Rajiv Gandhi University of Health Sciences, Karnataka

Second Year B.Sc. Allied Health Sciences Degree Examination - 29-May-2024

Time: Three Hours **Max. Marks: 50**

APPLIED PATHOLOGY (RS-3)

(Cardiac Care Technology and Perfusion Technology)

Q.P. CODE: 3266

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3266 and 3267 are to be answered within total duration of 3 hours)

LONG ESSAYS **1 x 10 = 10 Marks**

1. Classify heart failure. Describe the pathophysiology of either the right sided or left sided heart failure. Add a note on complications of heart failure

SHORT ESSAYS (Question No. 4 choice) **5 x 5 = 25 Marks**

2. Define and mention the different types of emphysema
3. Mention the differences between Transudate and Exudate
4. Classify embolism with appropriate examples
   OR
   Define and mention the different types Angina Pectoris
5. Describe the blood picture and bone marrow picture in megaloblastic anemia
6. Describe the causes of acute renal failure. Add a note on its laboratory diagnosis

SHORT ANSWER (Question No.9 choice) **5 x 3 = 15 Marks**

7. Mention three laboratory tests in Hemolytic anemia
8. Enumerate the stages of Lobar Pneumonia
9. **List three laboratory tests to diagnosis bleeding disorders and mention their normal values.**
   OR
   Enumerate the lesions caused by asbestos
10. Mention the causes of Pericardial Effusion
11. Describe the blood supply of the heart with neat labeled diagram

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year B.Sc. Allied Health Sciences Degree Examination - 29-May-2024

Time: Three Hours **Max. Marks: 50**

APPLIED MICROBIOLOGY (RS-3)
(Cardiac Care Technology and Perfusion Technology)
Q.P. CODE: 3267

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3266 and 3267 are to be answered within total duration of 3 hours)

LONG ESSAYS **1 x 10 = 10 Marks**

1. Enumerate the viruses that are transmitted by blood and body fluids. Describe in detail laboratory diagnosis of Hepatitis B virus infection. Add a note on preventive measures

SHORT ESSAYS (Question No. 4 choice) **5 x 5 = 25 Marks**

2. Note on importance of sterilisation
3. Methicillin resistant staphylococcus aureus – detection and treatment
4. Varicella zoster infection – modes of spread and prevention
   OR
   Prevention of HIV infection
5. Infections caused by clostridium difficle
6. Autoclave

SHORT ANSWER (Question No.9 choice) **5 x 3 = 15 Marks**

7. Moraxella catarrhalis
8. Name three gram negative bacteria
9. Fumigation
   OR
   Incineration
10. Name three RNA viruses
11. Hand washing techniques

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Allied Health Sciences Degree Examination - 04-Jun-2024

Time: Three Hours **Max. Marks: 100**

APPLIED PHARMACOLOGY (RS-3)
(Cardiac Care Technology and Perfusion Technology)

Q.P. CODE: 3269

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. **Classify antianginal drug. Write the mechanism of action, uses and adverse effects of Nitroglycerine.**
2. Enumerate various routes of drug administration with examples for each route. Mention advantages and disadvantages of Intravenous route of drug administration.

   OR

   Classify sedative hypnotics. Write the mechanism of action, uses and adverse effects of Benzodiazepines.

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Therapeutic uses of Glucocorticoids.
4. Pharmacotherapy of Bronchial asthma.
5. Paracetamol poisoning.

   OR

   Cardiac Glycosides.
6. Hypolipidemic agents.
7. Write mechanism of action, uses and adverse effects of Loop Diuretics.
8. Third generation cephalosporins.
9. First line antitubercular drugs.
10. Treatment of organophosphorus compound poisoning.

    OR

    Warfarin.
11. Classify immunosuppressive agents. Mention their uses and adverse effects.
12. Preanaesthetic medications.

SHORT ANSWER **10 x 3 = 30 Marks**

13. Name three second generation antihistaminic drugs.
14. Uses of adrenaline.
15. Mention three contraindications of morphine.
16. Mention three cardioselective beta blockers.
17. Name the antidote in the overdose of a) Heparin b) Diazepam c) Paracetamol
18. Name three aminoglycoside drugs with their side effects.
19. Name three anti-emetics and its uses.
20. What is the rationale of combining lignocaine with adrenaline?
21. Name two calcium channel blockers with one specific use.
22. **Name three mucolytic agents**

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year B.Sc. Cardiac Care Technology Degree Examination – 10-Jun-2024

Time: Three Hours **Max. Marks: 100 Marks**

Medicine Relevant to Cardiac Care Technology (RS-3)

Q.P. CODE: 3275

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Explain autonomic Nervous system in detail.
2. Explain the role of dialysis and renal transplantation in end stage renal disease.
   OR
   Explain RHD and its management in detail.

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Explain pathophysiology of Hypertension and its management in detail.
4. Write a note on antiplatelets.
5. Describe diabetes mellitus types and its management.
   OR
   Describe the mechanism of action of Statins.
6. Classify CNS disorders and mention their pathophysiology.
7. Explain the clinical investigations for IHD.
8. How do you differentiate acute vs chronic renal failure?
9. Describe etiology of pulmonary edema.
10. Write a note on Deep vein thrombosis.
    OR
    Discuss management of Peripheral Vascular Disease.
11. Explain clinical findings of End stage renal diseases.
12. Describe obesity-pathophysiology management.

SHORT ANSWER **10 x 3 = 30 Marks**

13. Write a note on PFT.
14. Mention any three Beta blockers.
15. Mention any three anticoagulants.
16. Mention any three routes of drug administration.
17. Mention any three methods of diagnosis IHD.
18. Define angina, syncope and palpitation.
19. What are the symptoms of aortic aneurysm?
20. What are the ECG findings in Hypertension?
21. Mention any three dietary products that can reduce anemia symptoms.
22. What are the risk factors for IHD?

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Cardiac Care Technology Degree Examination – 06-Jun-2024

Time: Three Hours **Max. Marks: 100 Marks**

INTRODUCTION TO CARDIAC CARE TECHNOLOGY (RS2)
Q.P. CODE: 1245

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Explain chamber enlargement in ECG.
2. What are the types of AV block? What are the mechanism, ECG changes and causes of it?
3. Describe the principles behind Echocardiography. What is A-mode, B-mode, M-mode Echocardiography and 2D Echocardiography?

SHORT ESSAYS (Answer any Twelve) **12 x 5 = 60 Marks**

4. Explain second degree AV block.
5. Pharmacological stress echocardiography.
6. Explain ECG changes during RBBB.
7. Types of AV block and ECG changes in Mobitz type 1 AV block.
8. Explain P-P interval and R-R interval.
9. Cardiac defibrillation.
10. Limitations of transthoracic Echo.
11. Explain Q-T interval and U wave.
12. Uses of ECG.
13. Explain normal ECG paper. Add a note on how to calculate heart rate.
14. Explain the parts of echocardiography machine.
15. Explain in detail about combined conduction block.
16. W.P.W syndrome.
17. Normal response to stress test ECG.

SHORT ANSWERS (Answer any Ten) **10 x 2 = 20 Marks**

18. Explain depolarization and repolarization.
19. What are the structures imaged in Apical 5 chamber view?
20. Wenkebach period.
21. Bernaulis equation.
22. Structures imaged in subcostal view.
23. P mitrale pattern.
24. What is Holter ECG monitoring?
25. Piezo electric effect.
26. Branches of aorta.
27. Write four protocols used for stress ECG.
28. Draw M-mode Echo of Aortic Valve and Label it.
29. Write inferior wall leads.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year B.Sc. Allied Health Sciences Degree Examination - 21-Nov-2024

Time: Three Hours Max. Marks: 50

APPLIED PATHOLOGY (RS-3)

(Cardiac Care Technology and Perfusion Technology)

Q.P. CODE: 3266

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3266 and 3267 are to be answered within total duration of 3 hours)

LONG ESSAYS **1 x 10 = 10 Marks**

1. 1. Define and classify anemias. Describe the blood picture and bone marrow picture in iron deficiency anemia. Add a note on daily iron requirements

   OR

   Define and classify anemias. Describe the Laboratory diagnosis of hemolytic anemia

SHORT ESSAYS (Question No. 4 choice) **5 x 5 = 25 Marks**

2. Define atherosclerosis. Describe the risk factors of atherosclerosis
3. Describe the stages of Lobar Pneumonia with neat labeled diagram
4. Enumerate the causes and effects of end stage renal diseases

   OR

   Classify acute leukemia according to the FAB classification
5. Classify congenital heart disease and describe Tetrology of fallot
6. Describe the Renin-Angiotensin mechanism of Renal oedema

SHORT ANSWER (Question No.9 choice) **5 x 3 = 15 Marks**

7. Mention three causes of thrombocytopenia
8. Classify hypertension
9. Classify proteinuria with appropriate examples

   OR

   Mention different types of aneurysms
10. List the different types of pneumoconiosis
11. Classify heart failure with examples

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year B.Sc. Allied Health Sciences Degree Examination - 21-Nov-2024

Time: Three Hours **Max. Marks: 50 Marks**

APPLIED MICROBIOLOGY (RS-3)

(Cardiac Care Technology and Perfusion Technology)

Q.P. CODE: 3267

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3266 and 3267 are to be answered within total duration of 3 hours)

LONG ESSAYS **1 x 10 = 10 Marks**

1. Enumerate the infections acquired by respiratory route. Explain the pathogenesis and laboratory diagnosis of pulmonary tuberculosis.

SHORT ESSAYS (Question No. 4 choice) **5 x 5 = 25 Marks**

2. Varicella zoster virus – modes of transmission and prevention.
3. Standard precautions.
4. Infections caused by Herpes simplex viruses.
   OR
   Catheter related blood stream infections.
5. Pathogenesis and prophylaxis of Hepatitis B virus.
6. Streptococcus pneumoniae – modes of transmission and clinical manifestation.

SHORT ANSWER (Question No.9 choice) **5 x 3 = 15 Marks**

7. Indicators used in autoclave.
8. Clinical manifestations of Clostridium difficile.
9. OAUGDP
   OR
   List three organisms spread by oro faecal route.
10. Name thee organisms causing nosocomial infections.
11. Prevention of Ebola virus.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Allied Health Sciences Degree Examination - 26-Nov-2024

Time: Three Hours **Max. Marks: 100**

APPLIED PHARMACOLOGY (RS-3)

(Cardiac Care Technology and Perfusion Technology)

Q.P. CODE: 3269

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Classify general anesthetics. Discuss the mechanism of action, uses and adverse effects of ketamine
2. Classify NSAID's. Discuss the therapeutic uses and adverse effects of aspirin

   OR

   Classify Glucocorticoids. Discuss the therapeutic uses and adverse effects of Glucocorticoids

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Therapeutic uses of β blockers
4. Bioavailability
5. Amiodarone

   OR

   Nitroglycerine
6. Therapeutic uses and contraindications of Morphine
7. First line anti-TB drugs
8. Therapeutic uses and adverse effects of diazepam
9. Salbutamol
10. Furosemide

    OR

    Chemoprophylaxis
11. Metoclopramide
12. Therapeutic uses and adverse effects of digoxin

SHORT ANSWER **10 x 3 = 30 Marks**

13. Rationale of using adrenaline in anaphylactic shock
14. Mention the drug of choice for organophosphorus poisoning with its dose and route of administration
15. Name three hypolipidemic drugs
16. Rationale of combining Lignocaine with adrenaline
17. Name any three antihistaminics
18. Rationale of using ethanol in methanol poisoning
19. Mention two uses and route of administration of Mannitol
20. Name three skeletal muscle relaxants
21. Name three mucolytic agents
22. Name the Heparin antagonist with its source and route of administration

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year B.Sc. Cardiac Care Technology Degree Examination – 28-Nov-2024

Time: Three Hours **Max. Marks: 100 Marks**

Introduction to Cardiac Care Technology (RS-3)

Q.P. CODE: 3274

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Echocardiographic view in detail with its modes
2. Describe heart blocks by writing a neat diagram of first degree, second degree and third degree heart block
   OR
   TMT – procedure, indications and contraindications

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Radiation hazards and how to minimize it
4. Write an essay on contrast echocardiography by describing the method of preparation of contrast and different conditions diagnosed with contrast echocardiography
5. Contraindications of TMT (Treadmill test)
   OR
   Role of transesophageal ECHO in detail
6. How you diagnose different grade of mitral regurgitation on ECHO?
7. Features of pulmonary hypertension on ECHO
8. ECG findings of RVH (Right ventricle hypertrophy) and LVH (Left ventricle hypertrophy)
9. Importance of J point on ECG
10. How do you perform TMT (Treadmill Test)? What are the different protocols of TMT?
    OR
    Describe Bundle branch blocks in detail.
11. Describe hypertrophic obstructive Cardiomyopathy, ECG and ECHO features
12. What is Dextrocardia and how do you diagnose Dextrocardia on ECG and ECHO

SHORT ANSWER **10 x 3 = 30 Marks**

13. What is P-Pulmonale?
14. What is P- Mitralae?
15. Complications of TEE (Transesophageal echocardiography)
16. Indications of TMT (Treadmill test)
17. ECHO features of anterior wall myocardial infarction
18. Three ECG features of Aortic stenosis
19. Three ECG features of Hyperkalemia
20. Three ECG features of inferior wall myocardial infarction
21. Three uses of colour doppler
22. Three ECG features of LVH (Left ventricular hypertrophy)

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year B.Sc. Cardiac Care Technology Degree Examination – 28-Nov-2024

Time: Three Hours **Max. Marks: 100 Marks**

Introduction to Cardiac Care Technology (RS-3)

Q.P. CODE: 3274

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Echocardiographic view in detail with its modes
2. Describe heart blocks by writing a neat diagram of first degree, second degree and third degree heart block
   OR
   TMT – procedure, indications and contraindications

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Radiation hazards and how to minimize it
4. Write an essay on contrast echocardiography by describing the method of preparation of contrast and different conditions diagnosed with contrast echocardiography
5. Contraindications of TMT (Treadmill test)
   OR
   Role of transesophageal ECHO in detail
6. How you diagnose different grade of mitral regurgitation on ECHO?
7. Features of pulmonary hypertension on ECHO
8. ECG findings of RVH (Right ventricle hypertrophy) and LVH (Left ventricle hypertrophy)
9. Importance of J point on ECG
10. How do you perform TMT (Treadmill Test)? What are the different protocols of TMT?
    OR
    Describe Bundle branch blocks in detail.
11. Describe hypertrophic obstructive Cardiomyopathy, ECG and ECHO features
12. What is Dextrocardia and how do you diagnose Dextrocardia on ECG and ECHO

SHORT ANSWER **10 x 3 = 30 Marks**

13. What is P-Pulmonale?
14. What is P- Mitralae?
15. Complications of TEE (Transesophageal echocardiography)
16. Indications of TMT (Treadmill test)
17. ECHO features of anterior wall myocardial infarction
18. Three ECG features of Aortic stenosis
19. Three ECG features of Hyperkalemia
20. Three ECG features of inferior wall myocardial infarction
21. Three uses of colour doppler
22. Three ECG features of LVH (Left ventricular hypertrophy)

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Cardiac Care Technology Degree Examination – 02-Dec-2024

Time: Three Hours **Max. Marks: 100 Marks**

Medicine Relevant to Cardiac Care Technology (RS-3)

Q.P. CODE: 3275

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Describe pathophysiology and management of Renal failure.
2. Discuss about pathophysiology and management of Dilated Cardiomyopathy.
   OR
   Explain CNS disorders and its management in detail.

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Write a note on autonomic nervous system.
4. Write a note on classification of CHD's.
5. Classify Cardiomyopathy.
   OR
   Describe TGA in detail.
6. Describe pulmonary edema in detail.
7. Describe CHF in detail.
8. Write a note on Rheumatic Fever pathophysiology.
9. Mention etiology of CNS disorders.
10. Write a note on PFT interpretation.
    OR
    Describe hypertension types.
11. Explain COPD management.
12. Write a note on pathophysiology of acute vs chronic renal failure.

SHORT ANSWER **10 x 3 = 30 Marks**

13. Mention any three types of Restrictive cardiomyopathy.
14. Describe three types of VSD.
15. Define Ebsteins anomaly.
16. Mention any three types of disease of Aorta.
17. Describe investigations for CHF.
18. Mention any three cyanotic congenital heart disease.
19. What are the drugs used to treat RHD.
20. What are the types of Anemia?
21. Describe any drugs used to treat pulmonary edema.
22. Describe any three Antiarrhythmic drugs.

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