[LB 0212] **AUGUST 2012** **Sub. Code: 1511**

B.Sc. CARDIAC TECHNOLOGY

SECOND YEAR

PAPER – I – ADVANCED ELECTROCARDIOGRAPHY

Q.P. Code : **801511**

Time : Three hours **Maximum : 100 marks**

(180 Mins) Answer ALL questions in the same order

I. Elaborate on:	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Normal variants in Electrocardiography and explain the Electrocardiographic features of early repolarisation syndrome in detail.	7	20	10
2. Phases of Myocardial infarction with appropriate electrocardiographic illustrations.	7	20	10
3. Classify ectopic atrial rhythms and explain electrocardiographic features of Supraventricular Tachycardia in detail.	7	20	10
II. Write Notes on:			
1. Electrocardiographic features of Atrial extrasystoles.	4	10	5
2. .Electrocardiographic manifestations of Ventricular Tachycardia.	4	10	5
3. Electrocardiographic effects of Hyperkalemia.	4	10	5
4. Genesis of QRS Complex.	4	10	5
5. Digitalis effects on Myocardial repolarisation.	4	10	5
6. Electrocardiographic features of Left anterior fasicular block.	4	10	5
7. Explain Prinzmetal Angina.	4	10	5
8. Cardioversion Techniques for treating Arrhythmias.	4	10	5
III. Short answers on:			
1. Narrate the causes of Left axis deviation.	2	4	3
2. Electrocardiographic features of Hypokalemia.	2	4	3
3. Significance of Right bundle branch block.	2	4	3
4. List out the causes of low voltage QRS complex.	2	4	3
5. Electrical alternans in Electrocardiography.	2	4	3
6. Enumerate the causes of non specific T wave variants.	2	4	3
7. Electrocardiographic manifestations of Acute pericarditis.	2	4	3
8. Electrocardiographic abnormalities of Atrial infarction.	2	4	3
9. ST segment elevation.	2	4	3
10. First degree Atrio ventricular block.	2	4	3

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[LC 0212] FEBRUARY 2013 Sub. Code: 1511

B.Sc. CARDIAC TECHNOLOGY

SECOND YEAR

PAPER – I – ADVANCED ELECTROCARDIOGRAPHY

***Q.P. Code :* 801511**

Time : Three hours Maximum : 100 marks

Answer ALL questions

I. Elaborate on: (3 x 10 = 30)

1. Classify bundle branch blocks and explain the electrocardiographic Manifestations of Left anterior fascicular block in detail.
2. Electrocardiographic manifestations of Sick Sinus syndrome with appropriate illustrations.
3. Classify Atrioventricular blocks and explain each in detail

II. Write Notes on: (8 x 5 = 40)

1. Etiology of Right axis deviation
2. Electrocardiographic evaluation of P waves
3. Electrocardiographic features of Right ventricular hypertrophy
4. Posterior wall Myocardial Infarction
5. Electrocardiographic manifestations of chagas myocarditis
6. Quinidine effect on Electrocardiography
7. Electrocardiographic features of Tetralogy of Fallot
8. Incomplete Compensatory pause in Atrial extrasystole

III. Short answers on: (10x3 =30)

1. Electrocardiographic features of Left atrial enlargement
2. Electrocardiographic manifestations of Hyperacute Myocardial Infarction
3. Sinus Tachycardia and its significance
4. Electrocardiographic characteristics of Mitral regurgitation
5. Electrical alternans in Electrocardiography
6. Significance of Premature Ventricular Contraction
7. Differences between Monophasic and Biphasic shock
8. P- Pulmonale in electrocardigraphy
9. Hereditary Long QT –Interval Syndrome
10. List out the causes of slow ventricular rhythm

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[LD 0212] **AUGUST 2013** **Sub. Code: 1511**

B.Sc. Cardiac Technology

Second year

Paper I – Advanced Electrocardiography

Q.P. Code : **801511**

Time: Three hours **Maximum: 100 Marks**

Answer all questions

1. Elaborate on: **(3 x 10 = 30)**

1. Enumerate the diagnostic features of Right ventricular hypertrophy and Left ventricular hypertrophy in ECG
2. Explain the basics for various ECG changes of acute myocardial infarction
3. Enumerate with diagrams the different types of tachyarrhythmias

II. Write Notes on: **(8 x 5 = 40)**

1. What are the ECG features of right bundle branch block and left bundle branch block?
2. Enumerate the various causes for non infarction Q waves
3. Differentiation of ventricular and supraventricular premature beats in ECG
4. Differentiation between premature and escape beat
5. What is preexcitation? Enumerate the different types of preexcitation
6. Describe the different degrees of AV block with diagrams
7. What are the indications of cardioversion?
8. Describe monophasic and biphasic shock

III. Write Notes on: **(10 x 3 = 30)**

1. How to recognise biatrial enlargement in ECG?
2. What are ECG features of left anterior hemiblock?
3. What ECG features will be seen and in which leads in hyperacute anterior wall MI?
4. What ECG features will be seen in acute inferior wall MI and in which leads?
5. What ECG features will be seen and in which leads in RV infarction?
6. What ECG features will be seen in true posterior wall MI and in which leads?
7. ECG recognition of hypokalemia
8. ECG features of hyperkalemia
9. ECG features of hypothermia
10. ECG recognition of hyperthyroidism

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[LE 0212] **FEBRUARY 2014** **Sub. Code: 1511**

B.Sc. Cardiac Technology

Second year

Paper I – Advanced Electrocardiography

Q.P. Code : **801511**

Time: Three hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: (3 x 10 = 30)

1. Describe with diagrams the different types of delays in intraventricular condution
2. How to determine the time and site of AMI from ECG?
3. The patient on cardiac catheterisation table suddenly stops breathing. ECG monitor shows bigemine wide QRS complexes with no detectable P waves. What is the rhythm? How will you resuscitate this patient?

II. Write Notes on: (8 x 5 = 40)

1. Describe the three different types of right ventricular hypertrophy in ECG
2. Enumerate at least five different ECG voltage criteria from left ventricular hypertrophy
3. How to recognise right atrial, left atrial and biatrial enlargement in ECG?
4. ECG features of hypo and hyperkalemia
5. What is preexcitation? Enumerate the different types of preexcitation.
6. Describe the different degrees of AV block with diagrams
7. What are the indications of cardioversion?
8. What are the components of defibrillator?

III. Write Notes on: (10 x 3 = 30)

1. Causes of ST elevation in ECG
2. ECG features of hypothermia
3. ECG features of hyperthyroidism
4. ECG recognition of supraventricular tachycardia
5. ECG features of atrial flutter
6. ECG recognitiion of atrial fibrillation
7. ECG features of second degree AV block
8. ECG recognition of complete heart block
9. Ventricular escape beat.
10. Basis for Q waves in acute MI

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[LF 0212] **AUGUST 2014** **Sub. Code: 1511**

B.Sc. CARDIAC TECHNOLOGY

SECOND YEAR

Paper I – ADVANCED ELECTROCARDIOGRAPHY

Q.P. Code : 801511

Time: Three hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. What are the diagnostic ECG criterias of LV hypertrophy? How do you differentiate pressure hypertrophy from volume hypertrophy?
2. ECG differentiation of VT from SVT with abberency.
3. What are the ECG changes of hyperacute and acute MI and how will you localise the MI based on ECG changes?

II. Write Notes on: **(8 x 5 = 40)**

1. What are the diagnostic criteria for left posterior hemiblock?
2. Which are the leads showing changes in RV myocardial infarction?
3. How do you calculate QT interval and calculate Qtc conditions producing prolonged QT?
4. Draw a characteristic ECG of complete heart block.
5. How will you differentiate supraventricular ectopics from ventricular ectopics?
6. Why do you get Q waves in Evolved myocardial infarction?
7. ECG features of ventricular fibrillation.
8. Describe monophasic and biphasic shock.

III. Write Notes on: **(10 x 3 = 30)**

1. How to recognise left atrial enlargement in ECG?
2. ECG features of hyperkalemia
3. ECG recognition of atrial flutter
4. ECG features of hyperthyroidism
5. What are the ECG features of right bundle branch block?
6. ECG recognition of supraventricular tachycardia
7. Causes of ST elevation in ECG
8. What are the ECG features of hypertrophic cardiomyopathy?
9. What ECG features will be seen and in which leads in hyperacute anterior wall MI?
10. What are the ECG changes of hypokalemia?

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[LG 0215] **FEBRUARY 2015** **Sub. Code: 1511**

B.Sc. CARDIAC TECHNOLOGY

SECOND YEAR

Paper I – ADVANCED ELECTROCARDIOGRAPHY

Q.P. Code : 801511

Time: Three Hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. What are the ECG features of LA hypertrophy? Which leads show it best? What is the mechanism?
2. Characteristic ECG changes in complete left bundle branch block.
3. What are the changes of inferio posterior myocardial infarction?

II. Write Notes on: **(8 x 5 = 40)**

1. What is Marcuz Index? In which atrial enlargement it is used.
2. Characteristics of Incomplete left bundle branch block
3. What are the diagnostic criteria for left anterior fascicular block?
4. ECG characteristics of ischaemia, injury and infarction
5. What are the ECG changes of hyperkalemia?
6. ECG changes in hypothyroidism
7. What are the ECG changes due to digitalis?
8. Typical ECG findings in Atrial fibrillation

III. Write Notes on: **(10 x 3 = 30)**

1. How to recognise right atrial enlargement in ECG?
2. What are the ECG features of hypertrophic cardiomyopathy?
3. ECG features of hypokalema.
4. ECG recognition of second degree AV block.
5. How to recognise WPW syndrome?
6. Causes of ST elevation in ECG.
7. Differentiate a premature beat from escape beat.
8. How will you diagnose myocardial infarction in presence of Bundle Branch blocks?
9. Indications for DC version, and when will you use synchronised shock And what are the precautions during DC version.
10. How many types of Bifascicular block, can you describe and their ECG changes?

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[LH 0815] **AUGUST 2015** **Sub. Code: 1511**

B.Sc. CARDIAC TECHNOLOGY

SECOND YEAR

PAPER I – ADVANCED ELECTROCARDIOGRAPHY

Q.P. Code: 801511

Time: Three Hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. What are the electrocardiographic phases of acute myocardial infarction? Explain the ECG features of each phase in detail.
2. Classify atrio-ventricular blocks and explain each one of them in detail.
3. Enumerate the spectrum of sick-sinus syndrome in detail.

II. Write notes on: **(8 x 5 = 40)**

1. What is are the normal varisnts in ECG and explain the ECG features of Early Repolarization Syndrome?
2. What are the ECG features of Posterior Wall Myocardial infarction?
3. What are the causes of ST elevation in ECG?
4. What are the ECG features ventricular tachycardia?
5. What are the ECG findings in hyperkalemia?
6. What is OT interval? How will you calculate corrected QT interval? Name few drugs causing QT prolongation?
7. What are the ECG manifestations of WPW syndrome?
8. What are the ECG features of acute pulmonary embolism?

III. Short answers on: **(10 x 3 = 30)**

1. ECG features of Left Anterior Hemi Block.
2. ECG features of Sino – Atrial Exit Block.
3. What is S I, S II, SIII syndrome?
4. ECG features of Atrial Premature Complex.
5. ECG features of Atrial Flutter.
6. What are the indications for DC versions?
7. What is Macruz index?
8. What are Osborn Waves?
9. How will you calculate the heart rate in ECG?
10. What are Capture beats and Fusion beats?

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