

**RAJASTHAN PUBLIC SERVICE COMMISSION, AJMER**  
**SYLLABUS FOR SCREENING TEST FOR THE POST OF**  
**ASSISTANT PROFESSOR (Super Speciality)**  
**PAEDIATRICS CARDIOLOGY**  
**MEDICAL EDUCATION DEPARTMENT**

**Unit- I**

1. Applied Anatomy- cardiac anatomy and examination of cardiac specimens, embryology and development, pulmonary system, renal system and other organs.
2. Applied Physiology- cardiac cycle, cardiac contraction, ionic basis, receptor concepts, hemodynamics, pulmonary circulation, electrophysiology, acid base balance, fetal and transitional circulation, physiology of extracorporeal circulation.
3. Genetics and molecular biology in the context of cardiac development.
4. Applied pathology- rheumatic fever, valvular lesions, myocarditis, pericarditis endocarditis, cardiomyopathies, cardiac tumors, immunological disorders, endomyocardial biopsy.
5. Pharmacology related to cardiovascular therapy and related disorders.
6. Microbiology relevant to cardiovascular and related infections.
7. Clinical cardiology- congenital heart diseases, valvular lesions, rheumatic fever, endocarditis, Kawasaki's disease, pericardial disease, myocardial diseases, cardiac failure, conduction disorders and electrophysiology, cardiac tumors, metabolic and nutritional cardiac disorders, fetal cardiac disorders, systemic hypertension, pulmonary hypertension, growth and nutrition, cardiac involvement in systemic illnesses, Cardiovascular surgery, Aortic disorders, immunological disorders, Cor Pulmonale, Coronary risk factors in childhood, Cardiac trauma and new entities.
8. Investigations & instrumentation- basic investigations like biochemistry, clinical pathology and microbiology, electrocardiography, radiology, Echocardiography, including 3D, fetal, trans-esophageal and epicardial, cardiac catheterization and angiography including common interventions, radionuclide studies, cardiac CT, MRI, PET, electrical & radiation safety norms and any new modalities.
9. Cardiovascular Therapy- pharmacotherapy, pacemakers, cardioverter defibrillator, cardiac interventions (congenital heart diseases, valvular heart diseases), cardiovascular surgery including cardiac transplantation, stem cell therapy, gene therapy and new developments.
10. Preventive cardiology and cardiac rehabilitation.

11. Grown-up congenital heart disease (GUCH).
12. Update on advances in Pediatric cardiology.
13. Research methodology.
14. Economics in cardiovascular management.
15. Communicative skills, social medicine.

\*\*\*\*\*

**Pattern of Question Papers:**

1. **Objective Type Paper**
2. **Maximum Marks: 180**
3. **Number of Questions: 180**
4. **Duration of Paper : Three Hours**
5. **All Questions carry equal marks**
6. **Medium of Screening Test: English**
7. **There will be Negative Marking**  
(1/3 part of the mark(s) of each question will be deducted for each wrong answer)