Cardiovascular Science

Examination topics for the state doctoral examination

Question number	Theoretical part	Clinical part (emphasis on knowledge of pathophysiology)
1	Anatomy and histology of the heart and blood vessels	Acute coronary syndromes
2	Pathophysiological relationships between diabetes and cardiovascular disease	Stroke and heart
3	Hemodynamics of the systemic and pulmonary circulation	Acquired and inherited myocardial and pericardial diseases
4	Assessment of left ventricular function and perfusion	Heart rhythm disorders - bradycardia and conduction disorders. Syncope.
5	Genetic basis of cardiovascular disease	Diseases of peripheral arteries and veins
6	Pathophysiological relationships between the kidney and the cardiovascular system	Thromboembolic disease
7	Pathophysiology of atherosclerosis	Valvular defects
8	Epidemiology of cardiovascular disease	Congenital heart defects
9	Pathophysiology of heart failure	Prevention of cardiovascular disease
10	Thrombosis and the cardiovascular system	Essential and secondary hypertension
11	Theoretical basis of ECG, electrophysiology of the heart Development of the heart and blood vessels	Cardiac surgery
12	Basic methodology of science: hypothesis, project protocol, prospective/retrospective/cohort/randomized/double blind/single blind/open label study, prospective registry, retrospective analysis.	Surgical procedures in vascular surgery
13	Basic principles of statistics: determining sample size, assessing statistical significance, basic tests.	Pulmonary hypertension, cor pulmonale
14	Ethical issues in research: Nuremberg Code, World Medical Association	Heart rhythm disorders - tachycardia. Sudden death
15	Declaration of Helsinki, local and national ethics committees, patient information, informed consent, ethics of experimental research.	Cardiomyopathy
16	Basic scientific methodology: database, study registration, primary and secondary objectives (end-points), entry and exclusion criteria), clinical (hard) objectives, surrogate (soft, surrogate) objectives.	Shock conditions