

Modul designation	Cardiovascular System
Semester in which the module is taught	6th Semester of Academic/Bachelor Stage
Person responsible for the module	<ol style="list-style-type: none"> <li>1. Harvi Puspa Wardani, dr., SpJP.</li> <li>2. Tita Barriah Siddiq, dr.</li> <li>3. Eka Hendryanny, dr.M.Kes</li> <li>4. Dr. Hj. Maya Tejasari, dr., M.Kes</li> <li>5. Umar Islami, dr., M.Kes</li> </ol>
Language	Bilingual (Indonesia & English)
Relation to curriculum	Compulsory
Teaching methods	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Tutorial</li> <li>- Laboratory activity</li> </ul>
Workload	<p>Total workload : 7 weeks</p> <p>Contact hours : Lecture 2 hours/week</p> <p style="padding-left: 40px;">Tutorial 3 hours/meeting (3 meeting/week)</p> <p style="padding-left: 40px;">Laboratory activity 3 hours/meeting</p>
Credit points	10 ECTS (7 SKS)
Required & recommended prerequisites for joining the module	Learning course at 1 <sup>st</sup> -5 <sup>th</sup> semester
Module Objective	<p>At the end of course, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Explain the formation of the upper and lower respiratory tracts (C2)</li> <li>2. Relating the formation of the upper and lower airways to cases of embryological abnormalities (C3)</li> <li>3. Explain the macrostructural description of the organs in the upper respiratory tract (C2)</li> <li>4. Explain the macrostructural description of the organs in the lower respiratory tract (C2)</li> <li>5. Explain the macrostructural description of the thoracic wall</li> </ol>

	<p>(C2)</p> <ol style="list-style-type: none"><li>6. Relate organ macrostructure to the clinical case (C4)</li><li>7. Explain the microstructural appearance of the upper respiratory tract (C-2)</li><li>8. Explain the microstructural features of the lower respiratory tract (C-2)</li><li>9. Relating airway microstructure to functional and clinical correlation in case (C4)</li><li>10. Explain the function of the respiratory system and organs (C2)</li><li>11. Explain the physiology of the upper respiratory tract (C2)</li><li>12. Explain the physiology of the lower respiratory tract (C2)</li><li>13. Analyze case-related physiological abnormalities (C4)</li><li>14. (Explain the biochemical aspects of acid-base balance in the respiratory system (C2)</li><li>15. Analyze the biochemical aspects of acid- base balance in the respiratory system related to clinical case (C4)</li><li>16. Explain the normal flora microorganisms in the respiratory tract and the associated microbiological pathogens in case (C2)</li><li>17. Linking pathogenic microbiological microorganisms to the body's defence mechanism (C4)</li><li>18. Explain the definition, etiology, and classification of respiratory disorders (C2)</li><li>19. Analyze clinical manifestations based on the pathogenesis and pathophysiology, diagnosis, and differential diagnosis of respiratory tract disorders in accordance with the rules of clinical medicine (C4)</li><li>20. Analyze the selection of examinations to support respiratory disorders according to the problem with the principles of clinical medicine (C4)</li><li>21. Explain the management of each disease (C2)</li><li>22. Explain the principles of pharmacological therapy and the pharmacological properties of the drugs used for each disease (C2)</li><li>23. Analyze the principles of pharmacological therapy and the pharmacological properties of drugs in each disease (C4)</li></ol>
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	<p>24. Analyze the principles of case-related non-pharmacological therapy (C4)</p> <p>25. Analyze the prognosis, complications, and prevention of respiratory system disorders ethically and professionally in communicating in accordance with the principles of bioethics and humanities (C4) (A4)</p>
Content	Cardiovascular system provide student with knowledge of basic medical science, clinical medical science, clinical skills, bioethics and humanities related to cardiovascular cases.
Examination forms	Multidisciplinary Examination (MDE), SOOCA, Lab exam
Study and examination requirements	<p>System Pass Criteria :</p> <p>Minimum MDE, SOOCA and Lab exam score 55.5 (C)</p>
Reading list	<ol style="list-style-type: none"> <li>1. Lily, LS, Pathophysiology of Heart Disease, Fifth Edition. Lippincot William &amp;Willkins.</li> <li>2. Braunwald E, Braunwald's Heart Disease, A Texbook of Cardiovascular Medicine, Nine Edition; Elsevier.</li> <li>3. Papano AJ, Wier WG. Cardiovascular Physiology, Ten Edition. Mosby Elsevier.</li> <li>4. Murphy JG., Lloyd MA, Mayo Clinic Cardiology Counse Texbook, Third Edition. Mayo Clinic Scientific Prees.</li> <li>5. Evans JDW, Crash Course Cardiovascular System, fourth Edition, Mosby Elsevier.</li> <li>6. Klabunde RE, Cardiovascular Physiology concept, second edition, Lippincot William &amp; Willkins.</li> <li>7. Trevor AJ, Katzung BG,Master SB, Katzung &amp; Trevor's Pharmacology Examination &amp; Board Review. Eight Edition, Mc Graww Hills.</li> <li>8. Kumar V, et all, Robin's and Cotran Pathologic Basis of Disease, eight edition. Saunder's Elsevier.</li> <li>9. Junqueira LC, Carneiro J, Basic Histology Texts and Atlas, Eleven Edition. McGraw-Hill.</li> <li>10. Harrison's Principles of Internal Medicine, Twentieth Edition.</li> <li>11. Rutherford's Vascular Surgery and Endovascular Therapy, 2-Volume</li> </ol>

Rubric of Tutorial Process:

Rubric Tutorial Process		CASE 1/2/3/4/5/6/7						
No.	Students matrix	Students's name	Group	Interpersonal group capability	Problem solving ability	The ability to gather information	Evaluation capability	Average score
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
		<b>Tutor Name</b>						

Total = (Score / 4) x 100

Date:

Criteria

Tutor's name:

- Very good, if scored 80-100
- Good : 70-79
- Acceptable : 60-69
- Poor : < 60

Signature:

**RUBRIC OF STUDENTS' ORAL CASE ANALYSIS (SOCA)**  
**6<sup>th</sup> SEMESTER ACADEMIC YEAR 2023/2024**  
**MODULE CARDIOVASCULAR SYSTEM/ DATE \_\_\_\_\_**

Assessed components	0	1	2	3
<b>Problem identification</b>	Unable to identify the patient's problems only	Able to identify only 1-2 patient problems	Able to identify 3-4 patient problems	Able to identify the following 5-6 patient problems
<b>Concept Map</b>	Does not make concept map	Create a concept map but are wrong and/or don't understand	Creating and explaining concept maps correctly but incompletely	Create and explain concept maps completely and correctly
<b>Basic science</b>	Unable to explain basic science	Able to explain basic science well on 1 component	Able to explain 2 components of basic science well	Able to explain 3-4 components of basic science well
<b>Clinical science</b>	Unable to explain <i>clinical science</i>	Able to explain other than points 3-4 (Pathogenesis and Pathophysiology and diagnostic criteria) or 3-4 other components	Able to explain points 3-4 (Pathogenesis and Pathophysiology and diagnostic criteria) and 1-2 other components of clinical science well	Able to explain points 3-4 (Pathogenesis and Pathophysiology and diagnostic criteria) and 3-4 other components of clinical science well
<b>Pathomechanism</b>	Does not make pathomechanism	Making a pathomechanism but wrong and/or not understanding	Creating and explaining pathomechanism correctly but incompletely	Creating and explaining the map correctly and completely
<b>Diagnostic Enforcement</b>	Unable to explain the reasoning/basis of the diagnosis		Able to establish the diagnosis and explain the reasoning/basis of the diagnosis accurately but incompletely	Able to establish the diagnosis and explain the reasoning/basis of the diagnosis completely and accurately
<b>Bioethic and Humanity Aspect</b>	Not explaining education to patients		Explaining education but incomplete	Explain patient education completely and well
<b>Islamic Value Integration</b>	Does not make Islamic Value Integration	Mention verses/hadiths but are less related	Mention related verses/hadiths but cannot explain the relationship properly	Mention relevant verses/hadiths and be able to explain the relationship well
<b>Perform</b>	Speech is unclear, unsystematic and uncooperative and disrespectful	Speak clearly but not systematically and uncooperatively	Speak clearly, politely, cooperatively, but not systematically	Speak clearly, systematically, cooperatively and politely

Example of Written Test Exam:

1. A 59-year-old man was diagnosed with hypertension and congestive heart failure. On the ECG examination, it was found that the calculation of Sokolov Lyon was more than 35mm.

Which areas of the heart muscle microstructure have been added to produce the ECG picture?

- A. Area Junctional complex lateral portion
  - B. Area from band A to the next band
  - C. The area between the intercalar disc and the other
  - D. The area between one Z line and the other Z line**
  - E. E. The area between one sarcomer and another sarcomere
2. A 73-year-old woman came to the outpatient polyclinic with complaints of pain in her lower limbs. After conducting an examination, the doctor advised the patient to use special stockings that have a certain compression strength due to the presence of venous insufficiency conditions in the patient.

What are the characteristics of the structures that experience insufficiency in these patients?

- A. It is a fold of fibrous customary connective tissue coated with endothelium
  - B. It is a semilunar fold of the adventitious tunica that protrudes into the lumen
  - C. It is a fold of muscle tissue and both sides are lined with endothelials.
  - D. It is a fold of connective tissue, elastin fibers, and both sides are coated with endothelials.**
  - E. Is a modification of endothelial-coated muscle tissue
3. In the internal part of the heart there is a structure located between the base of the valve which is insulator, which is composed of dense connective tissue with thick collagen and fibrous cartilage tissue.

What is the name of the structure that has these characteristics?

- A. Atrioventricular valve's leaflet
- B. Membrous part interventricular septum
- C. Atrioventricular septum
- D. Fibrous ring
- E. Trigone**