



LIAQUAT COLLEGE OF MEDICINE AND DENTISTRY
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GIT MODULE



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CODES			
Subject Name		Abbreviations	Color Codes
ANATOMY	Anatomy Lectures	A	
	General Anatomy	A(Gn)	Navy Blue
	Gross anatomy	A(Gr)	Black
	Histology	A(H)	Light Pink
	Neuro - Anatomy	A(NA)	Red
	Embryology	A(E)	Brown
	Histology Practical	A(P)	Light Pink
PHYSIOLOGY	Lecture	P	Green
	Practical	P(P)	
BIOCHEMISTRY	Lectures	B	Light Blue
	Practical	B(P)	
ORAL BIOLOGY	Oral Biology	O	Purple
	Tooth Morphology	T	Dark Pink



CONTENT				
GASTROINTESTINAL TRACT MODULE				
Subject Name		TOTAL NO: OF LECTURES	WEEK PER MODULE	MODE OF TEACHING
ANATOMY	General Anatomy	01	03 Weeks	Lecture/ Tutorial / SGD
	Gross Anatomy	06		Lecture/ Tutorial / SGD
	Practical	03		Practical
PHYSIOLOGY	Lecture	15		Lecture/ Tutorial
BIOCHEMISTRY	Lectures	12		Lecture/ Tutorial
	Practical	06		Practical
ORAL BIOLOGY	Oral Biology	14		Lecture
	Tooth Morphology	04		Lecture
Total		59		



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Topic	Lecture	GIT - Learning Objectives	Learning Strategy	KSA Competencies Knowledge/Skill/ Attitude	Assessment Tools
Introduction	GIT-A1(Gn1)	<ul style="list-style-type: none"> Identify abdominal viscera in relation to regions and quadrants 	Lecture	K	MCQ
	P1	Discuss functions of GIT	Interactive Lecture	Knowledge	MCQ
		Describe the structural and functional organization of the digestive system		Knowledge	MCQ
		Describe the physiological anatomy and the layers of Gastrointestinal tract		Knowledge	MCQ
		Give characteristic features of GIT smooth muscle and its enteric nervous system		Knowledge	MCQ / OSPE / Google classroom assignment
Oral Cavity	GIT-A2(Gr1)	<ul style="list-style-type: none"> Discuss the boundaries & divisions of the oral cavity Describe the vestibule and oral cavity proper with their contents 	Lecture / Tutorial / SGD	K	MCQ / OSPE
	GIT-A(P1)	<ul style="list-style-type: none"> Describe the general features of oral mucosa in oral cavity. List the types of oral epithelium. Discuss the histology of lips, cheek, palate and gums. 	Practical	KSA	MCQ / OSPE
Hard & Soft Palate	GIT-A3(Gr2)	<ul style="list-style-type: none"> Describe the boundaries. Tabulate the muscles, neurovascular supply and actions. Discuss the clinical (Gag reflex in dentistry) Describe how primary and secondary palate give rise to adult palate. Discuss embryologic basis of cleft palate & associated cleft lip. 	Lecture	KSA	MCQ / OSPE
Salivary Glands	GIT-A4(Gr3)	<ul style="list-style-type: none"> Describe location, relations and neurovascular & lymphatic supply of these gland. List the structure passing through parotid gland. Discuss clinical correlations Describe in general the acini, duct system & stroma. Differentiate the 3 major salivary glands on the basis of mucous and serous acini. Discuss the derivation of secretory part, duct system and 	Lecture	KSA	MCQ / OSPE



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		stroma from different embryonic sources.			
	GIT-A(P2)	Differentiate the 3 major salivary glands on the basis of mucous and serous acini.	Practical	KSA	MCQ / OSPE
	O1	List the functions of saliva	Lecture	Knowledge	MCQ
	O2	Describe the gross anatomy of the salivary glands		Knowledge	MCQ / OSPE
	O3	Differentiate between the major salivary glands		Knowledge	MCQ / OSPE
	O4- O5	Identify various cells, ducts and other anatomical structures with in salivary gland on simulation	Lecture	Knowledge	MCQ / OSPE
	O6	Outline the age changes and diseases associated with salivary glands		Knowledge (TA based learning)	MCQ
Tempromandi bular Joint	O7-08	Discuss the capsule, ligaments and disc of TMJ	Lecture	Knowledge	MCQ / OSPE
		Describe muscles of mastication on simulation		Skill	MCQ / OSPE
		Explain biomechanics and innervations of joint		Knowledge	MCQ
		Enumerate the synovial membrane		Knowledge (Presentation session)	MCQ
Tongue	GIT-A5(Gr4)	<ul style="list-style-type: none"> • Describe the division and external features of tongue. • Tabulate the muscles, their action and nerve supply. • Describe the vascular supply, innervation and lymphatic drainage • Discuss the clinical correlation. • Describe the histological features of tongue: Mucosal papillae, taste buds, lingual salivary glands etc. • Describe the development of the tongue & its anomalies. 	Lecture / Tutorial / Practical	Knowledge	MCQ / OSPE
	GIT-A(P3)	Identify the characteristic identification features of tongue.	Practical	KSA	MCQ / OSPE
Mandible	GIT-A6 (Gr5)	Identify the different parts and structures related to mandible on the given model/picture	Lecture / Tutorial	KSA	MCQ / OSPE



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Pharynx	GIT-A7(Gr6)	<ul style="list-style-type: none"> Describe the location, extent & divisions of pharynx. Identify features related to each part (tonsils, Pharyngotympanic tube Ostia etc.). 	Lecture / Tutorial	KSA	MCQ / OSPE
Smooth Muscle	P2	List the types of smooth muscle with examples	Interactive Lecture	Knowledge	MCQ
		Discuss the membrane potential and action potential in smooth muscle		Knowledge	MCQ
		Discuss the contractile mechanism & regulation of contraction by calcium ions in smooth muscles		Knowledge	MCQ
		Discuss the nervous and hormonal control of smooth muscle contraction (enteric / intrinsic nervous system) of GIT		Knowledge	MCQ / OSPE
Regulation Of Digestive System	P3	Discuss the neural control of GIT - Enteric Nervous System.	Interactive Lecture/tutorial open book test	Knowledge	MCQ
		Describe the role of "interstitial cells of Cajal" in generation of basic electrical rhythm (BER) of the GIT and its relation to smooth muscle contractile activity.		Knowledge	MCQ
		Contrast the effects of parasympathetic and sympathetic nervous activity in modulating GI activity (extrinsic nervous control) of GIT.		Knowledge	MCQ
		Discuss the hormonal control of GIT.		Knowledge	MCQ
		Describe the types of GIT reflexes.		Knowledge	MCQ
Mastication/ Deglutition	P4 + P5	Discuss the chewing reflex	Interactive Lecture	Knowledge	MCQ
		Discuss the phases of swallowing		Knowledge	MCQ/ quiz assign
		Discuss the swallowing reflex.		Knowledge	MCQ
		List the functions of lower esophageal sphincter		Knowledge	MCQ with socrative
		Describe the mechanisms that prevent food from entering the nasal cavity and larynx during swallowing		Knowledge	MCQ
Motor Functions Of Stomach	P6	List the functions of stomach	Interactive Lecture	Knowledge	MCQ
		Describe Motor functions of stomach along migratory motor complex (MMC) and factors promoting and inhibiting gastric emptying		Knowledge	MCQ google assignment
Movement Small Intestine	P7	Describe the normal and abnormal movements of small intestine.	Interactive Lecture/Tutorial	Knowledge	MCQ / case based study
		Explain peristaltic rush and migrating motor complex.		Knowledge	MCQ/ assignment
		What structures increase the		Knowledge	MCQ



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		absorptive surface area of the small intestine?			
		Distinguish between segmentation and the migrating motor complex of the small intestine.		Knowledge	MCQ
		Explain how food in the duodenum inhibits motility and secretion in the stomach		Knowledge	MCQ
Small Intestine Secretions And Absorptions	P8	Describe the glands of small intestine with their secretions and functions.	Flipped class room	Knowledge	MCQ
		Describe the origin, formation, composition, functions and regulations of Succus entericus		Knowledge	MCQ
		Name enzymes of the intestinal brush border, and identify the substrate or function of each.		Knowledge	MCQ
		Describe how each type of nutrient is absorbed by the small intestine.		Knowledge	MCQ
Movements Large Intestine	P9	Describe the normal and abnormal movements of large Intestine	Interactive Lecture	Knowledge	MCQ
Defecation Reflex		Discuss the mechanism and centers involved in Defecation Reflex		Knowledge	MCQ
Saliva	P10	Describe the origin, formation composition and functions of saliva.	Interactive Lecture/ Tutorial SGD	Knowledge	MCQ
		List the factors that increase salivary secretion.		Knowledge	MCQ
		Discuss the nervous regulation of salivary secretion.		Knowledge	MCQ
Gastric Juice	P11	Describe the origin, formation, composition, functions and Phases of regulations of gastric juice secretion	Interactive Lecture	Knowledge	MCQ
Pancreatic Juice	P12	Describe the origin, formation, composition, functions and Phases of regulations of pancreatic juice and factors effecting it.	Interactive Lecture	Knowledge	MCQ
Liver Bile Juice	P13	List the functions of liver	Interactive Lecture	Knowledge	MCQ
		Describe the origin, formation, composition, functions and regulations of bile juice discuss the functions of gall bladder and its emptying		Knowledge	MCQ/ class test
Large Intestinal Juice	P14	Describe the origin, formation, composition, functions and regulations of large intestinal juice	Interactive Lecture	Knowledge	MCQ



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GI Hormones	P15	Discuss in detail the secretion and role of following GIT hormones in digestion of food: Cholecystokinin Secretin GIP Gastrin Gastrin Releasing Peptide Pancreatic Polypeptide Somatostatin Vasoactive Intestinal Polypeptide Motilin	Flipped class room/ Tutorial SGD	Knowledge	MCQ / OSPE / Assignment	
Oral Mucosa	O9	List the functions of oral mucosa	Lecture/ Tutorial	Knowledge	MCQ / OSPE	
	O9	Locate the boundaries of oral cavity on the given simulation	Lecture/ Tutorial	Knowledge	MCQ / OSPE	
	O10	Differentiate various types of oral mucosa	Lecture/ Tutorial	Knowledge	MCQ / OSPE	
	O11-12	Explain the structural and functional histology of epithelium and connective tissue	Lecture/ Tutorial	Knowledge	MCQ / OSPE	
	O13	Outline the age changes that are associated with oral mucosa	Lecture/ Tutorial	Knowledge (presentation session)	MCQ	
Tongue	O14	Explain the gross features and nerve supply of tongue	Lecture/ Tutorial	Knowledge	MCQ / OSPE	
Maxillary 1st Premolar	T1	Enumerate the buccal, palatal, mesial, distal, and occlusal aspects of maxillary first premolar.	Lecture/ Tutorial	Knowledge		
Maxillary 2nd Premolar	T2	Enumerate the buccal, palatal, mesial, distal, and occlusal aspects of maxillary second premolar		Knowledge		
		Differentiate between 1st and 2nd maxillary premolar on the basis of their morphology		Knowledge		
Mandibular 1st Premolar	T3	Enumerate buccal, lingual, proximal and occlusal aspects of mandibular 1st premolar		Knowledge		
Mandibular 2nd Premolar	T4	Describe buccal, lingual, proximal and occlusal aspects of mandibular 2nd premolar		Knowledge		
		Differentiate between mandibular 1st and 2nd premolars on the basis of their morphology		Knowledge		
Metabolism Of Carbohydrate	B1	Discuss the digestion & absorption of carbohydrates		Lecture/ Tutorial	Knowledge	MCQ / OSPE
	B2	Define glycolysis		Lecture/ Tutorial	Knowledge	MCQ / OSPE / Assignment
		Explain the reactions involved in	Knowledge		MCQ / OSPE /	



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		Glycolytic pathway			Assignment
		Discuss the fate of Pyruvate		Knowledge	MCQ / OSPE / Assignment
	B3	Explain the reactions of citric acid cycle	Lecture/ Tutorial	Knowledge	MCQ / OSPE / Assignment
	B(P)1	Estimate blood glucose by enzymatic kit method		Skill	OSPE
	B4	Define Gluconeogenesis	Lecture/ Tutorial	Knowledge	MCQ Assignment
		Explain the reactions and regulations of Gluconeogenesis		Knowledge	MCQ Assignment
	B5	Discuss glycogen synthesis & degradation	Lecture/ Tutorial	Knowledge	MCQ Assignment
	B(P)2	Detect normal, hypoglycemic & hyperglycemic graphs by Glucose Tolerance Test	Practical	Skill	OSPE
	B(P)3	Detection of Glucose by Glucose oxidase and peroxidase Method	Practical	Skill	OSPE
	B(P)4	To estimate blood Glucose by Glucometer	Practical	Skill	OSPE
	B6	Describe the purpose & importance HMP-Shunt	Lecture/ Tutorial	Knowledge	MCQ Assignment
		Explain the reactions of HMP-Shunt		Knowledge	MCQ Assignment
	B7	Discuss blood glucose, its clinical significance and metabolic disturbances that occur in Diabetes Mellitus.	Lecture/ Tutorial	Knowledge	MCQ/OSPE /Assignment
	B8	Discuss the structure of electron transport chain and synthesis of ATP	Lecture/ Tutorial	Knowledge	MCQ/OSPE Assignment
		Explain the functions of electron transport chain			
Metabolism Of Protein	B9	Discuss the digestion & absorption of proteins		Knowledge	Quiz Assignment
	B10	Explain the reactions of amino acids	Lecture/ Tutorial	Knowledge	Quiz Assignment
		Discuss Ammonia Metabolism		Knowledge	MCQ/OSPE
	B(P)5	Estimate serum protein by kit method	Lecture/ Tutorial	Skill	VIVA / OSPE
	B11	Discuss the metabolism of specific amino acids & its inborn errors (Phenylalanine & Tyrosine)		Knowledge	MCQ/OSPE Assignment
B(P)6	Demonstrate chromatography.	Lecture	Skill	OSPE	
Minerals	B12	Discuss the sources & RDA of Fluoride & other important Minerals	Lecture	Knowledge	MCQ/OSPE Assignment
		Discuss the functions of Fluoride & other important Minerals		Knowledge	Quiz Assignment



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		Discuss the clinical abnormalities of Fluoride & other important Minerals		Knowledge	MCQ/OSPE Assignment
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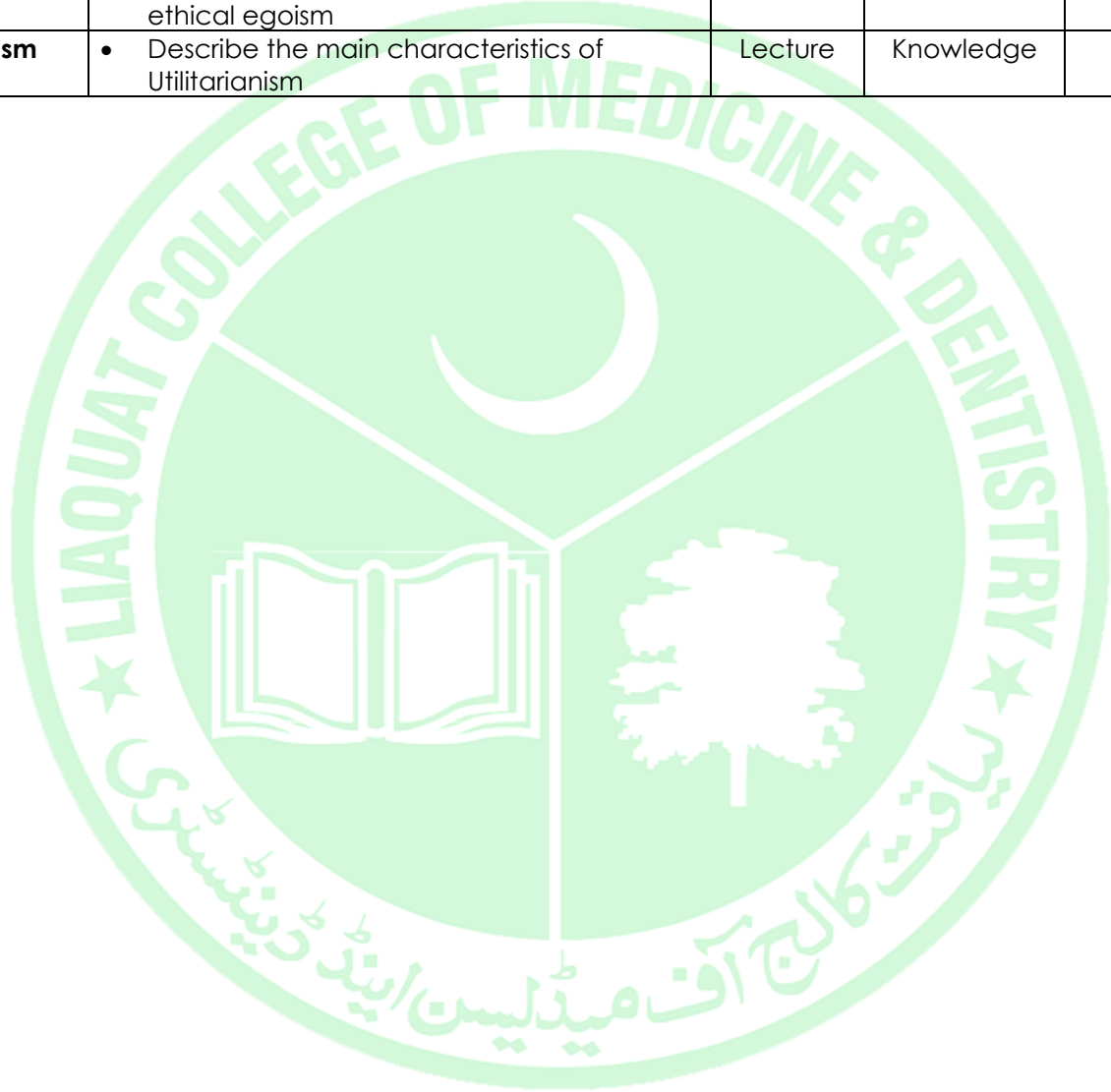
ISLAMIC STUDIES				
Topic	Objectives	Mode of Teaching	KSA Competencies	Assessment Tools
		Lecture/ Tutorials	Knowledge/ Skill/ Attitude	
INTRODUCTION TO THE HOLY QURAN				
Introduction To The Holy Quran	<ul style="list-style-type: none"> Discuss the importance of the Quran in our daily lives 	Lecture	Knowledge	MCQs
	<ul style="list-style-type: none"> Describe briefly the history of revelation of the Quran (Prediction of Warqa bin Naufal, 1st Revelation etc). 	Lecture		
	<ul style="list-style-type: none"> Explain how the Quran is the greatest miracle of Rasool-ullah (S.A.W). 			
	<ul style="list-style-type: none"> Explain how the Quran was compiled in different ways in the era of: <ul style="list-style-type: none"> Rasool-ullah (S.A.W) Abu Bakar (R.A.) Usman Ghani (R.A.) 			
	<ul style="list-style-type: none"> Discuss the Quranic Sciences (Uloom ul Quran): <ul style="list-style-type: none"> Definition and differences between Makkan and Madinah verses or chapters. Explain the Shan e Nuzool / reasons for the revelation (Two examples) 			
	<ul style="list-style-type: none"> Differentiate between the Abrogator & Abrogated verses (Nasikh & Mansookh) (Two examples) 			



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INTRODUCTION TO ETHICS				
Topic	Objectives	Mode of Teaching	KSA Competencies Knowledge/ Skill/ Attitude	Assessment Tools
		Lecture/ Tutorials		
Ethical Egoism	<ul style="list-style-type: none">Describe the main characteristics of ethical egoism	Lecture	Knowledge	MCQs
Utilitarianism	<ul style="list-style-type: none">Describe the main characteristics of Utilitarianism	Lecture	Knowledge	MCQs

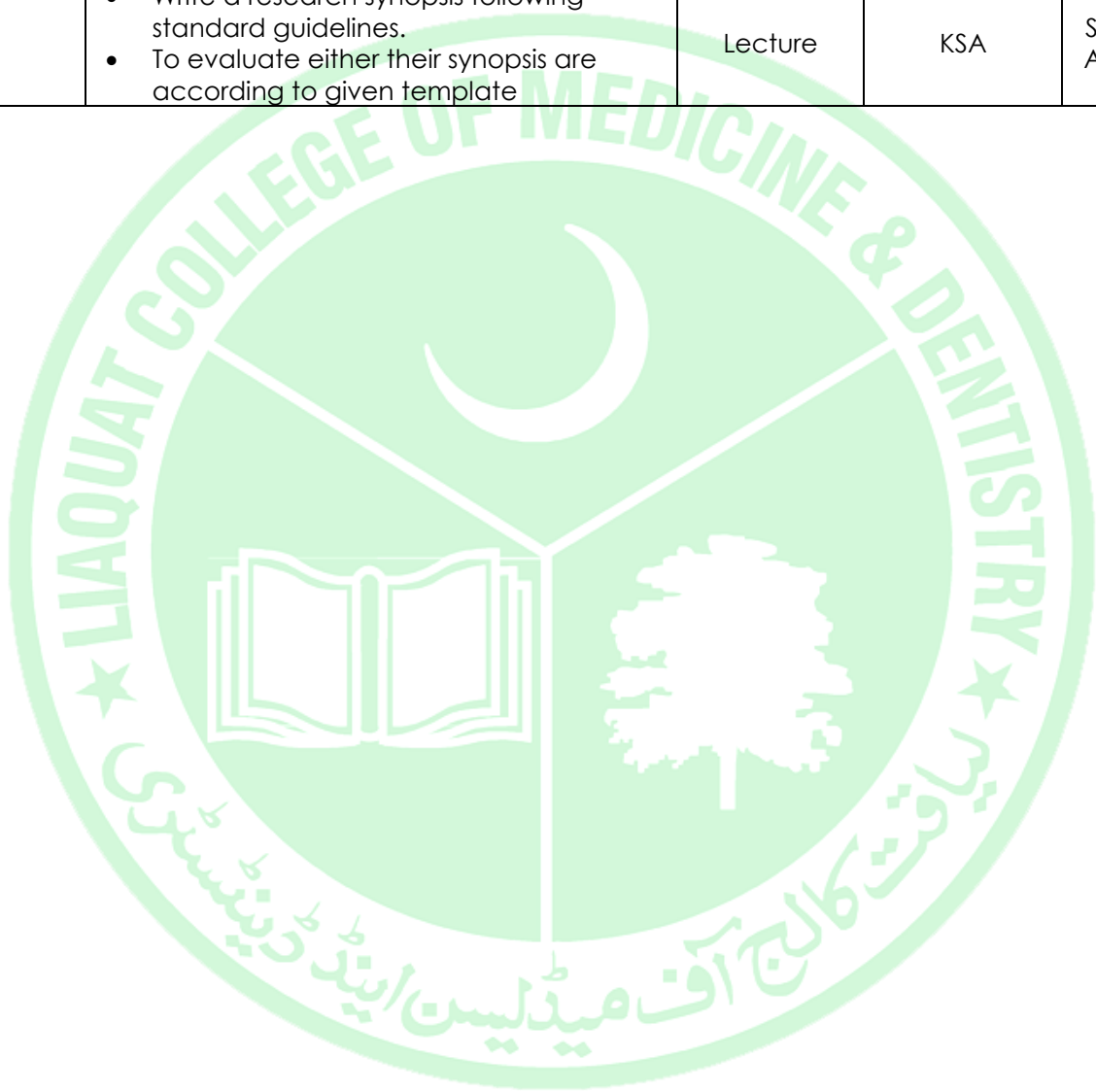




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RESEARCH				
Topic	Objectives	Learning Strategy	KSA Competencies Knowledge/ Skill/ Attitude	Assessment Tools
Synopsis Writing	<ul style="list-style-type: none">Write a research synopsis following standard guidelines.To evaluate either their synopsis are according to given template	Lecture	KSA	Summative Assignment

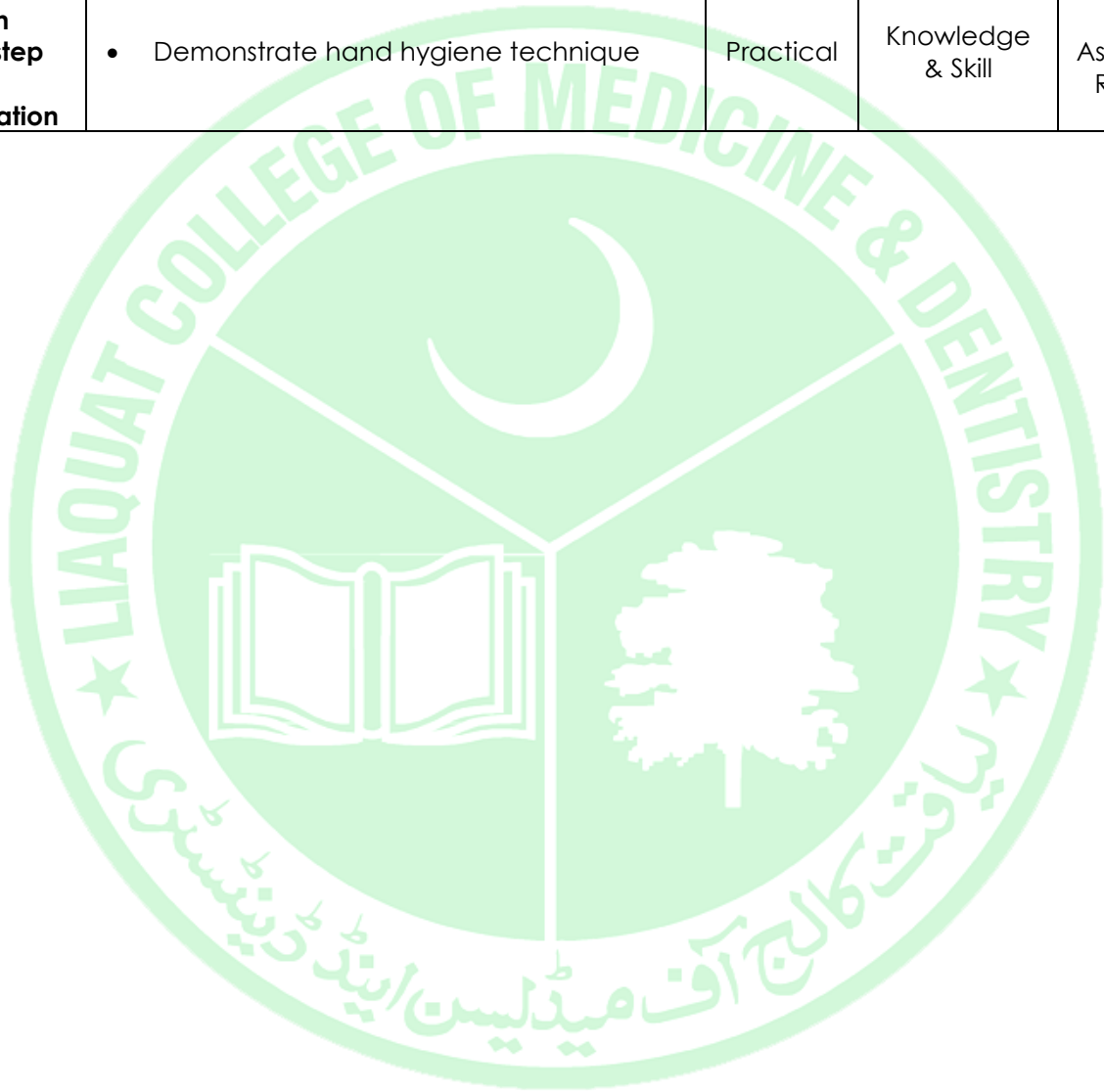




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PATIENT SAFETY				
Topic	Objectives	Mode of Teaching	KSA Competencies Knowledge/Skill/ Attitude	Assessment Tools
		Lecture/ Lectures		
Proper hand hygiene in dentistry step by step demonstration	<ul style="list-style-type: none">Demonstrate hand hygiene technique	Practical	Knowledge & Skill	MCQ, Assignment, Role Play





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LEADERSHIP, PROFESSIONALISM & ETHICS (LeaPE)				
Topic	Objectives	Mode of Teaching	KSA Competencies	Assessment Tools
		Lecture/ Tutorials	Knowledge/ Skill/ Attitude	
PROFESSIONALISM				
Professionalism: basic concepts	<ul style="list-style-type: none"> Discuss the various definitions of professionalism 	Lecture	KSA	MCQs/OSPE
	<ul style="list-style-type: none"> Identify the similarities and differences in the definitions 	Lecture	KSA	
	<ul style="list-style-type: none"> Discuss the main components of professionalism 	Lecture	KSA	
	<ul style="list-style-type: none"> Define professionalism and its importance in dentistry. Identify similarities and differences in definitions of professionalism. Discuss the core components of professionalism (ethics, competence, communication, accountability, altruism). 	Lecture /role play/ Small group discussion	KSA	

