Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology Degree Examination – 13-May-2025

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

INTRODUCTION TO ANAESTHESIA TECHNOLOGY (RS2)
Q.P. CODE: 1237

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. Describe parts of a type E oxygen cylinder with diagram. What are the safety features in anaesthesia gas cylinder? How do you store cylinder?
2. Discuss blood transfusion reactions and their management.
3. Discuss care of anaesthesia instruments.

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

4. Define antiseptic and disinfectants. Mention their agents and uses.
5. Ultrasonic cleaning of instruments
6. Venturi mask
7. Flowmeters and safety features in them
8. Jackson Rees Circuit
9. Nitrous oxide
10. Thiopentone sodium
11. What are the parts of anaesthesia delivery system?
12. Goals of oxygen therapy
13. Clinical signs of hypoxia
14. Medical gas pipeline system
15. WTG morton
16. Epidural anaesthesia
17. Ten golden rules of anaesthesia

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

18. Muscles relaxants
19. Complications of spinal anaesthesia
20. Propofol
21. Gas law
    Or
    E.T tube
22. Boyle's
    Or
    Write a short note on Ether Inhaler
23. Sodalime
24. What is cardiac massage?
25. Name two heat sterilizable metal instruments.
26. What is the temperature required for pasteurization?
    Or
    Defibrillator
27. Write a neat diagram of LMA with labeled parts.
28. Anaemic hypoxia
29. Jackson Ree's circuit

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology Degree Examination – 13-May-2025

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

Introduction to Anaesthesia Technology (RS-3)

Q.P. CODE: 3268

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

LONG ESSAYS (Question No.2 Choice) **2 x 10 = 20 Marks**

1. Classify breathing system. Explain the differences between Bains circuit and Jackson Rees system.
2. Define hypoxia. What are the types of Hypoxia? What are the clinical signs of Hypoxia? What are the different modalities of oxygen therapy?
   OR
   Describe the different types of vaporizers, their hazards, maintenance, filling of the vaporizers and draining.

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

3. Write and draw a neat diagram on parts of the airway and its features? What are the its uses?
4. Define Boyle's law and Charles law.
   Or
   Classify Induction agents and write a note on Propofol
5. What are the different waveforms in capnography? Explain with diagram.
   OR
   What is autoclaving? Explain its characteristics, advantages and disadvantages.
6. Glutaraldehyde.
7. Explain intermediate pressure system in anaesthesia machine.
8. Intraoperative monitoring.
9. What are the flows and pressure at which oxygen is delivered from oxygen flush? What are its hazards?
10. Short note on pressure relief value.
    OR
    Pin index safety system.
11. What are ten golden rules of anesthesia?
12. What is ethylene oxide? How does it act? What is the major problem of ethylene oxide?

SHORT ANSWER (Question No. 15 & 20 choice) **10 x 3 = 30 Marks**

13. O2 cylinders.
14. Entonox.
15. High pressure system in anesthesia.
    OR
    Complications of intubation.
16. Hypercapnia.
17. Stylet and its uses.
18. Color coding of vaporizers.
19. Difference between sterilization and disinfection.
20. Define non-rebreather valve and its properties.
    OR
    Flexometallic endotracheal tube.
21. Dalton's law of partial pressure.
    Or
    Ondonsetron
22. What is saturated vapour pressure?

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 08-May-2025

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

Introduction to Anaesthesia & OT Technology

Q.P. CODE: 3391

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. Enumerate all the regional anesthesia techniques. Describe in detail about epidural anaesthesia.
2. Describe various blood groups. Write in brief about indications, complications of blood transfusion.
3. Describe the steps of basic life support in cardiopulmonary resuscitation.

SHORT ESSAYS (Answer any ten) **10 x 5 = 50 Marks**

4. Biomedical waste management of OT.
5. Methods of gloving.
6. Preanesthetic assessment of patient.
7. ETO sterilization.
8. Explain in detail about intravenous induction agents.
9. Explain the various components of Boyle's apparatus.
10. How do you classify suture materials? Give examples of polyfilament suture materials.
11. Trendelenberg position and its uses.
12. Blood transfusion – Indication and complications.
13. Cleaning of operation theatre.
14. Postoperative patient care.
15. Criothyroidotomy.

SHORT ANSWER (Answer any ten) **10 x 3 = 30 Marks**

16. Guedel's airway.
17. Platelet transfusion indications.
18. Name three absorbable sutures.
19. Flash sterilization.
20. Laryngeal Mask Airway (LMA).
21. Complications of spinal anesthesia.
22. Use of a) Babcock's forceps b) Allis forceps
23. Glutaraldehyde.
24. Nitrous oxide.
25. Pin index.
26. Spinal needles – types and sizes.
27. Disposal of waste sharps.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 13-May-2025

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

Applied Pharmacology
Q.P. CODE: 3401

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. Classify anticoagulants. Write a detailed note on heparin.
2. Classify antimicrobial agents and explain their mechanism of action giving one example each.
3. **Classify antihypertensive agents. Write the mechanism of action and side effects of any one calcium channel blockers**

SHORT ESSAYS (Answer any ten) **10 x 5 = 50 Marks**

4. Succinylcholine – mode of action, indication and adverse effect.
5. Enlist ACE inhibitors. Explain their mechanism of action.
6. Write a note on Chemoprophylaxis.
7. Classify antitubercular drugs.
8. Spironolactone – mode of action, indications and dose.
9. Classify Immunosuppressants.
10. Classify local anaesthetics. Write a note on lidocaine.
11. **Write a note on peripherally acting skeletal muscle relaxants**
12. Write a note on drugs used in metabolic imbalance.
13. Write the mechanism of action of corticosteroids. Write in brief about hydrocortisone.
14. **Theophylline- mode of action, indications and adverse effects**
15. Classify antiemetics with examples.

SHORT ANSWER (Answer any ten) **10 x 3 = 30 Marks**

16. Name three lipid lowering agents.
17. Define Bioavailability.
18. Uses and adverse effects of salbutamol.
19. Contraindications of morphine.
20. Name three intravenous anaesthetics.
21. Name three antianginal drugs.
22. Enlist three cholinergic drugs.
23. Mention three drugs used in the treatment of shock.
24. Name three positive inotropic agents and its uses.
25. Medical uses of alcohol.
26. Name three Osmotic diuretics and its use.
27. Classify thrombolytics.

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. Allied Health Sciences Degree Examination – 08-May-2025

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

APPLIED PHARMACOLOGY (RS-3)
(Anaesthesia Technology and Operation Technology)
Q.P. CODE: 3406

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

LONG ESSAYS (Question No.2 Choice) **2 x 10 = 20 Marks**

1. Classify local anaesthetics. Explain its mechanism of action, side effects with five examples.
2. Classify diuretics. Explain the high ceiling diuretics giving their uses and side effects.

   OR

   Classify antiarrhythmic drugs giving two examples in each class. Write a note on the mechanism of action of any one class.

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

3. Classify Immunosuppressants.
4. Statins – Indication and adverse effect.
5. Verapamil – mode of action and indication.

   OR

   Captopril – mode of action and indication.
6. Dopamine therapeutic uses.
7. **Write a note on the pharmacological protection of organs during cardio pulmonary Bypass Surgery**
8. Classify Cephalosporins.
9. **Write a note on the mechanism of action of peripherally acting skeletal muscle relaxants.**
10. Write a note on drugs used in electrolyte imbalance.

    OR

    Add a note on H1-antihistaminics.
11. **Warfarin – Indications and mode of action.**
12. Two different IV fluids.

SHORT ANSWER (Question No. 15 & 20 choice) **10 x 3 = 30 Marks**

13. Uses of bile acid sequestrants with examples.
14. Name three cardiac glycosides.
15. Enlist the pharmacological action of alcohol.

    OR

    Uses of adrenaline.
16. Name the drugs which belong to broad spectrum antibiotics.
17. Name the contraindications of morphine.
18. Routes of administration of corticosteroids.
19. Uses of diazepam.
20. Define Bioavailability.

    OR

    Define Biotransformation.
21. Name any three Anti-fibrinolytics.
22. Name any three pre-anaesthetic medication.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Operation Theatre Technology Degree Examination – 13-May-2025

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

Introduction to Anaesthesia & OT Technology (RS-3)

Q.P. CODE: 3407

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

LONG ESSAYS (Question No.2 Choice) **2 x 10 = 20 Marks**

1. What is central sterile supply department (CCSD). Explain in detail about the different zones of CSSD with a neat labelled layout.
2. Explain in detail about the perioperative management of a 58 years old male patient posted for elective laparoscopic appendectomy.

   OR

   Explain the stages of general anaesthesia. Explain in detail about the systemic complications following general anaesthesia.

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

3. Laminar air flow.
4. Lateral decubitus position.
5. Pulse oximetry.

   OR

   Flash autoclave.
6. Biomedical waste management.
7. Propofol-inducing agent.
8. Sevoflurane – Inhalational anesthetic.
9. Hand wash technique.
10. Depolarising Vs Non depolarising muscle relaxants.

    OR

    Gloving and Gowning technique.
11. Classify different types of surgical instruments according to their applications. Also write a short note on self retaining retractors.
12. Chemical sterilization.

SHORT ANSWER (Question No. 15 & 20 choice) **10 x 3 = 30 Marks**

13. Suction apparatus.
14. Indications of central venous catheterization.
15. Fowler's position.

    OR

    Rose's position.
16. Draw a neat labelled diagram of an endotracheal tube.
17. Bupivacaine hydrochloride.
18. Three examples of opioids.
19. Three indications of intraoperative blood transfusion.
20. What are oropharyngeal airways? Mention two indications of oral airways.

    OR

    Neostigmine.
21. Classify local anesthetics.
22. ETCO2 monitoring.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology Degree Examination – 15-May-2025

Time: Three Hours **Max. Marks: 80 Marks**

MEDICINE RELEVANT TO ANAESTHESIA TECHNOLOGY (RS-2)
Q.P. CODE: 1238

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. Describe in detail the anatomic and physiological differences between adults and paediatrics
2. What are the causes of ischaemic heart disease (IHD) and what is the Perioperative management of patient with IHD?
3. Anaesthetic management of caesarian section

SHORT ESSAYS (Answer any Eight) **8 x 5 = 40 Marks**

4. Normal ECG tracing
5. Clinical features and management of diabetic ketoacidosis
6. Secondary causes of hypertension
7. Preoperative evaluation of patients with renal disease
8. Coexisting diseases in elderly
9. Anaemia
10. Generalized tonic clonic seizure
11. Hypoglycemia
12. Oxygen dissociation curve
13. Management of intraoperative bronchospasm

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

14. Cerebral vascular accident
15. Aortocaval compression
16. Causes of hemoptysis
17. Glucose tolerance test
18. Universal precautions
19. Intracranial pressure
20. Bronchodilator drugs
21. Body mass index
22. Types of shock
23. Name four antiepileptic drugs
24. Antiaspiration prophylaxis in pregnancy
25. Types of insulin

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Operation Theatre Technology Degree Examination – 15-May-2025

Time: Three Hours **Max. Marks: 80**

MEDICINE RELEVANT TO OPERATION THEATRE TECHNOLOGY (RS2)
Q.P. CODE: 1242

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. Etiopathogenesis, clinical features, investigation and treatment of Chronic Kidney Disease (CKD)
2. Risk factors, etiopathogenesis, clinical features, management of unstable angina
3. Etiology, clinical features, investigations and treatment of megaloblastic anemia

SHORT ESSAYS (Answer any Eight) **8 x 5 = 40 Marks**

4. Complications of diabetes mellitus
5. Clinical presentation of cardiogenic shock
6. Peripartum cardiomyopathy
7. Signs and symptoms of COPD
8. Pernicious anemia
9. Temporal lobe epilepsy
10. Febrile seizures
11. List the causes and investigations of young stroke
12. Classification of hypertension
13. Thrombolysis in MI

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

14. Name three drugs used in COPD
15. Three drugs used in status epilepticus
16. Three complications of diabetes
17. Three causes of Chronic Liver Disease (CLD)
18. Three causes of secondary hypertension
19. Complications of MI
20. Oral Glucose Tolerance Test (OGTT)
21. Name three causes of hemorrhagic stroke
22. Three causes of dementia in elderly
23. Three intravenous antihypertensive drugs
24. Surgeries in obesity
25. Three drugs used in diabetic neuropathy

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Allied Health Sciences Degree Examination – 15-May-2025

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

Medicine Relevant to OT Technology (RS-3)
(Anaesthesia Technology and Operation Technology)
Q.P. CODE: 3270

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

LONG ESSAYS (Question No.2 Choice) **2 x 10 = 20 Marks**

1. Discuss the aetiology and management of intraoperative hypotension.
2. Advanced cardiac life support and recent guidelines.
   OR
   Discuss the causes and management of post operative hypoxia.

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

3. Write in detail the pathophysiology of COPD.
4. Obesity and its complications.
5. Bronchospasm during general anaesthesia.
   OR
   Complications of cerebrovascular accidents.
6. Cyanosis.
7. Classify anaemia.
8. **Preanaethestic medication**
9. Types of epilepsy.
10. Define hypertension and classify antihypertensive drugs.
    OR
    Complications of general anaesthesia.
11. Resuscitation in polytrauma.
12. Cardiogenic shock.

SHORT ANSWER (Question No. 15 & 20 choice) **10 x 3 = 30 Marks**

13. Induction agents.
14. Foley's catheter.
15. Bipolar cautery
    OR
    Intra operative anaesthesia record.
16. Hypovolemic shock.
17. **Name few surgeries done for pediatric patients**
18. Stable angina.
19. Capnography.
20. Ectopic Pregnancy.
    OR
    Problems associated with elderly Patients.
21. Ligature.
22. Complications of liver failure.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 15-May-2025

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

Medicines Relevant to Anaesthesia & OT Technology

Q.P. CODE: 3392

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. **What is diabetics mellitus? How to diagnose and manage diabetes mellitus**
2. Classify antihypertensive drugs with examples, describe the role of beta-blockers in detail.
3. What is COPD? Describe briefly pathophysiology and treatment of COPD.

SHORT ESSAYS (Answer any ten) **10 x 5 = 50 Marks**

4. List the causes of Jaundice.
5. Post dural puncture headache (PDPH).
6. Oxygen therapy in ICU.
7. Coronary heart disease.
8. OT preparation for Paediatric patient.
9. Haemoglobin.
10. Emergency management of epilepsy.
11. Recovery from general anaesthesia.
12. Midazolam.
13. Lung function tests.
14. Physiological changes in pregnancy.
15. Endotracheal intubation in an obese patient.

SHORT ANSWER (Answer any ten) **10 x 3 = 30 Marks**

16. Aspirin prophylaxis.
17. A normal ECG.
18. Coronary vasodilators.
19. Post operative nausea and vomiting.
20. Adverse effects of beta – Blockers.
21. Clinical features of stroke.
22. Name three oral hypoglycemic drugs.
23. Insulin.
24. List three causes of renal failure.
25. Name three diuretics.
26. Drugs used in bronchial asthma.
27. Atropine and its uses.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 23-May-2025

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

Applied Pathology – (Sec A)
Q.P. CODE: 3399

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3399 and 3400 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any one) **1 x 10 = 10 Marks**

1. Enumerate the risk factors of atherosclerosis and discuss role of lipid and endothelial injury in its pathogenesis.
2. Define and list the ischemic heart disease. Explain myocardial infarction in detail.

SHORT ESSAYS (Answer any five) **5 x 5 = 25 Marks**

3. Describe etiology and pathogenesis of chronic bronchitis.
4. Describe causes and mechanism of acute renal failure.
5. Name two types of pneumoconiosis and explain any one type in detail.
6. Write about chronic pyelonephritis mechanism and clinical manifestations.
7. Define pathogenesis of emphysema.
8. Define and classify aneurysm.

SHORT ANSWER (Answer any five) **5 x 3 = 15 Marks**

9. What are the complications of renal stones?
10. Write three causes of pleural effusion.
11. Write three causes for ESRD.
12. Write three causes of pulmonary edema.
13. Name the morphological types of anemia.
14. Name three bleeding disorders and its lab tests.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 23-May-2025

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

Applied Microbiology – (Sec B)
Q.P. CODE: 3400

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3399 and 3400 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any one) **1 x 10 = 10 Marks**

1. Enumerate the viruses causing hepatitis. Explain the mode of transmission and laboratory diagnosis of Hepatitis A Virus. Add a note on prevention of Hepatitis A infection
2. Define and classify sterilisation. Describe in detail about gaseous method of sterilisation

SHORT ESSAYS (Answer any five) **5 x 5 = 25 Marks**

3. Catheter associated Urinary Tract Infection (UTI)
4. Infections caused by Salmonella Typhi
5. Vancomycin resistant enterococci – detection and prevention
6. Air sampling techniques
7. Human deficiency virus (HIV) – Morphology and mode of transmission
8. Hepatitis B virus – morphology and universal precautions to prevent Hepatitis B infection

SHORT ANSWER (Answer any five) **5 x 3 = 15 Marks**

9. Name three pathogen causing diarrhoea
10. Name three drug resistant bacteria
11. Mode of transmission of Hepatitis C infection
12. Name three opportunistic infections in HIV patients
13. Antibiotic sensitivity testing
14. Disease caused by V-Z (Varicella-Zoster) virus

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Allied Health Sciences Degree Examination – 23-May-2025

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

Applied Pathology – (Sec A) - (RS-3)
(Anaesthesia Technology and Operation Technology)
Q.P. CODE: 3404

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3404 and 3405 are to be answered within total duration of 3 hours)

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

1. Define chronic obstructive pulmonary disease. Mention the types, causes, pathology and complications of Emphysema.

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

2. Describe the risk factors and morphological features of atherosclerosis.
3. Laboratory findings of Megaloblastic anemia.
4. Describe obstructive uropathy
   OR
   List the causes of chronic renal failure, add a note on lab diagnosis.
5. Laboratory findings of chronic Myeloid Leukemia.
6. Etiopathogenesis and complications of infective endocarditis.

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

7. List the types of pericardial effusion.
8. Neutrophilic leucocytosis.
9. List three causes of acute renal failure.
   OR
   List three cause of Hemolysis.
10. Mention three cause of Thrombocytopenia.
11. List three primary glomerular diseases.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Allied Health Sciences Degree Examination – 23-May-2025

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

Applied Microbiology – (Sec B) (RS-3)
(Anaesthesia Technology and Operation Technology)
Q.P. CODE: 3405

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3404 and 3405 are to be answered within total duration of 3 hours)

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

1. Define Nosocomial infections. Enumerate pathogens and describe the major types of the hospital acquired infections. Add a note on preventive measures

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

2. Laboratory diagnosis of tuberculosis
3. Functioning of autoclave
4. Prevention of HIV infection
   OR
   Laboratory diagnosis of HIV infection
5. Enteric fever – mode of transmission, diagnosis and treatment
6. Catheter associated blood stream infections

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

7. Hand washing techniques
8. Infections transmitted by faecal-oral route
9. Name three Gram positive bacteria
   OR
   Name three RNA viruses
10. Fumigation
11. Name any three disinfectants

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 30-Oct-2025

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

Introduction to Anaesthesia & OT Technology

Q.P. CODE: 3391

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. What is Preanaesthetic evaluation? Describe how preanesthetic evaluation is carried out.
2. **List the components of Airway cart. Add a note on Supraglottic airway devices**
3. **What is Sterilization. What re the methods used for sterilization. Add a note on autoclaving**

SHORT ESSAYS (Answer any ten) **10 x 5 = 50 Marks**

4. Epidural kit.
5. Drugs used for Premedication.
6. Lignocaine Hydrochloride different preparation and uses.
7. Care and maintenance of fiberoptic bronchoscope.
8. Preparation and positioning for spinal anaesthesia.
9. Oxygen supply in operation theatre.
10. Name various inhalational agents and describe briefly about sevoflurane.
11. Biomedical waste management.
12. **What is decontamination. List the disinfectant agents used in OT. Add a note on surgical spirit**
13. **What are the components of macintosh laryngoscope? List common problems arising in it**
14. Oxygen failure alarm.
15. **Write a note on care of surgical instruments**

SHORT ANSWER (Answer any ten) **10 x 3 = 30 Marks**

16. Propofol.
17. **Succinyl choline**
18. Atropine.
19. Syringe.
20. **Bain's circuit**
21. Ringer lactate solution.
22. **Anesthetic Vaporizers**
23. Monitors used in post operative care unit.
24. **Cleaning and care of suction apparatus**
25. Protocol in case of infective material spillage.
26. Ketamine.
27. **Lithotomy position and complications**

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 28-Oct-2025

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

Applied Pathology – (Sec A)
Q.P. CODE: 3399

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary
(Note: Both QP Codes 3399 and 3400 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any one) **1 x 10 = 10 Marks**

1. Define atherosclerosis. Discuss the risk factors and pathogenesis of atherosclerosis.
2. Define and list the ischemic heart disease. Explain myocardial infarction in detail.

SHORT ESSAYS (Answer any five) **5 x 5 = 25 Marks**

3. Describe pyelonephritis.
4. Classify bronchial asthma. Discuss the cases and pathology of asthma.
5. Name two types of pneumoconiosis and explain any one type in detail.
6. Classify Leukemia according to FAB.
7. Briefly discuss various laboratory tests used to diagnosis of bleeding disorders.
8. Define and classify aneurysm.

SHORT ANSWER (Answer any five) **5 x 3 = 15 Marks**

9. List the types of angina.
10. Write three causes of pleural effusion.
11. Write three causes of End stage renal disease.
12. Write three causes of pulmonary edema.
13. Name the morphological types of anemia.
14. List the causes of cardiac hypertrophy.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 28-Oct-2025

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

Applied Microbiology – (Sec B)
Q.P. CODE: 3400

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

(Note: Both QP Codes 3399 and 3400 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any one) **1 x 10 = 10 Marks**

1. Describe in detail various sterilization techniques employed in operation theatres and ICU's.
2. Write briefly about the communicable diseases to health care workers in the hospital set up and the preventive measures.

SHORT ESSAYS (Answer any five) **5 x 5 = 25 Marks**

3. Microbiological sampling.
4. Hepatitis B vaccine.
5. Microbial surveillance methods.
6. Methods employed for sterility testing.
7. Ethylene oxide.
8. Varicella – Zoster virus – mode of spread and preventive measures.

SHORT ANSWER (Answer any five) **5 x 3 = 15 Marks**

9. Name any three germicidal chemicals.
10. Cytomegalovirus – mode of spread.
11. Haemophilus influenzae surveillance and sampling.
12. Name any three disease transmitted by exposure to infected blood and body fluids.
13. Hand disinfectants.
14. Direct surface Agar plating technique.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Allied Health Sciences Degree Examination – 30-Oct-2025

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

APPLIED PHARMACOLOGY (RS-3)
(Anaesthesia Technology and Operation Technology)
Q.P. CODE: 3406

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

LONG ESSAYS (Question No.2 Choice) **2 x 10 = 20 Marks**

1. Classify antihypertensive drugs. Write the therapeutic uses and adverse effects of ACE inhibitors
2. Classify general anaesthetics. Write briefly about various preanaesthetic medications

   OR

   Classify drugs used in bronchial asthma. Discuss the mechanism of action, therapeutic uses and adverse effects of corticosteroids

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

3. Advantages and disadvantages of intravenous route of drug administration
4. Dopamine
5. Antiplatelet drugs

   OR

   Vasodilators
6. Lignocaine
7. Proton pump inhibitors
8. Uses and adverse effects of morphine
9. Warfarin
10. Cardiac glycosides

    OR

    Mydriatics
11. Statins
12. β lactam antibiotics

SHORT ANSWER (Question No. 15 & 20 choice) **10 x 3 = 30 Marks**

13. Name three skeletal muscle relaxants
14. List three uses of aspirin
15. Name three drugs used in treatment of HIV infection

    OR

    Treatment of paracetamol poisoning
16. Mention three adverse effects of phenytoin
17. Name three drugs used in treatment of dry cough
18. Enlist the drugs used to treat insomnia
19. Enumerate three immunosuppressants
20. Name three drugs used in medical emergencies

    OR

    Name three drugs used in treatment of shock
21. Name three potassium sparing diuretics
22. Name three antihistamines and mention their uses

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology Degree Examination – 06-Nov-2025

Time: Three Hours **Max. Marks: 80 Marks**

MEDICINE RELEVANT TO ANAESTHESIA TECHNOLOGY (RS2)
Q.P. CODE: 1238

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. Discuss in detail about preanaesthetic evaluation. Mention the intraoperative and postoperative complications of carbiac surgeries.
2. Define and classify shock discuss the clinical features and management of hypovolemic shock.
3. Define hypertension and classify antihypertensive drugs. Discuss management of hypertensive emergencies.

SHORT ESSAYS (Answer any Eight) **8 x 5 = 40 Marks**

4. Define diabetes mellitus. Mention the types. Discuss about complications.
5. **Skeletal muscle relaxants**
6. End stage renal disease.
7. Indications and complications of blood transfusion.
8. Respiratory acidosis and respiratory alkalosis.
9. Define seizures. Mention the types. Discuss management of status epilepsy.
10. I.V fluids.
11. Analgesics.
12. Heart failure.
13. Intraoperative management of myocardial infarction.

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

14. APGAR SCORE.
15. Adrenaline.
16. Mention any four complications of blood transfusion.
17. Care of ET tube.
18. Total Parental Nutrition (TPN).
19. CPR.
20. Mannitol.
21. Spinal needles.
22. Uses of aspirin.
23. Anaphylactic shock.
24. Hepatitis B vaccination.
25. Aspiration pneumonia.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Operation Theatre Technology Degree Examination – 06-Nov-2025

Time: Three Hours **Max. Marks: 80**

MEDICINE RELEVANT TO OPERATION THEATRE TECHNOLOGY (RS2)
Q.P. CODE: 1242

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. Describe the etiology, clinical features, investigations and treatment of Ischemic Heart Disease
2. 50 years old female patient with hypertension is posted for varicose veins surgery. What are the expected intraoperative and post-operative complications and how will you manage
3. Explain in detail cerebro vascular accident (CVA)

SHORT ESSAYS (Answer any Eight) **8 x 5 = 40 Marks**

4. Illustrate hypovolemic shock and its management
5. Write etiopathogenesis and treatment of chronic liver failure
6. Explain emphysema
7. Explain the physiological changes during pregnancy
8. Discuss the operation theatre management of obese patients, including preoperative and postoperative care
9. Add a note in OT preparation and intra operative management of patient with anemia
10. Explain the diagnosis and treatment of pregnancy induced hypertension (PIH)
11. Explain management of patient with bronchial asthma in the operation theatre
12. Add a note on fasting guidelines and OT preparation in pediatric patients
13. Prepare a table of NYHA classification of breathlessness

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

14. Enlist any four medications used in treatment of epilepsy
15. Write about complications observed in positioning obese patients
16. Describe body mass index (BMI)
17. Enlist any two crystalloids with their composition
18. Treatment of diabetic ketoacidosis
19. Describe Oral hypoglycemic agents
20. Classify hypertension
21. Enlist any four diuretics
22. Renal function test
23. Risk factors of pre-labor rupture of membrane (Amniotic sac rupture)
24. Describe lung volumes
25. APGAR Score

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Anaesthesia Technology & Operation Theatre Technology
Degree Examination – 06-Nov-2025

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

Medicines Relevant to Anaesthesia & OT Technology

Q.P. CODE: 3392

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 the etiology, types, clinical features, diagnosis and treatment of diabetes mellitus.
2. What are the causes of liver failure? Explain the clinical features, diagnosis and management of chronic liver failure.
3. Briefly explain the common ailments in elderly. List clinical challenges feed while operating on an elderly patient.

SHORT ESSAYS (Answer any ten) **10 x 5 = 50 Marks**

4. Secondary hypertension and its management.
5. Clinical features of chronic renal failure.
6. Dietary changes in diabetes mellitus.
7. List various complications associated with pregnancy.
8. Explain the etiology of bronchial asthma, diagnosis and treatment in brief.
9. Acute coronary syndromes.
10. Complications of hypertension.
11. Clinical features of severe anemia and complications of anemia.
12. Classify stroke. Explain the management of acute hemorrhagic stroke.
13. What are the clinical features of acute subdural hematoma? Explain the treatment of acute SDH.
14. Explain the complications of obesity.
15. Crystalloids and colloids.

SHORT ANSWER (Answer any ten) **10 x 3 = 30 Marks**

16. Uses of Mannitol.
17. Nitrates – Uses, dose and route of administration.
18. Three complications of blood transfusion.
19. Autologus blood transfusion.
20. Name three antiepileptics.
21. List the causes of congestive cardiac failure.
22. Mention the stages of labour.
23. Adult Respiratory Distress Syndrome (ARDS).
24. Hemodialysis.
25. Gestational diabetes.
26. Benefits of breast feeding.
27. Define jaundice. List three causes of jaundice.

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