

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences Second Year Semester-III

March 2022 Examination

B.Sc. Cardiac Care Technology

Paper – I

[Max. Marks: 100]

Time: 3 Hrs.

Applied Pathology & Microbiology

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

(Use separate answer booklet for Section A & B)

Section – A

Applied Pathology (50 Marks)

Q.P Code :J3755

LONG ESSAY

2 X 10 = 20 Marks

1. Describe the etiopathogenesis, morphology of heart and laboratory findings in acute myocardial infarction?
2. Classify leukemia? Describe FAB Classification of Acute myeloid leukemia with its peripheral smear findings?

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

3. Define cardiac hypertrophy and list the etiology for right and left ventricular hypertrophy
4. Classify cardiomyopathies and describe the etiology and morphological features of primary cardiomyopathy?
5. Define and classify anemia
6. Classify aneurysms describe the etiopathogenesis and morphology of dissecting aneurysm
7. Describe the etiology and laboratory findings of megaloblastic anemia

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. List the types of pericardial effusions with their etiology?
9. List 06 causes of neutrophilic leucocytosis
10. Describe the morphological features of heart in hypertensive heart disease?
11. Define hemopericardium and list 02 causes of hemopericardium?
12. Classify hemolytic anemia
13. List the complications of atherosclerosis
14. List 03 causes for delayed clotting time

Section – B

Applied Microbiology (50 Marks)

Q.P Code : J3756

(Use separate answer booklet for Section-B)

LONG ESSAY

2 X 10 = 20 Marks

1. Types of HCAI, sources of infection and role of a health care worker in preventing Health care associated infections. (3+3+4)
2. Classify the types of waste generated in the hospital and write in detail about the Disposal of waste (3+7)

SHORT ESSAY (Answer any three)

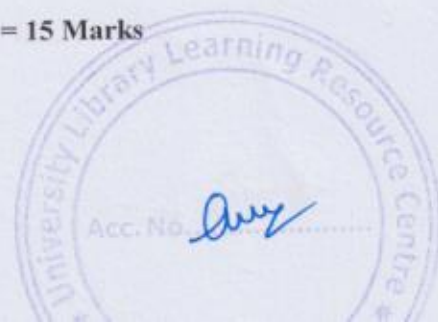
3 X 5 = 15 Marks

3. How will you prevent the spread of drug resistant E coli in the hospital?
4. Risk factors and preventive measures of catheter associated blood stream infection
5. MRSA, risk factors and its preventive measures
6. Clostridium difficile: Disease caused by, Risk factors and its preventive measures
7. Surveillance of infectious diseases

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. Five moments of hand hygiene
9. Name three blood borne viruses
10. Routes of transmission of infection in the hospital
11. Dos and don'ts in needle stick injury
12. Mention three diseases that spread by respiratory route
13. Name three PPE
14. Define health care associated infection



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B.Sc. Allied Health Sciences Second Year (Semester-III)

March 2022 Examination

B.Sc. Cardiac care Technology (CCT)

Time: 3 Hrs.

Paper – II

[Max. Marks: 100]

Introduction to Cardiac care Technology

Q.P Code: J3760

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

Explain the cause, clinical significance and ECG manifestation in RBBB and LBBB

2. a. Explain the ACC/AHA guidelines for the diagnostic use of exercise stress test in detail

b. Criteria for termination of TMT, c. Non-coronary indications of TMT

Short essay (Any ten)

10 X 5 = 50 Marks

3. Describe Sokolow Lyon and Romhilt Estes score in the diagnosis of LVH

4. What are the cause and ECG criteria of RAE?

5. Explain the types and ECG manifestation in 2nd degree AV block

6. Explain the structures of LA and LV in detail

7. Write significance of the following

a. P wave, b. QRS duration, c. PR interval, d. QT interval, e. PR segment, g. ST segment, f. T wave

8. Describe the fate of Heart tube in detail

9. Explain the protocols used in TMT

10. Write the components of conduction system of the heart and their blood supply

11. Explain ECG lead system in TMT

12. Explain the genesis of QRS complex and write a note on anatomic groups of ECG

13. Explain adult systemic and pulmonary circulation

14. Explain the development of RA in detail

Short Answers (Any ten)

10 X 3 = 30 Marks

15. Explain the venous end of the heart tube

16. Write a note on absorption of pulmonary veins during embryology

17. What are the changes that occur in heart after child birth?

18. Write a note on structure and function of pericardium

19. Write a note on Duke score in TMT

20. ECG criteria of 3rd degree AV block

21. Write a note on recovery period in TMT

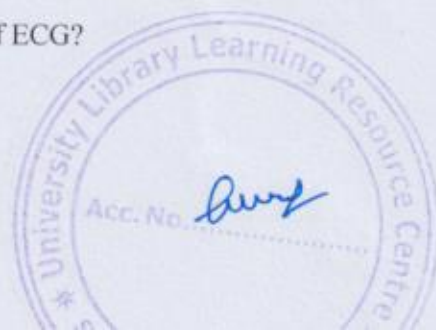
22. ECG criteria of RVH

23. ECG criteria of LAFB and LPFB

24. What are unipolar and bipolar ECG leads and the anatomic group of ECG?

25. ECG criteria of LVH in pressure overload condition

26. List cardinal feature of sinus rhythm



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B.Sc. Allied Health Sciences Second Year (Semester-III)

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B.Sc. Cardiac Care Technology

Time: 2 Hrs.

[Max. Marks: 40]

Applied Pharmacology

Q.P Code: J3770

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary.

LONG ESSAY

1 X 10 = 10 Marks

1. List drugs used in hypertension. Explain the mechanism of action, uses and adverse effects of beta blockers (3+2+3+2)

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

2. Mention low molecular weight heparins. Explain the mechanism of action and uses (1+2+2)
3. Explain the mechanism of action, uses and adverse effects of frusemide (1.5+2+1.5)
4. Explain enzyme induction and inhibition with examples (2.5+ 2.5)
5. Mention four routes of drug administration with examples and write the advantages of sublingual route (4+1)

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

6. Write the treatment of myocardial infarction
7. Explain idiosyncratic reactions with three examples
8. Mention three crystalloids and write three uses
9. List three uses and three adverse effects of calcium channel blockers
10. Explain tolerance and dependence with examples
11. Mention the targets of drug action with examples



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B.Sc. Cardiac care Technology (CCT)

Time: 2.30 Hrs.

[Max. Marks: 80]

PAPER-IV

Medicine Relevant to Cardiac care Technology

Q.P Code: J3780

Your answers should be specific to the questions asked.

Long Essay

2X10=20 Marks

1. Define Rheumatic fever. Discuss RHD with following points a) Etiology b) Pathogenesis c) Clinical features d) Investigations.
2. Define and Enlist cyanotic heart diseases (3 marks). Explain TOF in detail (7 marks)

Short Essay (Answer any Six)

6X5=30 Marks

3. Write clinical signs and symptoms of PVD & risk factors for PVD
4. Define Hypertension & classify it
5. Classification of Aortic aneurysm and its management
6. Obstructive and restrictive lung disease
7. What is Anemia? Explain types of anemia, signs and symptoms of anemia
8. Myocardial Infarction and its management
9. Define COPD with its pathophysiology
10. Pulmonary function test

Short Answers (Answer any ten)

10X3=30 Marks

11. What are defects in tetralogy of fallot
12. Treatment of coronary artery disease
13. Symptoms of restrictive cardiomyopathy
14. Jones criteria for Rheumatic fever
15. Haemophilia A
16. What is atherosclerosis?
17. Cardiomyopathy and its types
18. Clinical features of anemia
19. Antithrombotic therapy
20. Mention the factors that contribute to the development of Peripheral Vascular Disorders
21. Name the 3 layers of arteries
22. comparison of characteristics of arterial and venous disorders

