

STUDY GUIDE

Community Medicine

4th Year MBBS 2023, AFM&DC



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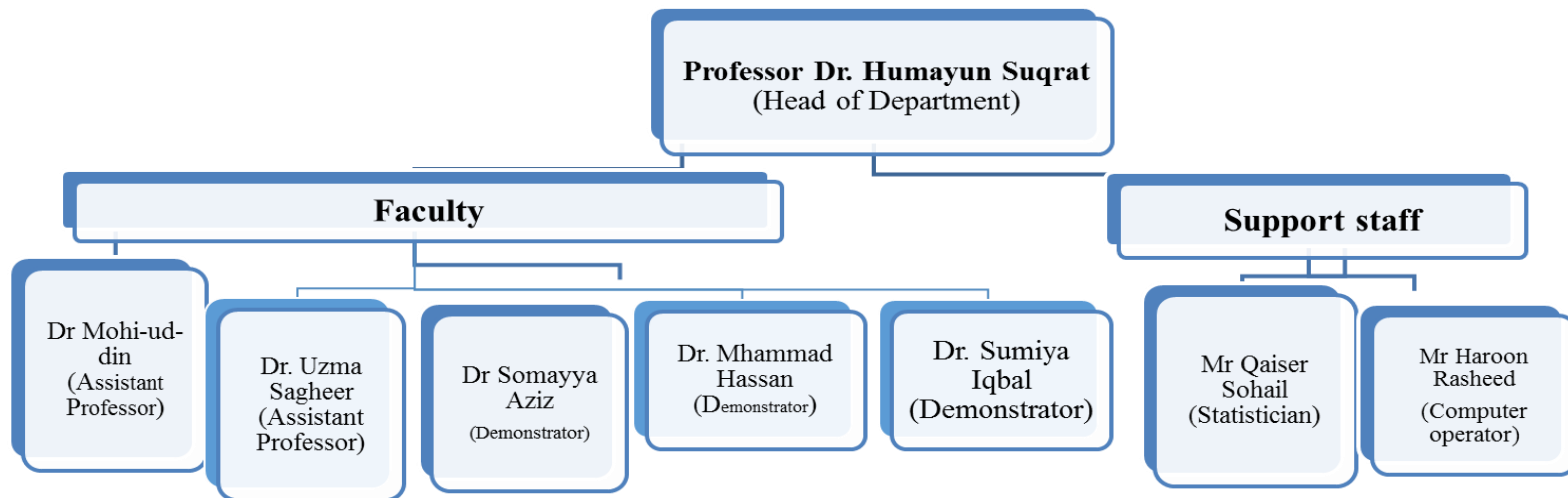
INTRODUCTION

Community Medicine is that branch of medicine, which deals with the study of provision of preventive, promotive, curative, rehabilitative, and evaluative services to the community at large, through an organized comprehensive healthcare delivery system.

The Department of Community Medicine, Aziz Fatima Medical and Dental College is involved in teaching and training of 4th year MBBS students through lectures, tutorials, presentations and field visits in the subject. Field visits of places of public health importance, household survey and research work are being arranged regularly. The department has a lecture hall which can accommodate more than 100 students, 3 offices and a beautiful museum for practical training of students. The Department also has computer facility to maintain department records and to prepare lectures, slides and demonstrations. The Department Museum is well equipped with required models, specimens and equipment for practical demonstrations and tutorials.

Close and excellent student-teacher relationship is maintained. The teaching is done using the most modern methods i.e. with the help of latest audiovisual aids like multimedia & projectors, achieving excellent results. Since teaching is ongoing process, the faculty members participate in various workshops and seminars which are supervised by experts of national repute to refresh and update their knowledge. Research has already been made compulsory for the students of 4th Year MBBS by UHS, so the students are trained for actively writing research papers by giving them regular assignments having reference from most modern journals under supervision of our staff members.

ORGANOGRAM COMMUNITY MEDICINE DEPARTMENT AZIZ FATIMAH MEDICAL & DENTAL COLLEGE



DEPARTMENT ORGANOGRAM



Day	Weekly Break up of Lectures and Tutorials				
	1	2	3	4	5
	8:00 am - 8:45 am	8:45 am - 9:30 am	9:30 am - 10:15 am	10:15 am - 11:00 pm	11:00 am - 01:00 pm
Monday			Lecture		
Tuesday		Lecture		PPERL	
Wednesday		Lecture	Lecture		
Thursday					
Friday		Lecture			Tutorial
Saturday					

Gantt's Chart for syllabus completion

Topics	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec	
Welcome & Introduction	■			S U M M E R V A C A T I O N S							
Nutrition	■										
Research	■										
Communicable diseases	■	■	■			■		■	■	■	
Concept of health and disease		■									
Primary health care		■									
Epidemiology			■								
Non-communicable diseases											
Demography						■					
Screening							■				
Mental Health							■				
Disaster & Accidents							■				
Geriatric Med							■				
Biostatistics									■		
Maternal and child health										■	
Immunology											■

Community Medicine (SEQs and MCQs)

TABLE OF SPECIFICATIONS

Table of specifications for the MCQ examination:

Total marks: 65.

Total number of questions: 65

Sr. #	Topics	C1	C2	Weighting	% of items and marks per content
1	Concept of health and disease, natural history of the disease, levels of prevention, control, elimination, eradication and surveillance, Sterilization and Disinfection	✓	✓	3MCQs	5% (3 MCQs = 3 Marks)
2	Introduction to public health and health systems in Pakistan, primary health care, leadership and motivation, national and international health agencies	✓	✓	3 MCQs	5% (3 MCQs = 3 Marks)
3	Epidemiology				
	3.a General Epidemiology and research methodology, dynamics of infectious disease Transmission	✓	✓	5 MCQs	8% (5MCQs = 5 Marks)
	3.b: Epidemiology, control and prevention of communicable diseases,	✓	✓	4 MCQs	6% (4 MCQs = 4Marks)
	3.c: Epidemiology, control and prevention of non communicable diseases	✓	✓	2 MCQs	3% (2 MCQs = 2 Marks)
	3.d: Immunology	✓	✓	5 MCQs	8% (5 MCQs = 5 Marks)
4	Biostatistics + HMIS + Sampling	✓	✓	4 MCQs	6% (4 MCQs =4 Marks)
5	Demography and Population dynamics	✓	✓	3 MCQs	5% (3 MCQs = 3 Marks)

6	Food and nutrition	✓	✓	5 MCQs	8% (5 MCQs = 5 Marks)
7	MCH + reproductive health + family planning	✓	✓	6 MCQs	9% (6 MCQs = 6 Marks)
8	School health	✓	✓	3 MCQs	5% (3 MCQs = 3Marks)
9	Environmental Health 9.a: Air, b: Water, c: Radiation, d: Climate, e: Noise, f; Housing, g: Waste disposal	✓	✓	6 MCQs	9% (6 MCQs = 6 Marks)
10	Occupational health	✓	✓	4 MCQs	6% (4 MCQs = 4 Marks)
11	Entomology and arthropod bone diseases	✓	✓	2 MCQs	3% (2 MCQs = 2 Marks)
12	Parasitology and parasitic diseases	✓	✓	2 MCQs	3% (2 MCQs = 2 Marks)
13	Snake bite	✓	✓	1 MCQ	2% (1 MCQ = 1 Mark)
14	Mental health / Medical Ethics	✓	✓	1 MCQ	2% (1 MCQ = 1 Mark)
15	Behavioural sciences and life style 15.a: Drug abuse 15.b: Addiction 15.c: Smoking 15.d: Personal hygiene 15.e: Child abuse / Child labor	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓	4 MCQs	6% (4 MCQs = 4 Marks)
16	Information, Education and Communication (IEC)	✓	✓	1 MCQ	2% (1 MCQ = 1 Mark)
17	Accidents / Disasters	✓	✓	1 MCQ	1% (1 MCQ = 2 Mark)

Table of specifications for the SEQ examination:

Total marks allocated: 70. Total questions: 14

Sr. #	Topics	C1	C2	Weighting	% of items and marks per Content
1	Concept of health and disease, natural history of the disease, levels of prevention, control, elimination, eradication and surveillance. 1.a: General Epidemiology and research methodology, dynamics of infectious disease transmission. 1.b: Epidemiology, control and prevention of Communicable and non-communicable diseases	✓	✓	2 SEQs	14% (2 SEQs = 10 Marks)
2	Introduction to public health and health systems in Pakistan, primary health care, leadership and motivation, national and international health agencies	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
3	Immunology	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
4	Biostatistics / HMIS	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
5	Demography and Population Control	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
6	Food + Nutrition	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
7	MCH / Reproductive Health	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)

8	Environment 8.a: Air pollution 8.b: Water 8.c: Radiation 8.d: Housing 8.e: Waste disposal 8.f: Climate 8.g: Noise	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
9	Occupational Health	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
10	Parasitology + Entomology + Snake Bite	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
11	Mental health + Behavioral Sciences	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
12	Dental Health / School Health / Health Education	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)
13	Accidents / Disasters	✓	✓	1 SEQ	7% (1 SEQ = 5 Marks)



COURSE	TOPIC	SUB-TOPIC	LEARNING OBJECTIVE
COMMUNITY MEDICINE	Welcome; introduction to Community Medicine	Definition of Health, disease, illness and well-being; description of iceberg phenomena; levels of prevention; McKeon's concept; attribute of seven star doctor; millennium development goals	Student can define and differentiate between Community Medicine and Clinical Medicine
	Different levels of prevention/ Types of Prevention. Mckeown thesis	Primary prevention, secondary prevention, Levels of prevention and their application on diseases; Mckeown thesis/ determination of morbidity and mortality in society; Determinants of health	Student will be able to: <ul style="list-style-type: none"> • Differentiate between different levels of prevention and their application on diseases of Public health important • Will be able to differentiate between two approaches of Mckeown postulate.
	Seven star doctor and SDGs	Qualities of seven star doctor and its impact on society; Latest SDGs and specially related to	<ul style="list-style-type: none"> • Students will be able to know about the importance of seven star doctor and impact of its qualities on society and

		health	<p>general patients.</p> <ul style="list-style-type: none"> • Health related MDGs; students will be able to elaborate MDGs with their indicators and targets
	History of Medicine and Public Health	Public Health in patient civilization; Sequence of events which shape public health to recent times	<ul style="list-style-type: none"> • Student will learn public health in ancient civilization; will be able to differentiate between advancement in different sectors of health. • Student can also differentiate between epidemiological transition and demographic transition
	Emerging and re-emerging diseases and their impact: future direction of Public health.	<p>Emergence of Old and New diseases in the last decade.</p> <p>Development of Public Health and health services in both developed and under-developed countries</p>	<ul style="list-style-type: none"> • Students will be able to differentiate between emerging and re-emerging diseases and also will know about prevention and control. • Students will know different developmental concepts regarding Public Health in developed and

			<p>underdeveloped countries and financial constraints leading to poor health status in under developed countries</p>
	<p>Pakistan national health profile</p>	<p>Overview of region, languages, culture and mixed nature of population of Pakistan; Major Public health related indicators/ statistics of Pakistan. Vertical and horizontal programs. Latest national health policy</p>	<ul style="list-style-type: none"> • Students will know of the profile of different regions, cultures, languages. • Students will understand development of public health policy and its impact. Learn about different health-related indicators with comparisons to developed countries. • Will be able to differentiate between vertical and horizontal programs.
	<p>Primary Health Care</p>	<p>Introduction</p>	<p>Define Primary health care</p>
			<p>Describe fundamentals & principles of PHC</p>

			Describe essential components of PHC
			Explain key concepts of PHC
		Community Problems	Define community health problems
			Enlist community health problems
			prioritize community health problems
			Describe the solution to the given Community health problem
		PHC in Pakistan	Define PHC in Pakistan
		Integrated Rural health complex	Describe the concept of integrated of rural health complex.
		Comprehensive health care	Discuss comprehensive and selective health care
			Compare comprehensive and selective healthcare
	Concept of health and disease	Introduction to health and disease	define health, disease, illness and wellbeing

		Iceberg phenomenon	Describe iceberg phenomenon of disease and discuss it with reference to important diseases
		Definitions	Define basic terminologies used in community Medicine
		Prevention	List all levels prevention
			Find out the level of given prevention against any disease
		Mckeown's concept	Describe Mskeown's concept
		Seven star doctor	List the attributes of 7 star doctor
		Sustainable developmental goals (SDGs)	list the SDGs and point out those relevant to public health
	Basic Epidemiology	Definition of epidemiology its uses, epidemiological triad, calculation of measures of mortality and morbidity, different epidemiological studies, classification, strength and weaknesses of this study, biases and confounders, association and causation,	<ul style="list-style-type: none"> Students will be able to understand basic principles and their application in planning and provision of healthcare services, more understanding of determinants of health and disease in human

		screening, calculation of sensitivity and specificity, positive and negative predictive values	<p>population, distribution of disease in time, place and person.</p> <ul style="list-style-type: none"> • Student can differentiate between control and prevention activities, will understand different types of research design
	Biostatistics and HMIS	<p>Definition of biostatistics, its concept of uses, calculations of measures of central tendency and measures of variations, definition of normal curve and its properties, classification of its data and types, data presentation methods, levels of significance, definition of hypothesis and its types, P values, Alpha values, test of significance and their applications correlation and regression, steps of hypothesis testing, describe the methods and types of census, collection and registration of vital events, sources of health related statistics, sampling and its types,</p>	<ul style="list-style-type: none"> • Student will be able to: Define Biostatistics, its types, uses of biostatistics in medicine, and in research. Students will calculate the numerical related to measures of central tendency, measures of dispersion. • Students will know about normal curve and its implication, confidence interval and confidence limit. Student will be able to differentiate between P value and alpha level. • Students will elaborate data and will understand its different types and its

			<p>uses in research.</p> <ul style="list-style-type: none"> • Student will present the data in the form of frequency table, graphs and diagrams according to types of data. • Student will be able to define hypothesis and its types for research purpose. Students will apply tests of significance according to type of data and interpret the same for research purpose. Student can elaborate steps of hypothesis testing. Students will know about DHIS and its uses
	Occupational Health	Background, aims and objective of occupational health	Describe the background aims and objective of occupational health
		Functions of occupational health services and practices	understand the functions of occupational health services and practices
		Ergonomics	Define and describe the

			application of ergonomics
		Occupational diseases	List the commonly occurring occupational diseases.
		Occupational diseases	Explain the etiology, clinical features, differential diagnosis and preventive strategies for occupational diseases
	Reproductive and child health	Define woman health,	Define woman health,
		Reproductive health and its components, save motherhood,	Define reproductive health its components, know about save motherhood components
		Maternal mortality	Definition of maternal mortality, formula to calculate its rate, its causes, risk factors and prevention
		perinatal mortality, neonatal mortality. Infant mortality, post-neonatal mortality	Define perinatal mortality, neonatal mortality, infant mortality, post-neonatal mortality, formulas to calculate their rates, causes, risk factors and prevention
		Essentials of Obstetric care	Define EOC, difference between basic and comprehensive EOC,

			three delays
		TBA training program	Define TBA training program, its importance and advantages
		RH in Islam	Define RH in Islam and importance of breastfeeding
	Nutrition	Definitions	Definitions of nutrition
		Macronutrients	Definitions sources and uses of macronutrients. Requirements and effects of deficiencies
		Micronutrients	Definitions sources and uses of micronutrients. Requirements and effects of deficiencies
		Nutritional assessment	Methods of assessment of nutritional status
		Food processing and Preservation	Pasteurization and other methods of food and milk preservation
		Health problems related to nutrition	LBW, PEM, obesity, food poisoning
		Special nutrition requirements	Nutrition needs of elderly, pregnant, children and

			sick
	Hospital waste management	hospital waste	definition of hospital waste, types of hospital waste, Hospital waste color coding system
		waste management plan	detail of waste management plan
		waste management team	members of the team
		hospital waste disposal	methods of disposal, advantages and disadvantages of each, types of waste with the suitable method of disposal
			Application of methods in given situation
	Control & prevention of infectious disease	classification of Communicable diseases, important CDs	classify Communicable diseases
			define terminology used in CD,
			differentiate between infective disease and Communicable disease
		Control of infection	Epidemiology, control and spread

			of important Communicable diseases, and prevention against each of them at primary, secondary and tertiary levels
	Basic Epidemiology	General epidemiology and research methodology	Definition, uses and application of Epidemiology.
			Different research designs used in epidemiology.
		Background measurements	Definition of mortality, morbidity and disability
			uses and applications of mortality, morbidity, disability, fatality
		Epidemiological methods	Definitions and application of different epidemiologic al methods (descriptive, analytical, experimental)
		epidemiologic al transition	define and describe association and causation
		Epidemic	Definition of epidemic.

			Investigation of epidemic
		screening	define Screening and specificity
			Calculate screening, specificity. Community Daignosis
		sampling	define sampling and its type with examples
			application of sampling methods in research
	Biostatistics and HMIS	Biostatistics	Define Biostatistics,
			Describe Concepts and uses of Biostatistics
		Data	Define data
			Describe types of data
		Measurements	Define rates, ratios and proportions
			Differentiate between crude, specific and standardized rates
		Data presentation	Discuss different methods of data presentation

		Measures of central tendency	Define measures of central tendency
			Measure and interpret central tendency of given data
		measures of dispersion	Define measures of dispersion
			Measure and interpret measures of dispersion
		Standard error	define and calculate standard error
		Normal distribution curve	Define normal curve
			Use information about normal curve to solve problems
		Hypothesis testing	Define hypothesis testing
			Formulate null and alternate hypothesis
			find out whether to accept or reject null hypothesis in a given

			scenario
			Describe p value and level of significance Differentiate between p value and alpha level
			enumerate tests of hypothesis testing
		test of significance	Interpretation of data (Chi square test)
			apply test of significant in a given situation
		Correlation	Define correlation
		sources of health related statistics	Enumerate the sources of health related statistics
			describe the methods of collection of vital events in Pakistan
		Sampling	Describe different types of sampling
			Apply the suitable type of sampling on various types of studies

		HMIS (Health management information system)	Define HMIS system and its components
			Sources and uses of district health information system
	Non- Communicable Diseases (NCDs)	Burden of NCDs,	Understand the burden of NCDs worldwide and Pakistan
		Risk factors of NCDs	Describe the role of different risk factors of NCDs
		Common NCDs in Pakistan	List common NCDs in Pakistan, their causes, impact and prevention
	Community Mental Health	Mental health,	Definition and etiology of mental health
			magnitude of mental health problems (local and international)
		Types of mental health	Describe common mental health problems in Pakistan
		Evolution of mental health	Learn about historical evolution of mental health

		Prevention and control of mental health problems	Understand about ways to improve mental health issue, understand principles of preventive mental illnesses
	Disaster Management	Disaster	Define disaster
			Classify disasters
			Differentiate between disaster and accident
		Disaster management	Describe steps in pre and post disaster phases of disaster cycle
			Describe triage and tagging
			Public health intervention after disaster
		Effects of different disasters	Describe the magnitude and effects of different types of disasters and their public health consequences
	Information, education and communication	Concept of health education	Define health education

	(IEC)		
			Explain contents, principles and stages of health education
			Describe aims and objectives of health education
			Discuss Approaches used in public health
		Communication	Discuss methods of communication
			Describe barriers of communication
			skills of communication
		health education program	Plan a health education program
			organize and evaluate health
		Social marketing	define social marketing and its uses health education
	Arthropods	Arthropod	Describe arthropod

			Name common arthropod borne diseases
		Control of arthropods	Describe control measure of arthropods
		Insecticides	Insecticides and their public health importance
	Parasitology	Parasitic diseases	Name parasitic diseases of public health importance
			Describe the routes of transmission of all parastic diseases in human beings
			Discuss the preventive measures against parasitic diseases
	Snake bite	Types of snakes	Describe the types of poisonous snakes in Pakistan
		Types of venom of the snake	Name the type of venom in each of the snake
		Protection	Describe protection and prevention

			against snake bite
	School health services	Introduction to school health services	Define school health
			List the components of school health
			List the members of school health team
			Describe role of school health team members
			Describe the functions of school health program
			Discuss common health problem of school children
		Equipment of school health service	List common medicines and equipment
			School health service in Pakistan
			Types of desks

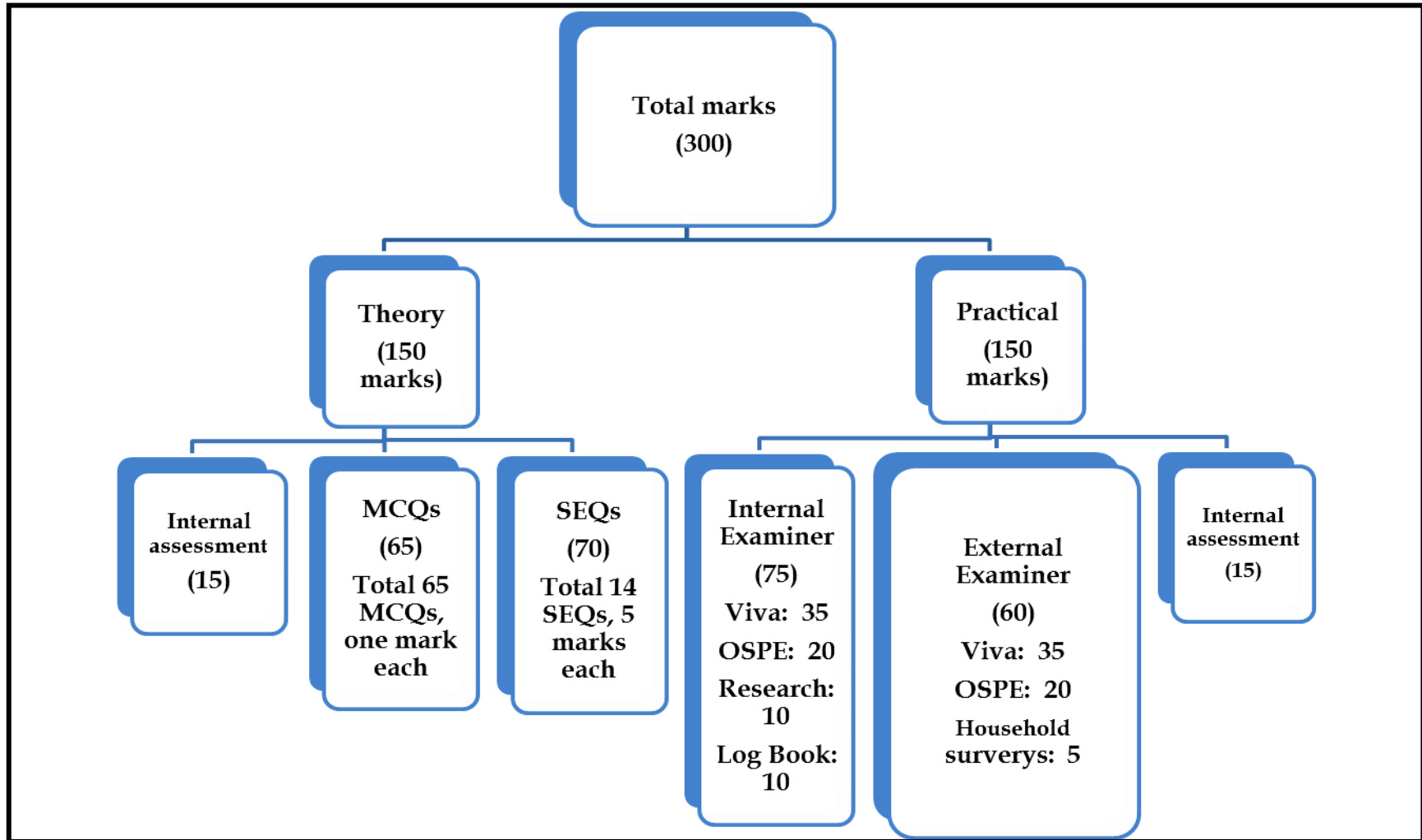
		Special children	Requirements of handicapped children
	Behavioral Sciences	Substance abuse	Basic definitions in substance abuse,
			Difference between drug addiction, drug abuse and drug misuse.
			Magnitude of the problem
			Types of drugs abused in Pakistan.
			Etiology of drug addiction.
			Prevention (at all levels) against drug addiction
		Tobacco control	Commonly used forms and routes of tobacco intake,
	Dynamics of infectious disease transmission	Reservoir and source of infection	Define reservoir and source of infection
			Discuss the procedure of escape of organism from reservoir
			Discuss mode of entry of

			Pathogen into the host
			Define host and susceptible host
		Immunity	Define immunity
			Describe types of immunity
		Immunization	Define immunization
			Describe EPI schedule with details of each vaccine
	Control of infection	Prevention against infection	Describe the methods of controlling reservoir of infection
			What is notification
			Discuss Primary, secondary and tertiary prevention against infection
			Describe interruption of transmission
	Demography and population dynamics	Concept, demographic principles and demographic	Define demography, population dynamics

		process	
			apply demographic principles in health system
			describe the concept of demographic equation
		Census	Define census
			describe methodology of census
			Describe types of census
		Fertility and mortality	Define fertility and mortality
			describe the determinants of fertility and mortality
			use various measures of fertility and mortality to solve community issues
		Population pyramid	Describe and interpret population pyramid
			Compare the population pyramids of developed and developing countries

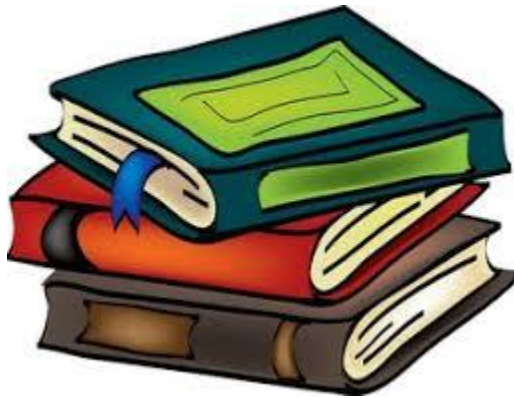
		Demographic transition, demographic trap	describe the purpose of theory of demographic transition
			Define demographic trap
	Medical Ethics	Introduction to Ethics	Define ethics
			Differentiate between different branches of ethics
			Describe 4 principles of medical ethics
		Development of medical ethics	Describe Nuremberg code
			Describe Helsinki declaration
			Describe code of medical ethics
		Guidelines by Pakistan Medical and Dental Council	Describe Guidelines by Pakistan Medical and Dental Council

EVALUATION METHOD (4th Year MBBS Professional Examination)



REFERENCE BOOKS

(As listed in the UHS Curriculum)



1. Textbook of Community Medicine by Park J E. Latest edition
2. Textbook of Community Medicine by Ilyas Ansari. Latest edition
3. Textbook of Community Medicine by Maxcy-Rozenau-Last. Latest edition
4. Medical statistics by R. Kirkwood. Latest edition
5. Online Journals and reading materials through HEC digital library facility and WHO website