

April-2001

[KD 006]

Sub. Code : 1152

D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch II — Cardiology

(Revised Regulations)

Paper II — APPLIED CARDIOLOGY INCLUDING
HAEMODYNAMICS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the role of Retinal Examination in Cardiovascular diseases. (25)
2. Discuss the usefulness of transesophageal Echocardiography. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Management of RV Infarction.
 - (b) Left Posterior Hemiblock.
 - (c) Prosthetic valve malfunction.
 - (d) Indications for Terminating Exercise testing.
 - (e) Mitral Balloon valvoplasty.

[KE 006]

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D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch II — Cardiology

**Paper II — APPLIED CARDIOLOGY INCLUDING
HAEMODYNAMICS**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Describe the contractile abnormalities at cellular as well as at the organ level in early and in advanced heart failure. (25)
 2. Discuss pathophysiology, diagnosis and management of electromechanical dissociation. (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Role of the ascending limb of the Starling curve in terms of myocardial contraction.
 - (b) Discuss the possible mechanism of the post pump syndrome.
 - (c) Genetics of long QT interval.
 - (d) Antiphospholipid syndrome.
 - (e) Dicrotic pulse.
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March-2002

[KG 006]

Sub. Code : 1152

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(Higher Specialities)

(Revised Regulations)

Branch II — Cardiology

Paper II — APPLIED CARDIOLOGY INCLUDING
HAEMODYNAMICS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the haemodynamic changes immediately after birth of the child and pathophysiology of left to right shunt. (25)
2. List and define each of the major determinants of the Cardiac output. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Mechanism of hibernation of myocardium
 - (b) Mechanism of increase of blood pressure in cold environment
 - (c) Electrophysiology of SA node
 - (d) Second heart sound in congenital heart disease
 - (e) After load mismatch.

[KH 006]

Sub. Code : 115

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch II — Cardiology

**Paper II — APPLIED CARDIOLOGY INCLUDING
HAEMODYNAMICS**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss about haemodynamics, clinical features of constrictive pericarditis. (25)
2. Write in detail about diastolic function of left ventricle in normal and disease. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Role of ACE inhibitors in heart failure
 - (b) Non-invasive evaluation and timing of surgery in chronic (MR) mitral regurgitation
 - (c) Echocardiography in the diagnosis of Aortic dissection
 - (d) Utility of pulmonary capillary wedge pressure in Catheterization laboratory
 - (e) Second degree heart block.

April-2003

[KI 006]

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(Higher Specialities)

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Branch II — Cardiology

Paper II — APPLIED CARDIOLOGY INCLUDING
HAEMODYNAMICS

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the current status of low molecular weight heparins in cardiology practice. (25)
 2. Discuss the procedure and usefulness of Dobutamine stress test. (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Myocardial bridging
 - (b) Aortic stenosis—indications for surgery
 - (c) Clinical predictors of perioperative cardiovascular risk in patients undergoing non cardiac surgery
 - (d) Reversed splitting of the II Heart sound
 - (e) Prosthetic valve sounds.
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D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch II — Cardiology

Paper II — APPLIED CARDIOLOGY INCLUDING
HEMODYNAMICS

Time : Three hours Maximum : 100 marks
Theory : Two hours and Theory : 80 marks
 forty minutes
M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

A. Essay : (2 × 15 = 30)

(1) Discuss the various invasive methods of calculating the cardiac output with their merits and demerits.

(2) Describe in detail the various methods of quantification of mitral regurgitation by echocardiography.

B. Write briefly on : (10 × 5 = 50)

- (1) Gorlin's formula.
- (2) Low flow low gradient aortic stenosis.
- (3) Hemodynamics in double outlet right ventricle.
- (4) Atrial isthmus and its role in arrhythmias.
- (5) Hemodynamics of constrictive pericarditis.
- (6) Usefulness of pulmonary wedge pressure in acute myocardial infarction.
- (7) Jugular vein assessment in congenital heart disease.
- (8) Assessment of myocardial reperfusion.
- (9) Correlation of chest radiology with hemodynamics.
- (10) ECG correlates of right ventricular hemodynamics.

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(Higher Specialities)

(Revised Regulations)

Branch II — Cardiology

Paper II — APPLIED CARDIOLOGY INCLUDING
HEMODYNAMICS

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay : (2 × 15 = 30)

(1) Describe in detail coronary blood flow and its assessment.

(2) Mitral flow Doppler Vs tissue velocity Doppler in diastolic heart failure - discuss.

II. Short notes : (10 × 5 = 50)

(a) Continuity equation

(b) Atrial natriuretic peptide

(c) Hemodynamics of hypoplastic left heart syndrome

- (d) Inferior vena caval Doppler
 - (e) Limitations of intravascular ultrasound
 - (f) Elastography
 - (g) Hemodynamics of cardiac tamponade
 - (h) ECG localization of site of myocardial infarction
 - (i) Calculation of flows in bi-directional shunts
 - (j) Pacemaker malfunction.
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(Higher Specialities)

(Revised Regulations)

Branch II — Cardiology

Paper II — APPLIED CARDIOLOGY INCLUDING
HEMODYNAMICS

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay questions : (2 × 15 = 30)

(1) Describe in detail the hemo-dynamic features
of constriction.

(2) Mechanism of a spell in TOF.

II. Short notes : (10 × 5 = 50)

(a) Pulmonary vascular resistance.

(b) Coronary flow reserve.

(c) Aortic valve resistance.

(d) Thermo-dilution cardiac output.

(e) Calculation of pulmonary blood flow and
effective pulmonary blood flow.

(f) Stroke work loss in Aortic stenosis.

(g) Biphasic response in Dobutamine stress
echo.

(h) Pacemaker syndrome.

(i) After load mismatch.

(j) Prediction of LVEDP by non-invasive
methods.

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II. Short notes :

(6 × 5 = 30)

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Branch II – Cardiology

Paper II — APPLIED CARDIOLOGY INCLUDING
HEMODYNAMICS

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay questions :

(1) Discuss the etiology, pathophysiology and management of acute and chronic aortic regurgitation. (20)

(2) Enumerate the causes of heart failure. Discuss the role of pharmacological and surgical methods of managing heart failure. (15)

(3) Describe haemodynamics of constrictive Pericarditis. (15)

(a) Prosthetic valve endocarditis.

(b) QT dispersion.

(c) ROSOVASTATIN

(d) Covered stents.

(e) Post-Cardiac arrest care.

(f) Familial myxomas.

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II. Short notes :

(6 × 5 = 30)

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Branch II — Cardiology

Paper II — APPLIED CARDIOLOGY INCLUDING
HEMODYNAMICS

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay Questions :

1. Discuss "Mitral Regurgitation". (20)
2. Discuss Cardiac Tamponade. (15)
3. Discuss "Hypertrophic Cardiomyopathy". (15)

- (a) Bioprosthetic valves.
- (b) Heart rate variability.
- (c) Startling's Law.
- (d) Contrast-induced nephropathy.
- (e) Bivalvectomy.
- (f) Hyperkalemia.

[KR 006]

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D.M. DEGREE EXAMINATION.

(Higher Specialities)

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Branch II — Cardiology

**Paper II — APPLIED CARDIOLOGY INCLUDING
HAEMODYNAMICS**

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay Questions :

1. How do you evaluate a young female presenting with unexplained pulmonary hypertension in the Catheterization Lab. (20)

2. Ventriculo-arterial coupling — concepts and applications. (15)

3. Evaluation of low gradient aortic stenosis. (15)

II. Short notes :

(6 × 5 = 30)

- (a) Circadian variation.
- (b) Carey Coombs murmur.
- (c) Silent Ischemia.
- (d) Myocardial bridging.
- (e) GP2b / 3a receptors and inhibitors.
- (f) Apical hypertrophic cardiomyopathy.

August 2008

[KT 006]

Sub. Code: 1152

D.M. DEGREE EXAMINATION

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Branch II - Cardiology

Paper II – APPLIED CARDIOLOGY INCLUDING HAEMODYNAMICS

Q.P. Code: 161152

Time: Three hours

Maximum: 100 Marks

ANSWER ALL QUESTIONS

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40 Marks

1. Discuss diastolic heart failure.
2. Discuss stent – thrombosis.

II. Write short notes on:

10 x 6 = 60 Marks

1. Brockenbrough – Braunwald phenomenon in hypertrophic cardiomyopathy.
 2. Brain natriuretic peptide (BNP).
 3. Valsalva maneuver.
 4. Contrast induced nephropathy.
 5. Abciximab.
 6. Endomyocardial biopsy.
 7. Digitoxicity.
 8. Angiographic findings in chronic thrombo-embolic pulmonary hypertension.
 9. Timi-score in unstable angina/ non-ST elevation myocardial infarction.
 10. No reflow (coronaries) phenomenon.
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February 2009

[KU 006]

Sub. Code: 1152

D.M. DEGREE EXAMINATION

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Branch II - Cardiology

(Revised Regulations)

Paper II– APPLIED CARDIOLOGY INCLUDING HAEMODYNAMICS

Q.P. Code: 161152

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40

1. Echo assessment of aortic and mitral stenosis
2. Discuss the pressure tracings in chronic constrictive pericarditis.

II. Write short notes on:

10 x 6 = 60

1. Radiation protection in cath lab
2. Newer mapping technology.
3. Athlete's heart.
4. Intra aortic ballon pump.
5. ECG in emergency room.
6. Intra operative Transesophageal ECHO.
7. Newer oral anticoagulants.
8. Pacemaker mediated arrhythmias.
9. Absent pericardium
10. Myocardial regeneration.
