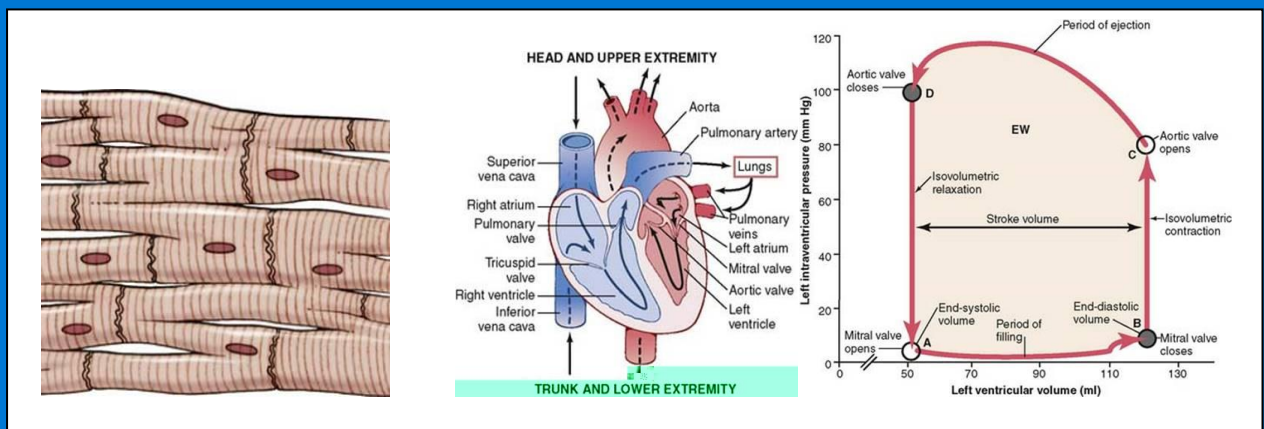


SWAT MEDICAL COLLEGE SWAT

DEPARTMENT OF MEDICAL EDUCATION



CARDIO VASCULAR - I MODULE



1ST YEAR MBBS

BLOCK: C

CLASS OF 2023-28

DURATION: 5 WEEKS

FROM: JULY 22 TO AUG 23

STUDENT NAME

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1 Acaedemic Calendar

Tentative Annual Calendar MBBS – 2023-24 Swat Medical College, Swat						
Activity/ Events	Week	Date	1 st Year	2 nd Year	3 rd Year	4 th Year
Orientation Week	1	12 th to 16 th Feb	Foundation-I (6 weeks) 22 nd March, Module Exam	Neurosciences-IA (6 weeks) 22 nd March, Module Exam	Foundation II (5 weeks) 22 nd March, Module Exam	Neurosciences – II (6 weeks) 25 th and 26 th March Block J Exam
Regular Classes	2	19 th to 23 rd Feb				
Regular Classes	3	26 th Feb to 1 st March				
Regular Classes	4	4 th to 8 th March				
Regular Classes	5	11 th to 15 th March				
Regular Classes	6	18 th to 22 nd March	Blood & Immunology (5 weeks) 6 th & 7 th May Block A exam	Neurosciences-IB (5 weeks) 13 th & 14 th May Block D	Infection & Inflammation (6 weeks) 6 th May to 7 th May Block G exam	GIT and Hepatobiliary – II (9 weeks) 10 th and 11 th June Block K Exam
Regular Classes	7	25 th to 29 th March				
Regular Classes	8	1 st to 5 th April				
Spring Break/Eid ul Fitr	9	8 th to 12 th April				
Sports Week	10	15 th to 19 th April				
Regular Classes	11	22 nd to 26 th April	MSK-I (8 weeks) 1 st & 2 nd July Block-B Exam	GIT, Hepatobiliary & Metabolism- (8 weeks) 1 st & 2 nd July	Multisystem (5 weeks) Module Exam 31 st May	Renal – II Module (4 weeks) 1 st and 2 nd July Module Exam
Regular Classes	12	29 th to 3 rd May				
Regular Classes	13	6 th to 10 th May				
Regular Classes	14	13 th to 17 th May				
Regular Classes	15	20 th to 24 th May				
Regular Classes	16	27 th May to 31 st May	CVS-I (5 weeks) 23 rd August Module Exam	Renal (3 weeks) 12 th to 13 th August Block E	MSK-II (5 weeks) 2 nd Sep 3 rd Sep Block H exam	Endocrine and Reproduction – II (8 weeks) 16 th and 17 th September Block-L exam
Regular Classes	17	3 rd to 7 th June				
Regular Classes	18	10 th to 14 th June				
Eid-ul-Adha Holidays	19	17 th to 21 st June				
Regular Classes	20	24 th to 28 th June				
Summer Vacations	21-23	3 rd to 21 st July	Respiratory-I (4 weeks) 23 rd -24 th SEP Block-C Exam	Endocrine-I (4 weeks) 6 th Sep	CVS-II (3 weeks) 20 th September Module exam	EYE and ENT (6 weeks) 14 th to 18 th Oct Block M1 & M2 Exam
Regular Classes	24	22 nd to 26 th July				
Regular Classes	25	29 th July to 2 nd Aug				
Regular Classes	26	5 th to 9 th Aug				
Regular Classes	27	12 th to 16 th Aug				
Regular Classes	28	19 th 23 rd Aug	PREPARATORY LEAVES	Reproduction-I (4 weeks) 30 th Sep 1 st Oct	RES-II (4 weeks) 21 st and 22 nd October Block L exam	PREPARATORY LEAVES
Regular Classes	29	26 th to 30 th Aug				
Regular Classes	30	2 nd to 6 th Sep				
Regular Classes	31	9 th to 13 th Sep				
Regular Classes	32	16 th to 20 th Sep				
Regular Classes/ Preparatory Leaves	33	23 rd to 27 th Sep	Annual Exam as per KMU schedule.	PREPARATORY LEAVES	PREPARATORY LEAVES	PREPARATORY LEAVES
Regular Classes/ Preparatory Leaves	34	30 th Sep to 4 th Oct				
Regular Classes/ Preparatory Leaves	35	7 th to 11 th Oct				
Regular Classes/ Preparatory Leaves	36	14 th to 18 th Oct				
Regular Classes/ Preparatory Leaves	37	21 st to 25 th Oct				
Regular Classes/ Preparatory Leaves	38	28 th Oct to 1 st Nov	Winter vacation	Annual Exam as per KMU	Annual Exam as per KMU schedule.	Annual Exam as per KMU schedule.
Regular Classes/ Preparatory Leaves	39	4 th to 8 th Nov				
Regular Classes/ Preparatory Leaves	40	11 th to 15 th Nov				
Regular Classes/ Preparatory Leaves	41	18 th to 22 nd Nov				
Regular Classes/ Preparatory Leaves	42	25 th to 29 th Nov				
Regular Classes/ Preparatory Leaves	43	2 nd to 6 th Dec	Winter vacation	Winter vacation	Winter vacation	Winter vacation
Regular Classes/ Preparatory Leaves	44	9 th to 13 th Dec				
Regular Classes/ Preparatory Leaves	45	16 th to 20 th Dec				
Regular Classes/ Preparatory Leaves	46-49	November 2024				
Regular Classes/ Preparatory Leaves	50-53	December 2024				
Regular Classes/ Preparatory Leaves	54-57	January 2025				
Start of new academic session 2025-26			February 2025	February 2025	February 2025	February 2025
Note: The given dates are tentative and may be subject to change as needed/demanded. The KMU will share the annual exam schedule at the end of the current session.			March 2025			

2 List Of Abbrevation

Anat-SGD	Small Group Discussion in Anatomy	Med-L	Medicine Lecture
Bio-L	Biochemistry Lecture	OSPE	Objectively Structured Practical Examination
Bio-P	Biochemistry Practical	Paeds-L	Pediatrics Lecture
Bio-SGD	Small Group Discussion in Biochemistry	Patho-L	Pathology Lecture
C.Med-L	Community Medicine Lecture	Phar-L	Pharmacology Lecture
DSL	Directed Self Learning	Phy-L	Physiology Lecture
FDT	Film/Demonstration/Tutorial	Phy-P	Physiology Practical
F.Med-L	Forensic Medicine Lecture	Phy-SGD	Small Group Discussion in Physiology
G.Anat-L	Gross Anatomy Lecture	PBL	Problem Based Learning
Histo-P	Histology Practical	SDL	Self-Directed learning
LGIS	Large Group Interactive Session.	SAQs	Short Answer Questions
MCQs	Multiple Choice Questions	SEQs	Short Essay Questions
Med.Edu-L	Medical Education Lecture	SGDs	Small Group Discussions
PRIME	Professionalism and communication skills, Research, Identity formation, Management and leadership, Ethics		

3 Module Committee:

s.no	Name	Department	Role
1.	Prof. Dr. Aziz Ahmad	Dean / principal	
2.	Dr. M Junaid Khan	DME	Director
Module Team			
3.	Prof. Dr. Rashid Ahmad	Professor Physiology	MPC-I Chair man
4.	Dr. Fiza Iqbal	Lecturer Physiology	Block Co-ordinator
5.	Prof. Dr. Muhammad khan	Professor Anatomy	Member
6.	Dr. Amanullah	Assistant Professor Physiology	Member
7.	Dr. Humaira Ali	Associate Professor Anatomy	Member
8.	Dr. Obaid Ur Rahman	Assistant Professor Biochemistry	Member
9.	Dr. Sara Maryum	Assistant Professor Biochemistry	Member
10.			
11.			
12.			
13.			



5 Recommended List Of Icons



Introduction To Case



For Objectives



Critical Questions



Assessment



Resource Material

6 Mission/ Vision of the College

6.1 Mission Statement of the Institution:

To train medical students as per international standards, thereby producing doctors who exhibit excellence as professionals, academicians, researchers and deptly fulfill healthcare needs through the application of ethical and evidence-based practices..

6.2 Vision Statement of the Institution:

To be a center of excellence in medical education, patient care and research globally.

7 Overview of the Module/ Preface

Welcome to the **Cardiovascular (CVS I) module**, where the overarching goal is to **equip you with profound understanding of medical science and practice**. Throughout the **Cardiovascular (CVS I) module**, emphasis is placed on integrating theoretical knowledge with practical applications, ensuring a comprehensive educational experience. The core themes of modules, including **chest pain, breathlessness and ankle swelling, blood pressure, and palpitations** are meticulously designed to foster a deep understanding of **Anatomy, Physiology, Biochemistry and Medicine**. Students will gain hands-on experience through **clinical rotation** in diverse settings such as **Long Interactive Group Session (LGIS), Small Group discussion (SGDs), Self Directed Learning (SDL), DSL and Skill/Practical** providing a well-rounded education.

The study guide serves as a crucial reference for assessment and evaluation. It outlines the components that will be assessed, such as **knowledge and basic sciences practical implications**, and the corresponding assessment tools, which may include **MCQs, SEQ and OSPE**. This transparency enables students to align their efforts with the evaluation criteria, promoting a sense of accountability and preparation for success in their academic pursuits. As future medical professionals, graduates can look forward to diverse career pathways, from clinical practice to research, with opportunities in **Anatomy, Physiology and Biochemistry**.

In essence, the study guide acts as an indispensable tool for students, offering clarity on module contents, instructional methodologies, faculty guidance, and assessment criteria. By actively engaging with the information provided, students can navigate their academic journey with confidence and purpose, maximizing their learning experience in the **MBBS program**.

8 Introduction/ Organization of Module

8.1 Introduction:

By the end of this module the student of Swat Medical College should be able to build adequate knowledge, attitude and skills to manage (Diagnose, Investigate, Treat, Refer, Prevent and Counsel) common cardiovascular diseases. Cardio Vascular system (CVS) module is designed to develop an understanding of the basic concepts of the cardiovascular system and electrocardiograph along with abnormalities through an integrated course.

CVS consist of the heart, lungs and blood vessels. In this system the heart functions as a pump whereas blood vessels act as pipes, carrying blood through the body and the lungs supply the blood with oxygen and remove its carbon dioxide.

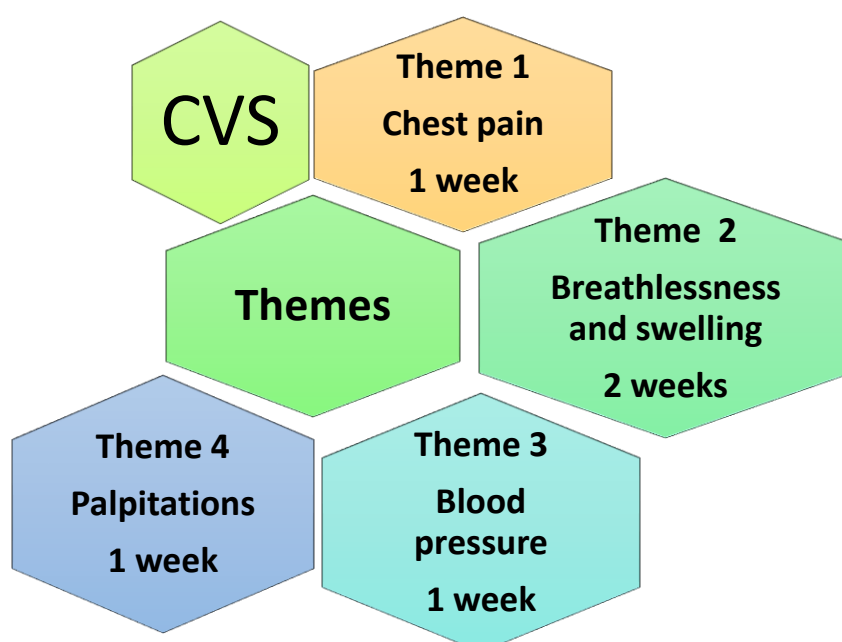
8.2 Rationale:

A perfectly functioning cardiovascular system is so important for the human body, that if it stops for a minute, rapid death may occur. Cardiovascular health is very important in maintaining overall health and wellness. This module will teach how heart and cardiovascular system works when healthy, and what happens when diseased.

8.3 Organization of the Study guide:

CVS module is a 5 week theme based module which will be taught through LGIS, SGDs, DSL, SDL and practicals in Anatomy, Physiology and Biochemistry. Each theme has clear learning objectives.

Themes included in CVS-I module:



8.1 Teaching Strategies:

The following teaching/ learning methods are used to promote better understanding:

A. Large Group Formats:

- a. **Interactive Lectures:** In large group, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients' interviews, exercises, etc. Students are actively involved in the learning process.
- b. **Directed Self Learnig:** Directed self-learning is an active learning approach where the learners are provided with predefined learning objectives and some facilitation through the learning process in the form of guidance and supervision. It helps establish a strong foundation for autonomous and deep learning.
- c. **Self Directed Learning:** Students' assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from Learning Resource Center, teachers and resource persons within and outside the college. Students can utilize the time within the college scheduled hours of self-study.

B. Small Group Formats:

- a. **Small Group Discussions:** This format helps students to clarify concepts acquire skills or attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials and self study. The facilitator role is to ask probing questions, summarize, or rephrase to help clarify concepts.
- b. **Practical Demonstration:** Basic science practicals related to anatomy, biochemistry and physiology are scheduled for student learning.

8.2 Assessment strategies

Assessments within the MBBS program at STMC consist of both formative and summative evaluations. These assessments are integral to monitoring student progress and academic performance.

A. Formative Assessment:

Formative assessments, accounting for 10% of the total marks assigned to each block, serve as ongoing evaluations designed to provide feedback and facilitate learning. The allocation of this 10% can be determined in accordance with the blueprint of KMU and further distributed as per the

academic council's recommendations at STMC. Formative assessments are conducted after the completion of each module, ensuring that students receive timely feedback to enhance their understanding and performance.

B. Summative Assessment:

Summative assessments, which comprise the majority of the assessment weighting (90% of all marks), are conducted and overseen by KMU, as part of the annual examination process. The summative annual examination is organized and conducted by KMU, which carries out the evaluation and grading. This summative assessment evaluates students' comprehensive understanding of the curriculum and accounts for a significant portion of their final scores.

C. Assessment Tools:

Various assessment tools are employed to gauge students' knowledge and competencies. These tools include:

- **Written Examinations:** These encompass Multiple Choice Questions (MCQ) and Short Essay Questions (SEQ) that evaluate students' theoretical knowledge.
- **Performance Assessments:** Objective Structured Practical Examinations (OSPE) and Objective Structured Clinical Examinations (OSCE) are used to assess practical skills and clinical competence.
- **In-Training Assessments:** Clinical logbooks provide a comprehensive record of students' practical experiences and serve as a valuable tool for tracking their progress.
- **Assignments:** Presentations, projects, and self-reflection assignments are included in the assessment process to enhance students' critical thinking and research skills

8.3 Feedback mechanism and summary

At the end of each module a **“Module Evaluation Form”** will be provided to the students whether in hard copies or online and the students will give their opinion regarding the “Course Contents”, “Learning Resources”, “Teaching Methods”, “Engagement & Motivation” and “Assessment Methods”.

9 Table Of Specification

Subject	No. of Hours Allocated in Time table						Percent Distribution	Assessment	
	Large Group Format		Small Group Format			Total		MCQs	OSPE
	Lectures	DSLs	Practicals	Skill Lab	SGDs				
Gross Anatomy	05	04	04	--	06	24	24.7%	09	05
Histology	02							04	
Embryology	03							05	
Physiology	09	04	06	--	06	25	25.8%	34	05
Biochemistry	06	04	04	--	04	18	18.6%	14	01
PRIME	03	--	--	--	--	--	3.1%	--	--
Pharmacology	02	--	--	--	--	--	2.1%	01	--
Pathology	02	--	--	--	--	--	2.1%	01	--
Community Medicine	03	--	--	--	--	--	3.1%	01	--
General Medicine	10	--	--	--	--	--	10.3%	--	01
Forensic Medicine	01	--	--	--	--	--	1.0%	01	--
IT Skills	01	--	--	--	--	--	1.0%	--	--
Islamiyat	03	--	--	--	--	--	3.1%	--	--
SDL	05	--	--	--	--	--	5.2%	--	--
Total	55	12	14	--	16	67	100%	70	12



10 Learning Objectives

10.1 General Learning Outcomes

By the end of this module the students would be able to;

Knowledge

1. Describe the normal structure and function of the different parts of the heart, conducting system, the aorta and large elastic arteries, arteries, arterioles and capillaries, venules and veins.
2. Recognize and identify the changes in structure and/or functioning of the cardiovascular system in the following disease states: valvular heart disease, dysrhythmias, atherosclerosis and ischemic heart disease, congenital heart disease, hypertension and common syndromes like heart failure, stroke and shock that arise as complications.
3. Correlate etiology with the pathogenesis of different types of shock
4. Correlate the etiology with the pathogenesis of different thromboembolic phenomenon.
5. Describe the embryology of the heart and correlate it with various developmental anomalies
6. Describe the development of arterial, venous and lymphatic system
7. Describe the microscopic structure of myocardium, and blood vessels
8. Describe the cardiac cycle, cardiac output, and venous return
9. Discuss blood pressure and its regulation
10. Describe the mechanisms and types of circulatory shock and associated compensatory mechanisms
11. Describe the anatomy and common pericardial diseases
12. Describe the cardiac enzymes
13. Describe the mechanisms of impulse generation, conduction and excitation of myocardium
14. Discuss the normal ECG and common ECG abnormalities
15. Enlist the drugs used in ischemic heart disease and hyperlipidemias
16. Describe preventive strategies of cardiovascular diseases

Skills

1. Demonstrate the use of Stethoscope for Auscultation.
2. Identify normal and abnormal findings in the heart and blood vessels on gross, microscopic and radiologic examination
3. Interpret circulation physics
4. Interpret normal and distinguish abnormal ECGs
5. Record blood pressure and observe the effects of posture and exercise on blood pressure.
6. Elicit clinical history in a patient suspected of cardiovascular disease
7. Auscultate the heart sounds and differentiate between the normal and abnormal sounds on

physical examination

8. Perform a focused physical examination of the CVS and recognize abnormalities in common disorders in the disease
9. Examine/ palpate all peripheral pulses and recognize alteration in volume, rate and rhythm
10. Examine JVP
11. Demonstrate systematic analysis of ECG.
12. Identify the position of borders and valves of the heart by surface marking on model / simulator.
13. Palpate and find apex beat, and auscultatory areas in the chest of the subject provided and describe their significance.
14. Differentiate between normal and displaced apex beat
15. Perform basic life support.
16. Interpret the cardiac enzymes
17. Detect lipids in a given sample

Attitude

1. Must be aware of the importance of lifestyle modification in the prevention and control of heart diseases
2. Describe increasing morbidity and mortality associated with cardiovascular disorders and its psycho-social impact on the individual and family
3. Demonstrate ability to give and receive feedback, respect for self and peers.
4. Develop respect for the individuality and values of others - (including having respect for oneself) patients, colleagues and other health professionals
5. Organize& distribute tasks

10.2 Specific Learning Outcomes

1 THEME-I: Chest Pain

This theme consists of one week and includes the surface anatomy of the heart, surface markings of heart valves & blood vessels and gross structure of the heart. Arterial supply of the heart and its lymphatic & venous drainage will be discussed. Gross anatomy of the pericardium is also part of this theme. Microscopic views of cardiac muscles, its ultra-structures and histological layers of heart wall will also be discussed. Physiologic anatomy, properties of cardiac muscles and physiologic basis of coronary circulation will be described. Etiology and steps of coronary thrombosis will also be described.

Cardiac enzymes and their pattern of elevation in ischemic heart diseases will be described. Similarly, the Cardiac Manifestations of Vitamin B1 deficiency and the role of Na, K, Ca and Mg in cardiac muscles contractility and their biochemical abnormalities will also be described. The chemistry of lipids, cholesterol and lipoproteins will also be discussed.

Pathology of coronary artery disease, atherosclerosis and Medico legal aspects of sudden death due to cardiovascular diseases will be described. Primordial, primary, secondary and tertiary prevention of cardiovascular diseases in community and their drug treatment will be described.

The contents of this theme will be taught in of lectures, Practicals, SGDs, DSLs and SDLs.

SNO	Subject:	Learning Outcomes	Hours	MIT
ANATOMY				
1	Surface anatomy	<ol style="list-style-type: none"> 1. Describe the surface marking of the heart 2. Describe the surface marking of the heart valves 3. Illustrate the surface marking of the aorta on models / x-rays 4. Describe the surface marking of the superior vena cava 5. Describe the surface marking of the inferior vena cava 6. Describe the gross structure of the heart 	01	LGIS

2.	Gross anatomy of the heart	<ol style="list-style-type: none"> 1. Describe the anatomical position, borders, surfaces, external and internal features of the atria and ventricles of the heart 2. Explain the role of muscles bundles present in the ventricles in drawing the valvular cusps together during ventricular systole. 3. Explain role of skeleton of heart in preventing the incompetence of heart valves. 4. Explain the location and structure 5. of all four valves of heart. 6. Explain the structure of interatrial and interventricular septum 	01	LGIS
3	Coronary circulation	<ol style="list-style-type: none"> 1. Describe the coronary arteries 2. Enlist the branches of each main artery 3. Describe the anastomosis of coronaries 4. Identify the area of the heart supplied by a coronary artery and its branches 5. Describe the venous drainage of the heart 6. Describe the lymphatic drainage of the heart 	01	LGIS
4	Pericardium	<ol style="list-style-type: none"> 1. Define pericardium 2. Describe different reflections of pericardium 3. Identify entry & exit of vessels of heart via pericardium 4. Define Pericarditis, Pericardial effusion and 5. Cardiac Tamponade 	01	LGIS
Embryology				
5	Development of heart tube and its subdivisions	<ol style="list-style-type: none"> 1. Explain the formation of heart tube with special reference to primary & secondary heart fields 2. Enlist the subdivisions of heart tube & their fate 3. Appraise the mechanism of cardiac looping and enlist its abnormalities. 4. Explain different methods of septal 	01	LGIS

		<p>formation</p> <ol style="list-style-type: none"> Describe division of atrioventricular canal. Describe the formation of right and left atrium and pulmonary veins Describe the embryological steps involved in formation of interatrial and interventricular septum. Explain the process of development and fusion of aorticopulmonary septum in primitive heart. Discuss the contribution of neural crest cells in the developing heart. 		
HISTOLOGY				
6	Histology of heart muscles	<ol style="list-style-type: none"> Explain the characteristics of cardiac muscle cell Explain the Structure of Intercalated disc Define the junctional specializations making up the intercalated disk Describe identification of different microscopic views of Cardiac muscle and its ultra-structures Differentiate histologically between cardiac and skeletal muscle and smooth muscles Enumerate histological layers of heart wall 	01	LGIS
PHYSIOLOGY				
7	Cardiac muscles	<ol style="list-style-type: none"> Explain the physiologic anatomy of the cardiac muscle Describe the properties of the cardiac muscle 	01	LGIS
8	Coronary circulation	<ol style="list-style-type: none"> Describe the physiologic basis coronary circulation 	01	LGIS
BIOCHEMISTRY				
9	Cardiac enzymes	<ol style="list-style-type: none"> Identify the enzymes that increase in myocardial infarction Describe Cardiac enzymes and their pattern of elevation in ischemic heart diseases 	01	LGIS
10	Lipids	<ol style="list-style-type: none"> Define and Classify lipids Describe the functions of lipids in the body 	01	LGIS
11	Cholesterol	<ol style="list-style-type: none"> Describe the Chemical Structure and function of cholesterol 	01	LGIS

		2. Describe the fate of cholesterol in the body		
12	Lipoproteins	1. Classify lipoproteins and their functions	01	LGIS
13	Role of Minerals in Cardiac Muscles Contractility	1. Describe the role of Na, K, Ca and Mg in cardiac muscles contractility and their biochemical abnormalities	01	LGIS
14	Cardiac Manifestations of Vitamin B1 deficiency	1. Describe the Cardiac Manifestations of Vitamin B1 deficiency	01	LGIS
PHARMACOLOGY				
15	Drug Treatment of CAD	1. Enlist the groups of drugs used in the treatment of CAD (angina and MI)	01	LGIS
16	Lipid Lowering Drugs	1. Enlist the groups of lipids lowering drugs	01	LGIS
PATHOLOGY				
17	Coronary circulation	1. Describe the steps of coronary thrombosis 2. Describe the etiology of coronary thrombosis	01	LGIS
18	Coronary Artery Disease	1. Describe the risk factors, and lab. Diagnosis of CAD	01	LGIS
19	Atherosclerosis	1. Define and Enlist the stages of atherosclerosis	01	LGIS
FORENSIC MEDICINE				
20	Medicolegal aspects of sudden death due to cardiovascular diseases	1. Describe the Medicolegal aspects of sudden death due to cardiovascular diseases	01	LGIS
COMMUNITY MEDICINE				
21	Prevention of CVD	1. Describe primordial, primary, secondary and tertiary prevention of CV diseases in community	01	LGIS
LAB WORK				
HISTOLOGY				
22	Cardiac Muscle	1. Identify the Cardiac Muscle under the microscope	02	Demonstration/practical
PHYSIOLOGY				
23	Basic Life Support	1. Perform basic life support.	02	Demonstration/practical
BIOCHEMISTRY				
24	Lipid Detection	1. Detection of lipids in a given sample. 2. Detection of cholesterol in a given	02	Demonstration/practical

		sample.		
DIRECTED SELF LEARNING				
ANATOMY				
25	Surface Anatomy of the Heart	<ol style="list-style-type: none"> 1. Describe the surface marking of the heart 2. Describe the surface marking of the heart valves 3. Illustrate the surface marking of the aorta on models 	01	DSL
PHYSIOLOGY				
26	Cardiac muscles	<ol style="list-style-type: none"> 1. Explain the physiologic anatomy of the cardiac muscle 2. Describe the properties of the cardiac muscle 	01	DSL
BIOCHEMISTRY				
27	Cardiac enzymes	<ol style="list-style-type: none"> 1. Identify the enzymes that increase in myocardial infarction 2. Describe Cardiac enzymes and their pattern of elevation in ischemic heart diseases 	01	DSL

*MIT:mode of information transfer. E.g. lecture, SGD, DSL, Practical, skill lab etc etc

Theme-II (Breathlessness and ankle swelling)

This theme is for two weeks and it will cover the physiological aspects of Cardiac Cycle, Cardiac output, blood flow, lymphatic system of the heart and functions of the heart valves. The congenital anomalies of the heart such as atrial septal defect, ventricular septal defect, patent ductus arteriosus, tetralogy of Fallot, transposition of the great vessels hemangiomas and telangiectasia will be described. The physiological changes in circulation after birth will also be discussed. Heart failure will also be discussed here.

S.No.	Subject	Learning Outcomes/Objectives	Hours	MIT
EMBRYOLOGY				
1	Fetal circulation	1. Describe the physiological changes in circulation after birth	01	LGIS
2	Cardiac developmental anomalies	1. Enlist the developmental anomalies of heart. 2. Describe the congenital anomalies of the heart: 3. ASD 4. VSD 5. PDA 6. Tetralogy of Fallot 7. Transposition of the great vessels 8. Hemangiomas and 9. Telangiectasia	01	LGIS
PHYSIOLOGY				
3	Cardiac cycle	1. Describe the Cardiac cycle 2. Describe the concept of systole and diastole, 3. Describe the role of atria and ventricles as pumps, 4. Describe the functions of heart valves, 5. Correlate the cardiac cycle events with ECG 6. Describe the mechanism of production of normal and abnormal heart sounds 7. Relate heart sounds with cardiac cycle, 8. Describe the metabolism and	01	LGIS

		oxygen utilization of cardiac muscle 9. Describe the regulation of cardiac cycle		
4	Cardiac output	<ol style="list-style-type: none"> 1. Describe pressure volume loop (end-systolic volume / end-diastolic volume / ejection fraction / systolic volume / systolic work output) 2. Explain the Frank-Starling mechanism of the heart for the control of cardiac output by venous return 3. Describe the methods for measuring of cardiac output 4. Describe normal cardiac output and venous return during rest and during activity 5. Enlist the causes of abnormally high and abnormally low cardiac output 6. Explain the mechanisms of normal cardiac contractility and the role of calcium ion/ ATPase pumps 7. Explain cardiac output (regulation/measurement) and peripheral resistance and its regulation 8. Explain the factors regulating cardiac output and venous return. 	01	LGIS
5	Blood flow I	<ol style="list-style-type: none"> 1. Describe the Biophysics and Interrelationships of Pressure, Flow, and Resistance in terms of Ohm's law and Poiseuille's Law 2. Describe Starling forces 3. Describe regulation of blood flow 4. Define basal tone. 5. List several substances potentially involved in local metabolic control of vascular tone. 6. State the local metabolic vasodilator hypothesis. 7. Describe physiological Vasodilators and Vasoconstrictors and their mechanisms 	01	LGIS
6	Blood flow II	<ol style="list-style-type: none"> 1. Describe the factors affecting the local blood flow including auto-regulation. 2. Describe the function of capillaries 	01	LGIS

		3. Describe circulatory changes during exercise 4. Describe blood flow to different organs like brain, heart, liver and skin during exercise		
7	Lymphatic system	1. Describe the function of lymphatic system in the maintenance of interstitial fluid volume. 2. Describe the effects of Interstitial Fluid Pressure on Lymph Flow. 3. Describe how changes in capillary hydrostatic pressure, plasma oncotic pressure, capillary permeability, and lymphatic function can lead to tissue edema	01	LGIS
GENERAL MEDICINE				
8	Functions of heart valves	1. Describe the functions of mitral, tricuspid, aortic and pulmonic valves 2. Describe the hemodynamics and sequel related to stenosis and regurgitation of heart valves 3. Describe the mechanism of production of normal and abnormal heart sounds	01	LGIS
	Heart failure	1. Define Heart failure 2. Differentiate between right-sided Heart failure and left-sided heart failure	01	LGIS
LAB WORK				
CLINICAL / GENERAL MEDICINE				
9	Chest Radiographs	1. Identify normal cardiac shadow, borders and cardiomegaly on chest radiographs.	02	SGF
10	Heart Model	1. Identify the position of borders and valves of the heart by surface marking on model / simulator	02	SGF
11	CVS Examination	1. Palpate and find apex beat, and auscultatory areas in the chest of the subject provided and describe their significance. 2. Demonstrate the use of Stethoscope for Auscultation. 3. Differentiate between normal and displaced apex beat	02	SGF
SMALL GROUP DISCUSSIONS				

ANATOMY				
12	Study of CVS Models	1. Identify the structures on gross heart models 2. Identify the structures on embryo heart models	02	SGD
PHYSIOLOGY				
13	Functions of Heart Valves	1. Describe the functions of mitral, tricuspid, aortic and pulmonic valves.	02	SGD
BIOCHEMISTRY				
14	Cardiac muscles contractility	1. Describe the role of Na, K, Ca and Mg in cardiac muscles contractility.	02	SGD
DIRECTED SELF LEARNING				
ANATOMY				
15	Fetal Circulation	1. Describe the fetal circulation	01	DSL
PHYSIOLOGY				
16	Cardiac Cycle	1. Describe the Cardiac Cycle, correlate the cardiac cycle events with ECG, relate heart sounds with cardiac cycle & describe the regulation of cardiac cycle	01	DSL
BIOCHEMISTRY				
17	Functions of Lipids	1. Describe the functions of lipids in the body	01	DSL

*MIT:mode of information transfer. E.g. lecture, SGD, DSL, Practical, skill lab etc etc

Theme-III (Blood Pressure)

This theme is for one week and will cover topics like rapid, intermediate and long term control of blood pressure, types and causes of hypertension, drugs used in hypertension and its prevention. The effects of sympathetic and parasympathetic stimulation on the heart and circulation will be described. Types of circulatory shocks and their pathophysiology will also be discussed. The histological composition of blood vessels, development of arterial and venous system will be described. The congenital anomalies in blood vessels will also be described. The contents of this theme will be taught in Lectures, Practicals, SGDs, DSLs and SDL.

S.No.	Subject	Learning Outcomes/Objectives	Hours	MIT
HISTOLOGY				
1	Histology of blood vessels	<ol style="list-style-type: none"> 1. Describe the histological composition of vessel 2. Describe the microscopic structure of artery and vein 3. Differentiate histologically between artery and vein under light microscope 4. Describe the histological composition of lymphatic channels 	01	LGIS
EMBRYOLOGY				
2	Development of arteries and veins	<ol style="list-style-type: none"> 1. Describe the development of arterial system 2. Describe the development of venous system 3. Describe the congenital abnormalities in in the vessels. 4. Coarctation of Aorta 	01	LGIS
PHYSIOLOGY				
3	Blood Pressure	<ol style="list-style-type: none"> 1. Define blood pressure 2. Describe the causes of High / low BP 3. Discuss the mechanisms for rapid and long term control of blood pressure (including Renin Angiotensin system) 4. Describe the effects of sympathetic and parasympathetic stimulation on the heart and circulation 	01	LGIS

MEDICINE				
4	Circulatory Shock	<ol style="list-style-type: none"> 1. Define Circulatory Shock 2. Explain the physiologic causes of circulatory shock 3. Explain the stages of circulatory shock 4. Describe cardiogenic shock 5. Describe Hemorrhagic Shock 6. Describe of Neurogenic Shock 7. Describe Anaphylactic Shock 8. Describe Septic Shock 9. Explain the physiology of treatment in Shock 	01	LGIS
PHARMACOLOGY				
5	Antihypertensive Drugs	<ol style="list-style-type: none"> 1. Describe the mechanisms of drugs used in the treatment of Hypertension 	01	LGIS
COMMUNITY MEDICINE				
6	Prevention of hypertension	<ol style="list-style-type: none"> 1. Describe the preventive strategies of hypertension 	01	LGIS
LAB WORK				
HISTOLOGY				
7	Histology of blood vessels	<ol style="list-style-type: none"> 1. Identify salient features of a medium sized artery & vein in a cross-section under microscope. 2. Identify the histological differences between medium size artery & vein under microscope. 	02	Demonstration / Practical
PHYSIOLOGY				
8	Blood pressure	<ol style="list-style-type: none"> 1. Measure the blood pressure. 2. Measure the effect of posture and exercise on blood pressure. 3. Examine the arterial pulses. 4. Auscultate the heart sounds. 	02	Demonstration / Practical
BIOCHEMISTRY				
9	Cardiac Enzymes	<ol style="list-style-type: none"> 1. Interpretation of Cardiac Enzymes 	02	Demonstration / Practical
SMALL GROUP DISCUSSIONS				
ANATOMY				
10	Blood Vessels	<ol style="list-style-type: none"> 1. Describe the histological composition of blood vessels. 	02	SGD
PHYSIOLOGY				
11	Circulatory Shock	<ol style="list-style-type: none"> 1. Define Circulatory Shock 2. Explain the Physiologic causes 	02	SGD

		of circulatory shock 3. Explain the stages of circulatory shock 4. Describe Cardiogenic shock 5. Describe Hemorrhagic Shock 6. Describe of Neurogenic Shock 7. Describe Anaphylactic Shock 8. Describe Septic Shock 9. Explain the Physiology of treatment in Shock		
BIOCHEMISTRY				
12	Lipoproteins	1. Define & classify lipoproteins 2. Describe the functions of lipoproteins	02	SGD
DIRECTED SELF LEARNING				
ANATOMY				
13	Pericardium	1. Define pericardium 2. Describe different reflections of pericardium 3. Identify entry & exit of vessels of heart via pericardium	01	DSL
PHYSIOLOGY				
14	Blood Pressure	1. Discuss the mechanisms for rapid and long term control of blood pressure including Renin Angiotensin system	01	DSL
BIOCHEMISTRY				
15	Cholesterol	1. Describe the chemical structure, function and fate of cholesterol.	01	DSL

*MIT:mode of information transfer. E.g. lecture, SGD, DSL, Practical, skill lab etc etc

Theme-IV (-Palpitations)

This 1-week long theme consists of description of different components of conduction system of the heart and sympathetic & parasympathetic innervation of the heart. Excitation and contraction of cardiac muscles and interpretation of ECG is also part of this theme. Identification of the major risk factors which contribute to common diseases of the cardiovascular system and primordial, primary, secondary and tertiary prevention of cardiovascular diseases in community will be discussed. The contents will be taught in lectures, Practicals, SGDS, DSLs and SDL.

S.No.	Subject	Learning ourcomes/Objectives	Hours	MIT
ANATOMY				
1	Conduction system of the heart	1. Describe the different components of conduction system <ol style="list-style-type: none"> SA Node AV Node Bundle of His Purkenje Fibers Bundle branches 2. Describe the sympathetic innervation of heart 3. Describe the parasympathetic innervation of the heart	01	LGIS
PHYSIOLOGY				
2	Excitation and contraction of cardiac muscles I	1. Describe the excitation–contraction process in cardiac muscle. 2. Describe Chronotropic, Inotropic and Dromotropic Effects 3. Describe Chronotropic, Inotropic and Dromotropic Effects 4. Differentiate excitation–contraction process in cardiac and skeletal muscle cells 5. Describe gap junctions and the significance of functional syncytium 6. Explain phases of cardiac muscle action potential 7. Describe the characteristics of cardiac action potentials and the role of “slow calcium” channels in causing plateau and its significance.	01	LGIS
3	Excitation and	1. Define Pacemaker and explain why SA node is the normal pacemaker of the heart	01	LGIS

	contraction of cardiac muscles II	<ol style="list-style-type: none"> Describe the significance of AV nodal Delay Define Ectopic Pacemaker and describe its causes Describe the effects of sympathetic and parasympathetic stimulation on the heart rate and conduction of cardiac action potentials Define various types of refractory periods Differentiate the refractory period of cardiac muscle with that of skeletal muscle Describe the significance of prolonged action potential in cardiac muscle Describe the physiological anatomy of the sinus node Define automaticity and rhythmicity and conductivity Describe the specialized excitatory and conductive pathway of the cardiac muscle tissue 		
MEDICINE				
4	ECG	<ol style="list-style-type: none"> Describe the characteristics of normal ECG, time duration of waves, segments and voltages Explain how to record ECG Describe the AV nodal, ventricular impulse conduction Interpret ECG paper and its calibration 	01	LGIS
COMMUNITY MEDICINE				
5	CVD prevention	<ol style="list-style-type: none"> Identify the major risk factors which contribute to common diseases of the cardiovascular system Enumerate modifiable and non-modifiable risk factors of CV diseases Apply primordial, primary, secondary and tertiary prevention of CV diseases in community 	01	LGIS
LAB WORK				
PHYSIOLOGY/ GENERAL MEDICINE				
6	ECG	Perform systematic analysis of ECG	02	Demonstration / Practical
SMALL GROUP DISCUSSIONS				

ANATOMY				
7	Innervation of the Heart	1. Describe the sympathetic & parasympathetic innervation of heart	02	SGD
PHYSIOLOGY				
8	Pacemaker	1. Define Pacemaker and explain why SA node is the normal pacemaker of the heart 2. Define Ectopic Pacemaker and describe its causes	02	SGD
DIRECTED SELF LEARNING				
ANATOMY				
9	Conduction system of the heart	1. Describe the different components of conduction system	01	DSL
PHYSIOLOGY				
10	ECG	1. Describe the characteristics of normal ECG and explain how to record ECG. 2. Interpret ECG paper and its calibration	01	DSL
BIOCHEMISTRY				
11	Lipoproteins	1. Define & classify lipoproteins. 2. Explain the structure of lipoproteins. 3. Enlist the functions of lipoproteins.	01	DSL

*MIT:mode of information transfer. E.g. lecture, SGD, DSL, Practical, skill lab etc e



11 Learning Opportunities and Resources

a. Instruction (if any)

Apart from these resource learning ,students can consult books available in library or recommended by the specialty experts.

b. Books:

1. Anatomy

- i. Clinical Anatomy by Regions by Richard S. Snell (Latest Edition)
- ii. Gray's Anatomy for Students (Latest Edition)
- iii. K.L. Moore, Clinically Oriented Anatomy (Latest Edition)
- iv. Netter's "Atlas of Human Anatomy (Latest Edition)
- v. Last's Anatomy (Latest Edition)

2. Histology

- i. Textbook of Histology by Junqueira (Latest Edition)
- ii. diFiore's ATLAS of Histology with Functional Correlations (Latest Edition)
- iii. Atlas of Human Histology by Wheaters. (Latest Edition)
- iv. Textbook of Histology by Laiq Hussain (Latest Edition)

3. Embryology

- i. Langman's Medical Embryology (Latest Edition)
- ii. The Developing Human "by Keith L Moore" (Latest Edition)

4. Physiology

- i. Textbook of Medical Physiology by Guyton and Hall (Latest Edition)
- ii. Ganong's "Review of Medical Physiology" (Latest Edition)

5. Biochemistry

- i. Harper's Illustrated Biochemistry (Latest Edition)
- ii. Lippincott's Illustrated Review: Biochemistry (Latest Edition)

6. Pharmacology

- i. Katzung's Basic and Clinical Pharmacology (Latest Edition)

7. Pathology

- i. Robbin's Basic Pathology (Latest Edition)

8. Community Medicine

- i. Essential Community Medicine (Latest Edition)
- ii. K Park Textbook of Preventive and Social Medicine (Latest Edition)

9. Forensic Medicine

- i. Parikh's Textbook of Medical Jurisprudence, Forensic Medicine & Toxicology (Latest Edition)

10. General Medicine

- i. Davidson's Principles and Practice of Medicine (Latest Edition)

c. Website:

1 Anatomy:

1. <http://files.readmedbooks.com/anatomy/netter-atlas-7.pdf>
2. [file:///C:/Users/dell/Desktop/Gray's%20AnatomyThe%20Anatomical%20Basis%20of%20Clinical%20Practice%2041st%20Edition%20-%202015%20\[MSCambo\].pdf](file:///C:/Users/dell/Desktop/Gray's%20AnatomyThe%20Anatomical%20Basis%20of%20Clinical%20Practice%2041st%20Edition%20-%202015%20[MSCambo].pdf)
3. <https://worldofmedicalsaviours.com/cunninghams-manual-of-practical-anatomy/>
4. https://ia802606.us.archive.org/16/items/pdfy-dPFUmAhPcw_n7EV/snell%20clinical%20anatomy%20by%20regions%209th%20ed%202012_2.pdf
5. <http://med-mu.com/wp-content/uploads/2018/06/Snell-Neuroanatomy-7th-Edition.pdf>
6. <http://files.readmedbooks.com/anatomy/lasts-anatomy.pdf>

2 Embryology

1. <https://bhumikapalrocks.files.wordpress.com/2016/02/langmans-medical-embryology-12th-ed.pdf>
2. <https://mymedicallibrary.files.wordpress.com/2016/08/the-developing-human-edition-8th.pdf>

3 Histology

1. [file:///C:/Users/dell/Desktop/\(Lib-Ebooks.com\)150320212213%20\(4\).pdf](file:///C:/Users/dell/Desktop/(Lib-Ebooks.com)150320212213%20(4).pdf)
2. file:///C:/Users/dell/Desktop/pdfcoffee.com_2002-basic-histology-by-luis-carlos-junqueira-textamp-atlas-10th-edition-mcgraw-hill-appleton-amp-lange-pdf-free.pdf

4 Physiology:

1. <https://med-mu.com/wp-content/uploads/2018/06/Guyton-and-Hall-Textbook-of-MedicalPhysiology-12th-Ed-PDFtahir99-VRG.pdf>
2. <https://medicostimes.com/guyton-medical-physiology-pdf/>
3. https://ia903208.us.archive.org/23/items/GanongsReviewOfMedicalPhysiology25thEdition/Ganong's%20Review%20of%20Medical%20Physiology_%2025th%20Edition.pdf
4. <https://worldofmedicalsaviours.com/medical-books/mbbs/physiology/sherwood-humanphysiology.pdf>

5 Biochemistry:

1. <file:///C:/Users/dell/Desktop/harpers-illustrated-biochemistry-28th-edition.pdf>
2. <http://repository.stikesrspadgs.ac.id/69/1/Principles%20of%20Medical%20Biochemistry%20Meisner%20Simmons-635hlm.pdf>

3. <https://worldofmedicalsaviours.com/medical-books/mbbs/biochemistry/lippincotts-illustratedreviews-series.pdf>

6 Pharmacology:

1. https://pharmacomedicale.org/images/cnpm/CNPM_2016/katzung-pharmacology.pdf

7 Community Medicine:

1. https://drive.google.com/file/d/1kG_04GUfxSOxsdRaucxJ-jykVgc-BZT0/view
2. <https://barlybeltatimen.wixsite.com/charratttisri/post/ilyas-ansari-community-medicine-bookfree-46>
3. <https://psebooks.club/-/readerroman/#/flow=gHqRV5+cdn.bkfd4.club/q=Basic%20Statistics%20for%20the%20Health%20Sciences/>

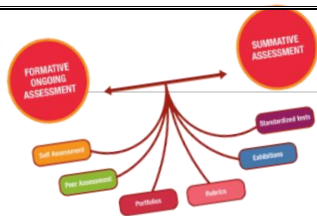
8 Forensic medicine:

1. <https://www.ojp.gov/ncjrs/virtual-library/abstracts/parikhs-text-book-medical-jurisprudence-andtoxicology-classrooms>

9 Medicine:

1. https://drive.google.com/file/d/0B8VbbFBwhaS8a2ZlaXIIMGNwMmc/view?resourcekey=0-cJ3WGul40Avx4G5U1gX2A_C

Articles:



12 Examination and Methods of Assessment:

a. Instruction:

- Students must arrive the examination venue at least 15 minutes before the scheduled start time. Latecomers 15 minutes after the start of exam, will not be allowed to enter the examination hall after the start time, and if permitted, they will not receive extra time.
- Students without College ID Card and white Lab Coat will not be allowed to sit in exam.
- In case of an emergency such as a medical emergency, students should inform the examination supervisor.
- Students are required to submit prohibited items such as mobile phones, smartwatches, electronic devices, books, notes, or any unauthorized materials before entering the examination hall.
- Students must maintain complete silence within the examination hall. They should refrain from communicating with fellow students and strictly follow invigilator instructions.
- Students must mark their attendance properly.
- No student will be allowed to leave the examination hall before half the time is over and paper should be properly handed to the examiner.
- Violation of these guidelines may lead to disqualification from the examination.

b. The Distribution of Internal Assessment Score (10% Marks):

The distribution of Internal Assessment Score for 1st Year MBBS will be as follows:

- Total Marks for 1st Year MBBS= 700 & Internal Assessment Marks=70 (10%)
- 50 % of the Internal Assessment Marks may be given to Block Exams
- 50 % of the Internal Assessment marks may be given to Class Test/ End of Module Exam, Assignments and Presentations.
- Biochemistry department is responsible to maintain the attendance record for BLOCK –A in coordination with all the concerned departments.
- Anatomy department is responsible to maintain the attendance record for BLOCK –B in coordination with all the concerned departments.

- Physiology department is responsible to maintain the attendance record for BLOCK –C in coordination with all the concerned departments.

A. Distribution of 20 Marks for Block Papers for First Year MBBS will be as under:

Attendance Requirement:

More than 75% attendance is mandatory to sit for the examinations.

Methods of assessment:

Block Assessment

Block Assessment consists of

- Theory Paper(MCQs, SAQs) and
- Skill assessment (OSPE).

1. Non-Interactive/ Non-Observed Station:

2. Interactive/Observed Station

Total marks distribution for papers C of year-1 (MBBS) Year 1 Professional Exam in System-based Curriculum

Theory paper	Modules	Theory marks	Internal assessment theory (10%)	OSPE/OSCE	Internal assessment OSPE/OSCE (10%)	TOTAL MARKS
Paper C	CVS	120	13	90	10	233

UNIVERSITY EXAM:

Exam has 90% (210) marks in total

Blue Print for Block-C Assessment

Block C (Paper C) Theory Paper			
Subject	CVS Module-I	Respiratory Module-I	Total MCQs
Gross Anatomy	9	12	21
Histology	4	4	8
Embryology	5	3	8
Physiology	34	20	54
Biochemistry	14	8	22
Pharmacology	1	0	1
Pathology	1	1	2

Community Medicine	1	1	2
Forensic Medicine	1	1	2
Total	70	50	120

INTERNAL EXAM:

Internal evaluation is a process of quality review undertaken within an institution for its own ends. It has 10% (23 marks) of total exam.

Distribution of 13 Marks for block C paper (internal Assessment)

THEORY PAPER	INTERNAL ASSESSMENT THEORY(10%)	INTERNAL ASSESSMENT OSCE/OSPE(10%)
Paper c	Anatomy (06)	Anatomy 03
	Physiology (05)	Physiology 06
	Biochemistry (2)	Biochemistry 01
	Total 13	Total 10

Block C (Paper C) OSPE		
Specialty	Practical	No. of Stations
CVS Anatomy	Surface Anatomy Internal features of the heart on models CVS Models Cardiac muscle under the microscope Medium sized artery under the microscope Histological features of veins	5
CVS Physiology	Recording of 12 lead ECG Interpretation of ECG Examination of arterial and venous pulses Recording of blood pressure Examination of the apex beat and heart sounds Demonstrate the effect of posture and exercise on Blood Pressure Basic Life Support	5
CVS Biochemistry	Detection of lipids in a given sample Interpretation of cardiac enzymes	1
CVS Radiology	Identify normal cardiac shadow, borders and cardiomegaly on chest radiographs	1
Respiratory	Lung Models	3

Anatomy	Microscopic structure of trachea Microscopic structure of bronchi Microscopic structure of lungs	
Respiratory Physiology	Spirometry Vitalography Vitalography (Interpretation) Stethography	3
Total		18

13 Timetables

SWAT MEDICAL COLLEGE, SWAT

Department of Medical Education

Time Table **1st Year MBBS**

Class Session 2024-25

Block-C: (CVS Module IV)

Theme I chest pain

Week-1)

Days	8:00 to 10:00 am		10:00 to 11:00 am	11:00am to 12:00 pm	12:00 to 1:00 pm	P R A Y E R S B R E A K	1:30 to 2:30 pm
Monday 08/07/24	PRACTICALS Batch A: Phy Dr. Batch B: Anat Dr. Batch C: Bio Dr.		G. Anat-L1 Surface Anatomy of the Heart Dr.	G. Anat-L2 Coronary Circulation Dr.	Phy-L1 Physiologic Anatomy & Properties of Cardiac Muscles Dr.		Anat-DSL Surface Anatomy of the Heart Dr.
Tuesday 09/07/24	PRACTICALS Batch A: Bio Dr. Batch B: Phy Dr. Batch C: Anat Dr.		Histo-L1 Histology of Heart Muscles Dr.	Bio-L1 Definition Classification & Functions of lipids Dr.	PRIME Types of ethics Dr.		Bio-DSL Cardiac Enzymes Dr.
Wednesday 10/07/24	PRACTICALS Batch A: Anat Dr. Batch B: Bio Dr. Batch C: Phy Dr.		G. Anat-L3 Pericardium Dr.	Phy-L2 Coronary Circulation Dr.	Bio-L2 Structure, Functions & Fate of Cholesterol Dr.		Phy-DSL Cardiac Muscles Dr.
Thursday 11/07/24	8:00am to 9:00 am	9:00am to 10:00 am	Bio-L4 Role of Na, K, Ca & Mg in Cardiac Muscles contractility Cardiac Manifestations of Vitamin B1 Deficiency Dr.	Patho-L1 Risk factors and lab diagnosis of CAD Dr.	Patho-L2 Atherosclerosis (Definition/Stages) Dr.		PRIME Components of Ethics Dr.
Friday 12/07/24							

Any instruction?? Whole module timetable with tentative dates

SWAT MEDICAL COLLEGE, SWAT

Department of Medical Education

Time Table **1st Year MBBS**

Class Session 2024-25

Block-C: (CVS Module IV)**Week-2)****THEME 1: CHEST PAIN**

Days	8:00 to 10:00 am	10:00 to 11:00 am	11:00am to 12:00 pm	12:00 to 1:00 pm	1:30 to 2:30 pm
Monday 15/07/24	PUBLIC HOLIDAY				
Tuesday 16/07/24	WRITTEN EXAM BLOCK B (MSK Module)				
Wednesday 17/07/24	BATCH A: OSPE (MSK Module) BATCH B: OSPE (MSK Module) BATCH C: SDL (SLRC Library) BATCH D: SDL (SLRC Library)				
Thursday 18/07/24	BATCH A: SDL (SLRC Library) BATCH B: SDL (SLRC Library) BATCH C: OSPE (MSK Module) BATCH D: OSPE (MSK Module)				
Friday 19/07/24	Islamiyat Relation among the doctors Mr. Qazi Ubaidullah	Phy-DSL Physiologic Anatomy & Properties of Cardiac Muscles Dr. Rahmatullah	Anat-DSL Surface Anatomy of the Heart Dr. Maleeha Ahmad	Bio-L4 Describe the cardiac manifestations of vitamin B1 deficiency Dr. Nouman Khan	SDL (SLRC Library)
					Bio-DSL Dr. Nouman Khan

SWAT MEDICAL COLLEGE, SWAT

Department of Medical Education

Time Table **1st Year MBBS**

Class Session 2024-25

Block-C: (CVS Module IV)

Week-3)

THEME 2/3: BREATHLESSNESS & ANKLE SWELLING/ BLOOD PRESSURE

Days	8:00 to 10:00 am		10:00 to 11:00 am	11:00am to 12:00 pm	12:00 to 1:00 pm	P R A Y E R S B R E A K	1:30 to 2:30 pm	
Monday 22/07/24	PRACTICALS/ Model Dissection (MD)/ SGD Batch A: Phy Dr. Asma Hadi Batch B: Anat SGD Dr. Erum Zeb Batch C: MD Dr. Maleeha Ahmad		Anat-DSL Pericardium Dr. Sanya Hadi	Phy-L3 Cardiac Cycle Prof Dr. Taj Muhammad	Phy-L4 Cardiac Output Dr. Alamzeb		SDL (SLRC Library)	
Tuesday 23/07/24	PRACTICALS/ Model Dissection (MD)/ SGD Batch A: MD Dr. Maleeha Ahmad Batch B: Phy Dr. Asma Hadi Batch C: Anat SGD Dr. Erum Zeb		Phy-L5 Blood Flow Dr. Amanullah	Emb-L1 Fetal Circulation Dr. Humaira Ali	Phy-L6 Functions of Heart Valves Dr. Amanullah		Emb-L2 Cardiac developmental anomalies Dr. Humaira Ali	
Wednesday 24/07/24	PRACTICALS/ Model Dissection (MD)/ SGD Batch A: Anat SGD Dr. Erum Zeb Batch B: MD Dr. Maleeha Ahmad Batch C: Phy Dr. Asma Hadi		Phy-L7 Lymphatic System Dr. Fiza Iqbal	Research-L8 Literature Search-III Prof Dr. Aziz Ahamd	Phy-L8 Blood Pressure Dr. Amanullah		Phy-DSL Circulatory Shock Dr. Uzair	
Thursday 25/07/24	8:00 to 9:00 am	9:00 to 10:00 am	Histo-L1 Histology of Blood Vessels Prof Dr. Muhammad Khan	Emb-L4 Development of Veins Dr. Humaira Ali	G. Med-L1 Heart Failure Prof Dr. Aziz Ahmad		Bio-DSL Lipid & Cholesterol Dr. Najmuddin	
	SDL (SLRC Library)	Emb-L3 Development of Arteries Dr. Humaira Ali						
Friday 26/07/24	Islamiyat Relation between a Doctor & Patient Mr. Qazi Ubaidullah	Phy-L9 Circulatory Shock Dr. Alamzeb	PRIME Emotional Intelligence Miss. Afroz Ahmad	C. Med-L2 Preventive Strategies of Hypertension Dr. Shahab Alam	SDL (SLRC Library)	Pharma-L2 Mechanism of antihypertensive drugs Dr. Jibran Khan		

SWAT MEDICAL COLLEGE, SWAT

Department of Medical Education

Time Table **1st Year MBBS**

Class Session 2024-25

Block-C: (CVS Module IV)**Week-4)****THEME 4: PALPITATIONS**

Days	8:00 to 10:00 am	10:00 to 11:00 am	11:00am to 12:00 pm	12:00 to 1:00 pm		1:30 to 2:30 pm
Monday 29/07/24	PRACTICALS/SGD Batch A: Phy Dr. Rahmat Ullah Batch B: Anat Dr. Saad Hussain Batch C: Bio SGD Dr. Muhammad Saad	Phy-L10 Excitation and contraction of cardiac muscles Prof Dr. Taj Muhammad Khan	SGDS Batch A: Phy Dr. Hamza Rashid Batch B: Anat Dr. Nauman Khan Batch C: SDL (SLRC/Library)		P R A Y E R S B R E A K	C. Med-L3 CVD Prevention Dr. Rafi Ullah
Tuesday 30/07/24	PRACTICALS/SGD Batch A: Bio SGD Dr. Muhammad Saad Batch B: Phy Dr. Rahmat Ullah Batch C: Anat Dr. Saad Hussain	Phy-L11 ECG Dr. Aman Ullah	SGDS Batch A: SDL (SLRC/Library) Batch B: Phy Dr. Hamza Rashid Batch C: Anat Dr. Nauman Khan			Bio-DSL Lipid & Cholesterol Dr. Muhammad Saad
Wednesday 31/07/24	PRACTICALS/SGD Batch A: Anat Dr. Saad Hussain Batch B: Bio SGD Dr. Muhammad Saad Batch C: Phy Dr. Rahmat Ullah	Anat-DSL Gross Anatomy of the Heart Dr. Maleeha Ahmad	SGDS Batch A: Anat Dr. Nauman Khan Batch B: SDL (SLRC/Library) Batch C: Phy Dr. Hamza Rashid			Phy-DSL Lymphatic System Dr. Asma Hadi
Thursday 01/08/24	SELF STUDY SDL (SLRC Library)					
Friday 02/08/24	CARDIOVASCULAR SYSTEM MODULE EXAM					

14 For inquiry and troubleshooting



Please contact
Dr. Fiza Iqbal
Lecturer Physiology, Swat Medical College
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Email: fiza.iqbal1430@gmail.com

15 Module Evaluation Form

MBBS Year: _____ Block: _____ Module: _____

Date: _____

1. (Unsatisfactory) 2 (Fair) 3 (Satisfactory) 4 (Good) 5 (Excellent)

Category: Course Contents

No.	Question	1	2	3	4	5
1	To what extent did the course contents align with the stated learning objectives of the module?					
2	How clear and comprehensive were the course materials provided in this module?					
3	Were the core topics adequately covered, ensuring a well-rounded understanding of the subject?					
4	How current and up-to-date were the course contents in reflecting recent advancements?					
5	Did the module incorporate real-world applications and case studies effectively?					
Category: Learning Resources						
6	Were the learning resources (e.g., textbooks, online materials, laboratory facilities) readily available and easily accessible?					
7	How helpful were additional learning resources such as supplementary readings or multimedia content?					
8	Did the module offer adequate support for research and independent study?					
9	Were digital resources and online platforms effectively utilized to enhance the learning experience?					
10	Were there sufficient opportunities for hands-on practice and practical application of knowledge?					
Category: Teaching Methods						
11	How well did instructors engage with students and create a supportive learning environment?					
12	Were diverse teaching methods (e.g., lectures, group discussions, simulations) effectively employed?					
13	How responsive were instructors to questions, concerns, and feedback from students?					
14	To what extent did instructors provide timely and constructive feedback on assignments and assessments?					
15	Were opportunities for collaborative learning and peer-to-peer interactions encouraged and facilitated?					
Category: Engagement and Motivation						
16	To what extent did the module use real-world examples and practical applications to engage students?					
17	How well were active learning techniques (e.g., problem-solving, case studies) integrated into the curriculum?					
18	Did the module provide opportunities for students to pursue their individual interests within the subject matter?					

19	Were assessments designed to challenge and motivate students to excel in their studies?					
Category: Inclusivity and Diversity						
20	How well did the module accommodate different learning styles and preferences among students?					
21	Were efforts made to include diverse perspectives, cultures, and backgrounds in the curriculum?					
22	How effectively were accommodations provided for students with varying levels of prior knowledge?					
Category: Overall						
No.	Question	1 (Very Poor)	2 (Poor)	3 (Fair)	4 (Good)	5 (Excellent)
23	How would you rate the overall quality of this module?					

16 Students Diary/Notes

[illegible]

PROGRESS: _____

ACHIEVMENT: _____