physiology	Dr. N. Limbu	Narendra Mohan Jha
	b. Biochemical alteration in DM	Biochemistry	Dr. R. K. Chaudhary	Nitesh Kumar Jha
	c. Etiopathogenesis of DM	Pathology	Dr. P. Paudyal	Priyanka Kumari
	d. Lab diagnosis of DM	Biochemistry	Dr. R. K. Chaudhary	Rupak Dhakal
	e. Trends of treatment in DM	Pharmacology	Dr. B. Koirala	Shaurya
	04-06-2018 (MONDAY)			
	ACUTE FEBRILE ILLNESS	(MICROBIOLOGY)	DR. SHRADDHA SIWAKOTI	
17	a. Definition/Classification/ Common causes of acute febrile illness in Indian subcontinent	Microbiology	Dr. S. Siwakoti	Sunita Pujara
	b. Leptospirosis-Epidemiology, Pathogenesis, Clinical feature, Laboratory diagnosis, management	Microbiology	Dr. S. Siwakoti	Aakansha Rai
	c. Scrub Typhus- Epidemiology, Pathogenesis, Clinical Feature, Laboratory diagnosis, Management	Microbiology	Dr. S. Siwakoti	Anurag Pandey
	d. Other arthropod borne illness- Malaria, Dengue and Chikungunya	Microbiology	Dr. S. Siwakoti	Bikash Kumar Sah
	e. Approach to laboratory diagnosis of acute febrile illness.	Microbiology	Dr. S. Siwakoti	Dikshya Yadav
	05-06-2018 (TUESDAY)			
	LEPROSY	(PHARMACOLOGY)	DR. G. P. RAUNIAR	
18	a. Prevalence & Transmission	Community Medicine	Dr. R. B. Sah	Kshitiz Bhandari
	b. Clinical types & features	Dermatology	Dr. M. K. Chaudhary	Netra Prassan
	c. Histopath spectrum	Pathology	Dr. S. Dhakal	Objan Kumar Rawal
	d. Lab diagnosis	Microbiology	Dr. R. Sah	Puja Rani
	e. Treatment of leprosy	Pharmacology	Dr. G. P. Rauniar	Sabin Ghale
	06-06-2018 (WEDNESDAY)			
19	TUMOR OF BREAST	(BIOCHEMISTRY)	DR. O. SHERCHAND	

	a. General anatomy and lymphatic drainage of breast	Anatomy	Dr. C. Pokhrel	Shivani Agarwal
	b. Risk factors/Regulation of cell cycle / Proto-oncogene	Biochemistry	Dr. O. Sherchand	Surjan Kumar Singh
	c. Lab diagnosis and staging of breast cancer	Pathology	Dr. S. Dhakal	Aakash Neupane
	d. Pharmacological management of breast cancer	Pharmacology	Dr. K. Chapagain	Anusha Rayamajhi
	e. Epidemiology and Preventive aspects of breast cancer	Community Medicine	Dr. R. Karkee	Binita Kunwar
	07-06-2018 (THURSDAY)			
	CUSHING SYNDROME	(PHYSIOLOGY)	DR. N. LIMBU	
20	a. Histology of adrenal cortex	Anatomy	Dr. P. Yadav	Dipendra Prasad Yadav
	b. Functions of adrenal cortex esp. Cortisol	Physiology	Dr. N. Limbu	Kshitiz Rijal
	c. Synthesis and release of Cortisol in laboratory diagnosis of Cushing syndrome	Biochemistry	Dr. S. A. Khan	Nidesh Raj Baral
	d. Diagnostic features of Cushing syndrome	Internal medicine	Dr. R. Maskey	Pallavi
	e. Principle of Treatment of Cushing syndrome	Pharmacology	Dr. R. Kushwaha	Pushpal Prasoon
	08-06-2018 (FRIDAY)			
	ARBOVIRAL INFECTIONS	(MICROBIOLOGY)	DR. N.R. BHATTARAI	
21	a. Arboviruses: Definition/Classification	Microbiology	Dr. N.R. Bhattarai	Sachin Chaudhary
	b. Arboviral infection prevalent in Nepal: Japanese Encephalitis, Dengue fever	Community Medicine	Dr. S. B. Singh	Shreyashi Jain
	c. Emerging Arboviral infection of international concern: Zika Virus	Microbiology	Dr. N.R. Bhattarai	Sushan Pokharel
	d. Prevention of Arboviral infection	Community Medicine	Ms. G. N. Gurung	Aashish Guragain
	10-06-2018 (SUNDAY)			
	PREVENTION OF TUBERCULOSIS	(COMMUNITY MEDICINE)	DR. V.K. KHANAL	
22	a. Epidemiology	Community Medicine	Dr. V.K. Khanal	Aprajita
	b. Pathogenesis of Tuberculosis	Pathology	Dr. N. Shah	Bivek Khatiwada
	c. Etiology & diagnosis of TB	Microbiology	Dr. D. Halwai	Gaurab Paudel
	d. Treatment of tuberculosis – I	Pharmacology	Dr. D. S. Rai	Madhu Chaturvedi
	e. Treatment of tuberculosis – II	Pharmacology	Dr. D. S. Rai	Nidhi Chaudhary
	f. Prevention of TB	Community Medicine	Dr. V.K. Khanal	Pradip Raut
	11-06-2018 (MONDAY)			
	WORM INFESTATION	(PHARMACOLOGY)	DR. K. CHAPAGAIN	
23	a. Classification, Clinical Manifestation and complication	Microbiology	Mr. T. Pandit	Rahul Reddy
	b. Lab diagnosis	Microbiology	Mr. T. Pandit	Saloni
	c. Drug used in intestine – I	Pharmacology	Dr. K. Chapagain	Shristi Swaroop
	d. Drug used in intestine – II	Pharmacology	Dr. K. Chapagain	Sushil Dhakal
	e. Prevention of worm infestation	Community Medicine	Dr. K. R. Sharma	Prashanta Shrestha
SELF STUDY FROM 12-06-2018 To 17-06-2018				

18-06-2018 (MONDAY) UNIT '6' INTERNAL EXAMINATION**19-06-2018 (TUESDAY) FHE EVALUATION****NUMBERS OF TOPIC FOR THE DEPT ARE AS FOLLOWS:**

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

CLINICAL POSTING SCHEDULE

21-05-2018 (MONDAY)	2.00	CLIP	CLIP EVALUATION : BATCH I : A/M, B/S, C/P, D/OBG	HOSPITAL
22-05-2018 (TUESDAY)	2.00	CLIP	CLIP EVALUATION : BATCH II : B/M, C/S, D/P, A/OBG	HOSPITAL
28-05-2018 (MONDAY)	2.00	CLIP	CLIP EVALUATION : BATCH III : C/M, D/S, A/P, B/OBG	HOSPITAL
29-05-2018 (TUESDAY)	2.00	CLIP	CLIP EVALUATION : BATCH IV : D/M, A/S, B/P, C/OBG	HOSPITAL

Total Topic: 23

Total Sub topic: 116

Total Students: 115



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Dr. Seraj Ahmed Khan
Program Coordinator
MBBS, Phase I



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Dr. Karishma R. Pandey
Deputy Program Coordinator
MBBS, Phase I

SEMINAR TOPIC & SUB TOPIC/ OBJECTIVES & REFERENCES

MSS, 2017-2018

2nd Year MBBS [Batch 2016]

S.N	SEMINAR TOPIC AND SUB TOPIC	OBJECTIVES AND REFERENCES
1	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 39 th 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 13 th ed. 2. Ganong's review of medical physiology 25 th edition. 3. William's text book of endocrinology, 13 th edition.
	c. Etiopathogenesis of pancreatitis & its complications	Obj:- 1. Etiopathogenesis of Acute and chronic pancreatitis. Ref:- 1. Robins 9 th 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 assess 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, 26 th Ed. 2. Sabiston text book of surgery, 20 th Ed.
2	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 13 th ed.. 2. Ganong's review of medical physiology 25 th edition. 3. Text book of Physiology, Berne & Levy 6 th 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, 9 th 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 – 19 th ed.
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 13 th ed.. 2. Ganong's review of medical physiology 25 th edition. 3. Text book of applied physiology, Samson Wright 13 th ed.
	b. Metabolism of alcohol	Obj:- 1. To describe how ethanol is metabolized in the body. 2. To interpret the biochemical findings in ALD. Ref:- 1. Tietz Textbook of Clinical Chemistry (3 rd 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. Ref:- 3. Tietz Textbook of Clinical Chemistry (4 th edition)
	d. Pathological changes in ALD	Obj:- 1. Pathogenesis of alcoholic liver disease Ref:- 1. Robbins & Cortran: Pathologic Basis of Disease, 9 th 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, 9 th Ed. Page no. 842-845	
4	Newer Respiratory Viruses (Microbiology)	
	a. Emergence of newer respiratory viruses and their microbiological aspects	Obj:- 1. To list the newer respiratory viruses 2. To know the microbiological properties of the viruses Ref:- 1. Jaffar A al Tawfic, Surveillance for emerging respiratory viruses: unza-uclms.org 2. Ananthanarayan and Paniker's textbook of Microbiology-10 th edition.
	b. H1N1 and newer influenza viruses: virological aspects, pathogenesis, clinicoepidemiological features	Obj:- 1. To describe virological aspect, pathogenesis and clinic-epidemiological features Ref:- 1. Ananthanarayan and Paniker's textbook of Microbiology-10 th edition. 2. Mandell, Douglas and Bennett's Infectious Diseases, Vol-2
c. MERS Co-V: virological aspects, pathogenesis, clinic-epidemiological features	Obj:- 1. To describe the virological aspect, pathogenesis and clinic epidemiological clinical features. Ref:- 1. Ananthanarayan and Paniker's textbook of Microbiology-10 th edition.	

		<ol style="list-style-type: none"> CP Baveja's textbook of Microbiology-6th edition. Mandell, Douglas and Bennett's Infectious Diseases, Vol-2
	d. Laboratory diagnosis and preventive measures	<p>Obj:-</p> <ol style="list-style-type: none"> To describe the approaches to laboratory diagnosis and prevention of viral respiratory infections <p>Ref:-</p> <ol style="list-style-type: none"> Ananthanarayan and Paniker's textbook of Microbiology-10th edition. Mandell, Douglas and Bennett's Infectious Diseases, Vol-2
	e. Outbreak investigation of viral respiratory illness	<p>Obj:-</p> <ol style="list-style-type: none"> To describe the approach to an outbreak of viral respiratory infection <p>Ref:-</p> <ol style="list-style-type: none"> Steps of an outbreak investigation. CDC 2016
5	Leukemia (Pathology)	
	a. Genetic basis of leukemia	<p>Obj:-</p> <ol style="list-style-type: none"> Genetic basis of leukemia <p>Ref:-</p> <ol style="list-style-type: none"> To contact Prof CB JHA , Dept of Anatomy
	b. Origin & differentiation of hemopoetic cells	<p>Obj:-</p> <ol style="list-style-type: none"> Stages of Erythropoiesis and leucopoiesis. Defence properties of neutrophils and macrophages. <p>Ref:-</p> <ol style="list-style-type: none"> Review of Medical physiology by W.F. Ganong, Textbook of Medical Physiology by A.C. Guyton & Hall Understanding of Medical Physiology by RL Bijlani and Samson Wright's Applied Physiology.
	c. Classification of leukemia	<p>Obj:-</p> <ol style="list-style-type: none"> Revised FAB Classification of acute leukemia Peripheral blood & marrow findings in AML, ALL, & CLL <p>Ref:-</p> <ol style="list-style-type: none"> Robbins & Cotran: Pathologic Basis of Disease, 9th Ed. Page no. 588, 590-594, 611-614 Wintrobe's Clinical Hematology, 11th Ed. Vol II, Page no. 616-618
	d. Laboratory diagnosis	<p>Obj:-</p> <ol style="list-style-type: none"> Immuno markers & stains in diagnosis of acute leukemia Diagnostic criteria for AML, CML, ALL & CLL Cytogenetics in AML, ALL CML, CLL <p>Ref:-</p> <ol style="list-style-type: none"> Wintrobe's Clinical Hematology, 11th Ed. Vol II, Page no. 616-618
	e. Treatment	<p>Obj:-</p> <ol style="list-style-type: none"> List the drugs used in leukemia with their mechanism of action and precautions to be taken. Mention the commonly used regimens of combination therapy in ALL with rationale. Discuss the role of imitanib mesylate in CML. <p>Ref:-</p> <ol style="list-style-type: none"> Basic and Clinical Pharmacology- Betram G. Katzung – latest edition.
6	Urinary Tract Infection (UTI) (Pharmacology)	
	a. Etiology of UTI	<p>Obj:-</p> <ol style="list-style-type: none"> To know the common uropathogens causing UTI. To know the virulence factors of uropathogens.

		Ref:- 1. Ananthanarayan and Paniker's, test book of Microbiology 9 th edition 2. Mandell, Douglas and Bennett's: Principles and Practice of infectious Diseases, vol 1 and 2, 7 th edition.
	b. Complications of UTI - Pyelonephritis	Obj:- 1. Morphology of acute and chronic Pyelonephritis Ref:- 1. Robin, 9 th 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, 7 th Edition
7	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 4 th ed. 2. Textbook of Medical Physiology, Guyton & Hall 13 th ed.. 3. Ganong's review of medical physiology 25 th 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, 9 th 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 11 th Ed.

		<ol style="list-style-type: none"> 2. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition. 3. Harrison's Principles of internal medicine. Latest Edition.
8	Hypertension (Physiology)	
	a. Microanatomy of blood vessels	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Microanatomy of blood vessels <p>Ref:-</p> <ol style="list-style-type: none"> 2. General Anatomy- A K Datta or 3. Tissues of the body- L. G. Clarke
	b. Regulation of BP	<p>Obj:-</p> <ol style="list-style-type: none"> 1. To explain the Neural regulation of BP <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Type and causes of hypertension 2. Mechanism of essential hypertension 3. Vascular Pathology in Hypertension 4. Effects on cardiovascular, renal & other systems <p>Ref:-</p> <ol style="list-style-type: none"> 1. Robbins & Cortran: Pathologic Basis of Disease,9th Ed. Page no. 487-491
	d. Drugs in management of hypertensive crisis	<p>Obj:-</p> <ol style="list-style-type: none"> 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. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition Clinical Pharmacology- Laurence.
e. Epidemiology & prevention of hypertension	<p>Obj:-</p> <ol style="list-style-type: none"> 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 <p>Ref:-</p> <ol style="list-style-type: none"> 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 	
9	Alzheimer's Disease (Biochemistry)	
	a. Gross anatomy of brain	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Features of cerebral hemisphere. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Snell's neuroanatomy. 2. Gray's anatomy 39th edition.
	b. Memory mechanism	<p>Obj:-</p> <ol style="list-style-type: none"> 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:- <ol style="list-style-type: none"> 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:- <ol style="list-style-type: none"> 1. Pathogenesis of Alzheimer's Disease 2. Morphology of Alzheimer's Disease Ref:- <ol style="list-style-type: none"> 1. Robins, 9th ed. Pg.1288 – 1292.
	d. Biochemistry and molecular changes in Alzheimer's Disease	Obj:- <ol style="list-style-type: none"> 1. To describe the biochemical and molecular changes in Alzheimer's Disease Ref:- <ol style="list-style-type: none"> 1. Marshaff's Biochemistry 2. Harper's review of Biochemistry
	e. Principle of Treatment of Alzheimer's Disease	Obj:- <ol style="list-style-type: none"> 1. Mention drugs used to treat Alzheimer's Disease Ref:- <ol style="list-style-type: none"> 1. Goodman and Gillman's The Pharmacological basis of Therapeutics, 12th Edition
10	MALARIA (COMMUNITY MEDICINE)	
	a. Epidemiology of malaria in Nepal with special ref. to falciparum malaria control & prevention malaria in Nepal	Obj:- <ol style="list-style-type: none"> 1. To know the distribution of malaria (worldwide, South East Asia Region and Nepal) with special reference to falciparum malaria 2. To understand the agent, host and environment for the occurrence of Malaria in Nepal 3. To know the various approaches to malaria control 4. To explain various strategies and activities carried out in malaria control program in Nepal Ref:- <ol style="list-style-type: none"> 1. Park K, Preventive & Social Medicine, 19th edition 2. Annual Report 2007/2008, DoHS, MoH. Nepal WHO – Health situation in South East Asia Region, New Delhi, Regional Office SEAR.
	b. Immuno pathogenesis of falciparum	Obj:- <ol style="list-style-type: none"> 1. Brief immunology Ref: <ol style="list-style-type: none"> 1. Mandell, Douglas and Bennett's Infectious Diseases Vol-1. 2. K.D. Chatterjee Parasitology 3. Infectious diseases by – Barbara A et al.
	c. Complications & diagnosis	Obj:- <ol style="list-style-type: none"> 1. Main complications and methods used in diagnosis. Ref:- <ol style="list-style-type: none"> 1. Mandell, Douglas and Bennett's Infectious Diseases Vol-1. 2. K.D. Chatterjee Parasitology 3. Infectious diseases by – Barbara A et al. 4. Microbiology and microbial infections (Vol-5) Topley and Wilson's
	d. Treatment of falciparum malaria	Obj:- <ol style="list-style-type: none"> 1. Drug use in Falciparum Malaria with Chloroquine sensitive and their dosages, route of administration, duration and precaution. Ref:-

		1. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition.
	e. Management of resistance malaria	Obj:- <ol style="list-style-type: none"> 1. Drug use in resistant malaria. 2. Chemoprophylaxis of malaria. 3. Treatment regimens Ref:- <ol style="list-style-type: none"> 1. Basic and Clinical Pharmacology- Betram G. Katzung – latest edition.
11	HEALTH CARE ASSOCIATED INFECTIONS (HAI) AND SSIs (SURGICAL SITE INFECTIONS) (MICROBIOLOGY)	
	a. Health care associated infections (HAI) and SSIs (Surgical site infections)	Obj:- <ol style="list-style-type: none"> 1. To define and classify (HAI) 2. To know the various predisposing factors causing HAI 3. Common Sources and organisms causing HAI and SSIs (Surgical site infections) Obj:- <ol style="list-style-type: none"> 1. Define SSIs based on diagnostic criteria 2. List risk factors and common agents causing SSIs 3. List source of infections 4. Describe lab diagnosis and prevention Ref:- <ol style="list-style-type: none"> 1. Ananthanarayan and Paniker’s textbook of Microbiology-10th edition. 2. Essentials of Medical Microbiology, Apurba Sankar Sastry, Sandha Bhatt.
	b. CLABSIs (Centerline associated Blood Stream infections)	Obj:- <ol style="list-style-type: none"> 1. Define CLABSI Based on diagnostic criteria 2. List risk factors and common agents causing CLABSI 3. List source of infections 4. Describe lab diagnosis and prevention Ref:- <ol style="list-style-type: none"> 1. Ananthanarayan and Paniker’s textbook of Microbiology-10th edition. 2. Essentials of Medical Microbiology, Apurba Sankar Sastry, Sandha Bhatt.
	c. Ventilator associated pneumonia (VAP)	Obj:- <ol style="list-style-type: none"> 1. Define VAP based on diagnostic criteria 2. List risk factors and common agents causing VAP 3. List the source of infections 4. Describe lab diagnosis and prevention Ref:- <ol style="list-style-type: none"> 1. Ananthanarayan and Paniker’s textbook of Microbiology-10th edition. 2. Essentials of Medical Microbiology, Apurba Sankar Sastry, Sandha Bhatt.
	d. Catheterized associated Urinary tract infections (CAUTIs)	Obj:- <ol style="list-style-type: none"> 1. Define CA-UTIs based on diagnostic criteria 2. List risk factors and common agents causing CA-UTI 3. List the source of infections 4. Describe lab diagnosis and prevention Ref:- <ol style="list-style-type: none"> 1. Ananthanarayan and Paniker’s textbook of Microbiology-10th edition. 2. Essentials of Medical Microbiology, Apurba Sankar Sastry, Sandha Bhatt.
	e. Hospital infection control and	Obj:-

	Prevention	<ol style="list-style-type: none"> 1. Able to discuss various infection control measures for prevention of HAIs 2. Able to know the hospital infection control committee and its role and responsibilities. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Ananthanarayan and Paniker's textbook of Microbiology-10th edition. 2. Essentials of Medical Microbiology, Apurba Sankar Sastry, Sandha Bhatt.
12 Antimicrobial Resistance (Bacterial Drug Resistance) (Pharmacology)		
	a. Mechanism of action of antimicrobials	<p>Obj:-</p> <ol style="list-style-type: none"> 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. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Integrated Pharmacology. 2. Pharmacology, Lippincott's Illustrated Reviews.
	b. Mechanism of antimicrobial resistance	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Mechanisms with example how various antimicrobials are rendered ineffective by various microorganisms. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Mandell, Douglas and Bennett's Infectious Diseases, Vol-1 2. Topley Wilson's Vol-1
	c. Acquisition speed of antimicrobial resistance	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Mechanisms of acquisition of drug resistance and its dissemination <p>Ref:-</p> <ol style="list-style-type: none"> 1. Mandell, Douglas and Bennett's Infectious Diseases, Vol-1 2. Topley Wilson's Vol-1
	d. Problem of antimicrobial resistance	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Epidemiology of infections caused by drug resistant bacteria 2. Effect of drug resistance on the health system <p>Ref:-</p> <ol style="list-style-type: none"> 1. Mandell, Douglas and Bennett's Infectious Diseases, Vol-1 2. Topley Wilson's Vol-1
	e. Control of antimicrobial drug resistance	<p>Obj:-</p> <ol style="list-style-type: none"> 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 <p>Ref:-</p> <ol style="list-style-type: none"> 1. Mandell, Douglas and Bennett's Infectious Diseases, Vol-1 2. Topley Wilson's Vol-1
	f. Rational use of antimicrobial agents	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Consequences of irrational use of antimicrobial agents 2. Causes of irrational use of antibiotics 3. Steps of rational use of antibiotics <p>Ref:-</p> <ol style="list-style-type: none"> 1. Essentials of Medical Pharmacology.
13 Cervical Cancer (Pathology)		
	a. Anatomy of cervix	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Gross anatomy of uterus. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Gray's anatomy 39th edition. 2. Text book of human anatomy by B.D.Chaurasia.
	b. Structure of HPV	Obj:-

		<p>1. To know the structure & properties of HPV.</p> <p>Ref:-</p> <ol style="list-style-type: none"> 1. Text book of Microbiology, 9th Ed., Ananthanarayan & Paniker 2. Medical Microbiology, Jawetz, Melnick and Adelberg
c. Epidemiology with special reference	<p>Obj:-</p> <ol style="list-style-type: none"> 1. To know the magnitude problem of cervical cancer. 2. To know the risk per cervical cancer. <p>Ref:-</p> <ol style="list-style-type: none"> 1. K Park. Text book of preventive and social medicine, 23rd edition. 2. WHO website. 	
d. Etiopathogenesis of cervical cancer	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Etiopathogenesis of Cervical Cancer. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 	
e. Diagnosis	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Biopsy related changes of cervical intraepithelial lesion and cervical cancer 2. Methods of detection <p>Ref:-</p> <ol style="list-style-type: none"> 1. Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no 	
f. Clinical features, Prevention and Treatment	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Clinical features, methods of screening & treatment. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Shaw's Gynecology. 	
14	Myocardial Infarction (Anatomy)	
a. Blood supply of the heart	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Coronary circulation <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Conductive System & heart <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 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. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Understanding Medical Physiology, RL Bijlani & S.Manjunatha 4th ed. 2. Textbook of Medical Physiology, Guyton & Hall 13th ed.. 	
d. Pathophysiology of myocardial infarction	<p>Obj:-</p> <ol style="list-style-type: none"> a. Risk Factor b. Pathogenesis c. Morphology 	

		<p>d. Complications</p> <p>Ref:-</p> <ol style="list-style-type: none"> 1. Robbins & Cotran: Pathological Basis of Disease, 9th Ed.
	e. Lab diagnosis & biochemical markers for myocardial infarction	<p>Obj:-</p> <ol style="list-style-type: none"> 1. To list and classify the serum markers of myocardial damage. 2. To interpret the lab findings in patients with myocardial infarction. <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Pharmacological and non-pharmacological measures. 2. Role of following drugs in Post MI. <ol style="list-style-type: none"> a. Antiplatelet agents b. Beta blocked c. ACE inhibitors d. Hypolipidemic agents. <p>Ref:-</p> <ol style="list-style-type: none"> 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	Pregnancy & Parturition (Physiology)	
	a. Fertilization of ovum & implantation of embryo	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Fertilization of ovum & implantation of embryo <p>Ref:-</p> <ol style="list-style-type: none"> 1. Embryology : 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	<p>Obj:-</p> <ol style="list-style-type: none"> 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 <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 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. <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 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

		<p>mother</p> <ol style="list-style-type: none"> Discuss the effect of nutrition on pregnancy and pregnancy outcome List components of nutrition intervention programs combating maternal nutrition deficiencies in Nepal. Explain the channel of nutrition intervention programs for mother in the country. <p>Ref:-</p> <ol style="list-style-type: none"> Mother and child health nutrition- NIN Publication nutritive value of Indian foods-NiN publication Hyderabad Food and Nutrition – M Swaminathan, BAPPCO publication preventive and social medicine – Mahajan and Gupta Annual Report- DHS, MOH, Govt of Nepal
	e. Drugs contra- indicated in pregnancy	<p>Obj:-</p> <ol style="list-style-type: none"> Teratogenicity with list of important teratogenic drugs. Risk category of drugs during pregnancy. <p>Ref:-</p> <ol style="list-style-type: none"> Basic and Clinical Pharmacology- Betram G. Katzung – latest edition Clinical Pharmacology- Laurence. Essential of Medical Pharmacology, KD Tripathi latest edition.
16	Diabetes Mellitus (DM) (Biochemistry)	
	a. Insulin secretion & its role in metabolism	<p>Obj:-</p> <ol style="list-style-type: none"> To describe the mechanism of insulin secretion To describe the mechanism of insulin action To describe the role of insulin in carbohydrate, fat and protein metabolism in normal person and diabetic patients. <p>Ref:-</p> <ol style="list-style-type: none"> Textbook of Medical Physiology, Guyton & Hall 13th ed.. Ganong's review of medical physiology 25th edition. Williams text book of Endocrinology 12th ed. Harper's illustrate Biochemistry 30th ed.
	b. Biochemical alteration in DM	<p>Obj:-</p> <ol style="list-style-type: none"> Outline the mechanism of ketone bodies formation and ketoacidosis. Mechanism of atherosclerosis in diabetes mellitus <p>Ref:-</p> <ol style="list-style-type: none"> Harrison's Principle of Internal Medicine
	c. Etiopathogenesis of DM	<p>Obj:-</p> <ol style="list-style-type: none"> Pathogenesis of the complication of DM Morphology of the complications of DM <p>Ref:-</p> <ol style="list-style-type: none"> Robbins & Cortran: Pathologic Basis of Disease, 9th Ed. Page no. 1115-1119
	d. Lab diagnosis of DM	<p>Obj:-</p> <ol style="list-style-type: none"> To plan laboratory tests in diagnosis and monitoring diabetes mellitus (type, severity and regular monitoring). To interpret the laboratory report in diagnosis of DM. <p>Ref:-</p> <ol style="list-style-type: none"> Tietz Textbook of Clinical Chemistry (3rd edition)
	e. Trends of treatment in DM	<p>Obj:-</p> <ol style="list-style-type: none"> Monocomponent insulin and their importance. Newer insulin delivery systems. Status of metformin and thiazolidinediones in therapy. Outline of treatment of type 2 DM. <p>Ref:-</p>

		<ol style="list-style-type: none"> 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.
17	ACUTE FEBRILE ILLNESS (MICROBIOLOGY)	
	a. Definition/Classification/ Common causes of acute febrile illness in Indian subcontinent	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Definition of Acute Febrile Illness (AFI) 2. Etiological classification of AFI 3. List out the common causes of AFI. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Shelke YP, Deotale VS, Maraskolhe DL. Spectrum of infections in acute febrile illness in central India. Indian J Med Microbiol 2017; 35: 480-4. 2. Mandell, Douglas and Bennett's Infectious Diseases –Vol 1.
	b. Leptospirosis-Epidemiology, Pathogenesis, Clinical feature, Laboratory diagnosis, management	<p>Obj:-</p> <ol style="list-style-type: none"> 1. To describe the epidemiology, pathogenesis, clinical feature, laboratory diagnosis and management of leptospirosis. <p>Ref:-</p> <ol style="list-style-type: none"> 3. Ananthanarayan and Paniker's textbook of Microbiology-10th edition. 4. Harrison principle of internal medicine, 15th edition. 5. Mandell, Douglas and Bennett's infectious Diseases-Vol 2.
	c. Scrub Typhus- Epidemiology, Pathogenesis, Clinical Feature, Laboratory diagnosis, Management	<p>Obj:-</p> <ol style="list-style-type: none"> 1. To describe the epidemiology, pathogenesis, clinical feature, laboratory diagnosis and management of Scrub typhus. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Ananthanarayan and Paniker's textbook of Microbiology-10th edition. 2. Harrison principle of internal medicine, 15th edition. 3. Mandell, Douglas and Bennett's infectious Diseases-Vol 2.
	d. Other arthropod borne illness- Malaria, Dengue and Chikungunya	<p>Obj:-</p> <ol style="list-style-type: none"> 1. To describe the epidemiology, pathogenesis and laboratory diagnosis of malaria, dengue and chikungunya. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Ananthanarayan and Paniker's textbook of Microbiology-10th edition. 2. Mandell, Douglas and Bennett's infectious Diseases-Vol 2. 3. K.D Chatterjee Parasitology.
	e. Approach to laboratory diagnosis of acute febrile illness.	<p>Obj:-</p> <ol style="list-style-type: none"> 1. To describe the approach to laboratory diagnosis of AFI. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Harrison principle of internal medicine, 15th edition.
18	Leprosy (Pharmacology)	
	a. Prevalence & Transmission	<p>Obj:-</p> <ol style="list-style-type: none"> 1. To describe the epidemiological situation of Leprosy in Nepal 2. To understand the national Leprosy Control Program <p>Ref:-</p> <ol style="list-style-type: none"> 1. Park K. Textbook of Preventive & Social Medicine. 19th edition 2. Annual Report – 2007/2008, Department of Health Services, Nepal
	b. Clinical types & features	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Sign & Symptom <p>Ref:-</p> <ol style="list-style-type: none"> 1. Essential of medical Pharmacology, KD Tripathi- latest edition. 2. Dermatology in general medicine latest Ed.

	c. Histopath spectrum	Obj:- <ol style="list-style-type: none"> Intermediate Leprosy (I) Tuberculoid Leprosy (TT) & Borderline Tuberculoid (BT) Lepromatous Leprosy (LL) & Borderline (BB) & (BL) Type I & II reactions Ref:- <ol style="list-style-type: none"> Hand book of Leprosy, 5th Ed. Page no. 385-387 Lever's Histopathology of the skin, 10th Ed, Page no. 558-567
	d. Lab diagnosis	Obj:- <ol style="list-style-type: none"> Methods used in diagnosis Ref:- <ol style="list-style-type: none"> Text Book of Microbiology by P.Chakraborty Jawetz's, Review of medical microbiology Harrison's principles of internal medicine.18th Ed, page No. 1363-1364 Infectious diseases by Barbara et al
	e. Treatment of leprosy	Obj:- <ol style="list-style-type: none"> Enumerate the drug used in leprosy. Discuss the mechanism of action, adverse effect, precaution and contraindication. Mention the drug regimens for leprosy. Role of corticosteroid in leprosy. Ref:- <ol style="list-style-type: none"> Essential of medical Pharmacology, KD Tripathi- latest edition. Dermatology in general medicine latest Ed.
19	Tumor of Breast (Biochemistry)	
	a. General anatomy and lymphatic drainage of breast	Obj:- <ol style="list-style-type: none"> Gross anatomy of breast. Ref:- <ol style="list-style-type: none"> Gray's anatomy 39th edition. Text book of human anatomy by B.D. Chaurasia.
	b. Risk factors/Regulation of cell cycle / Proto-oncogene	Obj:- <ol style="list-style-type: none"> To describe the stages, control & its regulations of cell cycle. To know about oncogene, proto-oncogenes. To enlist tumor markers related to disease. Ref:- <ol style="list-style-type: none"> Harper's review of biochemistry. Tietz's text book of clinical chemistry.
	c. Lab diagnosis and staging of breast cancer	Obj:- <ol style="list-style-type: none"> Gross and microscopic features of carcinoma of breast Ref:- <ol style="list-style-type: none"> Robins, 9th ed. Pg.1062– 1064
	d. Pharmacological management of breast cancer	Obj:- <ol style="list-style-type: none"> List drugs used to treat breast cancer. Discuss MOA, ADR & Precautions of drugs used to treat Breast Cancer. Ref:- <ol style="list-style-type: none"> Essential of Pharmacology 7th Edition.
	e. Epidemiology and Preventive aspects of breast cancer	Obj:- <ol style="list-style-type: none"> To know the Magnitude of breast cancer (Globally and reference to Nepal) To know Risk facts of breast cancer To know the prevention methods in breast cancer Ref:- <ol style="list-style-type: none"> Parks Textbook of preventive & social medicine 23rd ed WHO websites

		<ol style="list-style-type: none"> CDC web sites Nepal Cancer society web site
20	Cushing Syndrome (Physiology)	
	a. Histology of adrenal cortex	Obj:- <ol style="list-style-type: none"> Microanatomy of adrenal cortex. Ref:- <ol style="list-style-type: none"> Text book of histology by Indervir singh. Wheater's functional histology.
	b. Functions of adrenal cortex esp. Cortisol	Obj:- <ol style="list-style-type: none"> To explain in detail the effects of Cortisol in <ol style="list-style-type: none"> Metabolism of carbohydrate, protein & fat. Food intake & fat deposition. Blood cells (role in anti-inflammation, allergic reaction & immunity) Different systems viz; CVS, CNS, MSK, GIT, Renal System and connective tissues. Ref:- <ol style="list-style-type: none"> Textbook of Medical Physiology, Guyton & Hall 13th ed.. William's text book of endocrinology, 13th edition.
	c. Synthesis and release of Cortisol in laboratory diagnosis of Cushing syndrome	Obj:- <ol style="list-style-type: none"> To elucidate the mechanism of Cortisol synthesis & secretion. To outline/ enumerate the biochemical parameters for diagnosis of Cushing syndrome. To interpret the above parameters. Ref:- <ol style="list-style-type: none"> Tietz's text book of clinical chemistry and molecular diagnostics, 5th ed.
	d. Diagnostic features of Cushing syndrome	Obj:- <ol style="list-style-type: none"> To enlist signs and symptoms in Cushing syndrome patients. Ref:- <ol style="list-style-type: none"> Kasper, D.L. et al. 2015. Harrison's principles of internal medicine, 19th ed. 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:- <ol style="list-style-type: none"> To find the causes of Cushing syndrome Treatment based on the cause. Ref:- <ol style="list-style-type: none"> Goodman and Gillman's The Pharmacological basis of Therapeutics, 12th Edition Katzung, B., S. Masters, and A.Trevor. 2014. Basic and clinical pharmacology, 13th ed. Tripathi, T.D. 2013. Essentials of medical pharmacology, 7th ed. 	
21	Arboviral Infections (Microbiology)	
	a. Arbovirus: Definition/Classification	Obj:- <ol style="list-style-type: none"> Able to define Arbovirus Able to know the taxonomic classification of some important Arbovirus Able to list important Arbovirus, its infection and vectors Ref:- <ol style="list-style-type: none"> Ananthanarayan and Paniker's , text book of Microbiology, 9th Edition
	b. Arboviral infection prevalent in Nepal: Japanese Encephalitis and	Obj:- <ol style="list-style-type: none"> To know the geographic distribution of JE, Dengue in the

	Dengue fever	<p>context of Nepal</p> <ol style="list-style-type: none"> To know about the agent, host and environmental factor related to these infections Able to describe the Arbovirus, host vector transcycle To describe the pathogenesis of JE, Dengue fever. <p>Ref:-</p> <ol style="list-style-type: none"> dohs.gov.np/wpcontent/uploads/2014/Annual Report_2070_71.pdf Ananthanarayan and Paniker's, test book of Microbiology 9th edition 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	<p>Obj:-</p> <ol style="list-style-type: none"> Able to highlight the threat, recent outbreak of Zika virus Able to describe- Mode of transmission <ol style="list-style-type: none"> Nature of Vector Clinical manifestation Approach of lab diagnosis Able to know the safety preventive measures from Zika virus (special concern to pregnancy) Able to know the measures of vector control Able to highlight safety sexual precautions <p>Ref:-</p> <ol style="list-style-type: none"> www.who.int/emergencies/Zikavirus www.cdc.gov.np
	d. Prevention of Arboviral infection	<p>Obj:-</p> <ol style="list-style-type: none"> To describe the preventive & control measure for Arboviral Infection To assess various control measure adapted by Nepal Government for Arboviral Infection Able to know the immune prophylaxis <p>Ref:-</p> <ol style="list-style-type: none"> Park's Textbook of Preventive & social medicare. 22nd Edition Annual Depart. 69/70, DOH, Gov. Nepal Ananthanarayan and Paniker's, test book of Microbiology 9th edition Mandell, Douglas and Bennett's: Principles and Practice of infectious Diseases, vol 1 and 2, 7th edition
22	PREVENTION OF TUBERCULOSIS (Community medicine)	
	a. Epidemiology	<p>Obj:-</p> <ol style="list-style-type: none"> To describe the epidemiology of tuberculosis with special reference to Nepal. Burden of MDR TB in Nepal. To know the DOTS program and new regimen for the treatment of tuberculosis. <p>Ref:-</p> <ol style="list-style-type: none"> K. Park. Text Book of Preventive and Social Medicine 19th Ed. National tuberculosis control program of Nepal SAARC journal of TB/HIV TB/HIV. A clinical manual- WHO Department of Health Services, Nepal. Annual Report 2007/2008
	b. Pathogenesis of Tuberculosis	<p>Obj:-</p> <ol style="list-style-type: none"> Pathogenesis of primary tuberculosis Morphology of Tuberculosis <p>Ref:-</p> <ol style="list-style-type: none"> Robbins & Cotran: Pathologic Basis of Disease, 9th Ed. Page no.

		371-376
	c. Etiology & diagnosis of TB	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Etiology of tuberculosis 2. Conventional and recent advances in the diagnosis of tuberculosis <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Classification 2. Role of INH, rifampicin and pyrazinamide in therapy. 3. DOTS therapy and its importance. <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Category wise treatment regimens 2. Treatment of MAC. 3. Chemoprophylaxis <p>Ref:-</p> <ol style="list-style-type: none"> 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.
23	Worm Infestation (Pharmacology)	
	a. Classification, clinical manifestation & complication	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Know the basis of classification 2. Know the life cycle and morphology 3. Clinical manifestations <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Collection , transportation and processing of specimen 2. Lab diagnosis of worm infestation <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Name antihelmentic drugs. 2. Categories them as vermifuse or vermicide. 3. Discuss the brief pharmacology of Albendazole/ Mebendazole. <p>Ref:-</p> <ol style="list-style-type: none"> 1. Basic and Clinical Pharmacology- Betram G. Katzung. Latest

	edition.
d. Drug used in intestine – II	<p>Obj:-</p> <ol style="list-style-type: none"> 1. Mention the treatment of Neurocysticercosis. 2. Discuss the role of purging in T-solium infection. 3. Discuss briefly about Praziquantel. <p>Ref:-</p> <ol style="list-style-type: none"> 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	<p>Obj:-</p> <ol style="list-style-type: none"> 4. To describe the prevention & control strategies of worm infestation. <p>Ref:-</p> <ol style="list-style-type: none"> 3. K. Park. Text Book of Preventive and Social Medicine 19th Ed. 4. Department of Health Services, Nepal. Annual Report 2007/2008



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