# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Operation theatre Technology Degree Examination – 30.05.2024

Time: Three Hours | Max. Marks:100 Marks

## CLINICAL OPERATION THEATRE TECHNOLOGY - PAPER – I (RS2)

Q.P. CODE: 2926

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. Write about the layout of operation theatres. Explain peripheral support areas.
2. How do you separate the OT wastes and how do you dispose them?
3. How do you position, prepare the OT, instruments and medications for major breast surgery under general anaesthesia?

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

4. Surgical scrub, gowning and gloving
5. Implication in liver resection
6. Suction apparatus
7. Operating microscope
8. Preparation of the patient for TURP surgery
9. Classification of hazards in the operation theatre
10. Powered surgical instruments
11. What is lithotomy position and how is it managed? What are the complications?
12. Sterilization of operation theatre
13. Absorbable and non-absorbable suture material
14. Cholecystectomy
15. Inguinal hernia

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

16. Povidone iodine
17. Haemostat
18. Dilation and curettage
19. Glutaraldehyde
20. Radiation sterilization
21. Name the surgical procedures on esophagus.
22. Preparation of patient for LSCS
23. Surgical drains
24. Hernioplasty
25. Intravenous inducing agents
26. Cautery – bipolar
27. Decontamination of anaesthesia equipment

# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anaesthesia Technology Degree Examination – 30-May-2024

Time: Three Hours | Max. Marks: 100 Marks

## CLINICAL ANAESTHESIA TECHNOLOGY
## PAPER – I (RS2)
## Q.P. CODE: 2932

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 blood transfusion – indications and complications.
2. Explain in detail, the preparation of operating room for a Cardiac surgery.
3. Enumerate the anaesthesia machine checklists.

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

4. Explain briefly intra-operative monitoring.
5. Inhalational anaesthetics – types, colour coding
6. Clinical signs of hypoxemia
7. Heat Moisture Exchanger (HME)
8. Common complications after spinal anaesthesia
9. Capnography – definition, normal value and types of measurement
10. transport to ICU
11. Artificial airways
12. Neuro muscular blockers – definition, classification.
13. Hospital infection – prevention and control
14. Laryngeal mask airways – different types, indications
15. Sodalime canister
16. Bleeding time, clotting time
17. Communication to patients

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

18. Double lumen tubes
19. Cyanosis
20. Drugs used for treating hypotension
21. List the sizes and colour coding of suction catheters.
22. Drugs used for monitored anaesthesia care
23. $O_2$ cylinder
24. Antiemetics
25. Dopamine
26. Antihistamines
27. List the lung capacities
28. ECG
29. List the crystalloids

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anaesthesia Technology Degree Examination – 30-May-2024

Time: Three Hours Max. Marks: 100

## ANAESTHESIA TECHNOLOGY – CLINICAL – PAPER-I (RS-3)

## Q.P. CODE: 3271

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. Elaborate the steps taken to check anaesthesia machine

2. Algorithm or steps for difficult intubation
   OR
   Enumerate 10 golden rules of anesthesia. List the reversal agent. Criteria required for adequate reversal

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

3. Premedication in pediatric patient
4. Importance of ECG in a patient posted for surgery
5. What are the monitors required during surgery for pre induction and post induction?
   OR
   Gas cylinders, colour coding and testing
6. Drugs used for bronchospasm during surgery. How to relieve intraoperative bronchospasm?
7. Enumerate causes of post operative shivering and how to manage it?
8. Write a note of intraoperative fluid management
9. Various uses of epinephrine
10. Explain intermediate system in anaesthesia machine
    OR
    What is oxygen flush? What and the pressures and flows delivered from oxygen flush?
11. Sodabicarb
12. What is hypoxia? What are the different types of hypoxia?

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

13. Laryngoscope
14. **Causes of intraoperative Bradycardia & Treatment.**
15. Causes of restlessness in post op period
    OR
    Criteria for accepting the case
16. Hydrocortisone
17. **Reversal for muscle Relaxants.**
18. Importance of blood glucose, ketones bodies, electrolytes in a diabetic patient on the day of surgery?
19. Pulse oximetry
20. What is a vaporizer?
    OR
    Pin index safety system
21. Cylinder types
22. Hyperkalemia and its anaesthetic implications

# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anaesthesia Technology & Operation Theatre Technology Degree Examination – 30-May-2024

Time: Three Hours | Max. Marks: 100 Marks

## Anaesthesia & OT Technology – Clinical -PAPER-I

## Q.P. CODE: 3393

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. How do you plan a new operation layout? What are the basic requirements of in a operation theatre and its positioning in the theatre complex?
2. What is lithotomy position? What are the complications and the preventive measures to be taken for this?
3. How do you prepare the patient, the anesthesia trolley and surgical trolley for TURP?

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

4. Laser is OT.
   Or
   **Tonsilectomy**
5. General principles, surgical procedures of preparation for breast procedures.
6. Preparation of endoscopy room for procedure.
7. Universal precautions.
8. Thermal sterilization.
9. End tidal carbon dioxide.
10. Prevention of Hypothermia in OT.
11. How do you set up ventilators in OT?
12. Cleaning of surgical sharp instruments.
13. Surgical safety check list.
14. Anaesthesia preparation for orthopedic procedures.
15. Setting up equipments for nerve blocks.

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

16. Autoclave.
17. How do you quantify blood loss intra-operatively?
18. Disposal of sharps.
19. Precautions to be taken before touching patients.
20. AED (Automated External Defibrillator cardioverter)
21. Temperature probe.
22. Micro discectomy.
23. Anaesthetic considerations for LSCS.
24. Suture materials.
25. Epidural needle.
26. Chlorhexidine.
27. Plasma sterilization.

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Operation Theatre Technology Degree Examination – 30-May-2024

Time: Three Hours Max. Marks: 100 Marks

## OPERATION THEATRE TECHNOLOGY – CLINICAL – PAPER-I (RS-3)

## Q.P. CODE: 3408

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. Explain the indications, preoperative assessment and procedure of modified radical mastectomy.
2. Classify physical methods of sterilization. Explain in detail regarding autoclaving.
   OR
   Classify chemical methods of sterilization. Explain in detail regarding Aldehyde method of sterilization.

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

3. Splenectomy – Indications and complications.
4. Explain the complications of Laparoscopy Cholecystectomy.
5. Lasers in surgery.
   OR
   Care of microsurgical instruments.
6. Briefly explain the care of following instruments a) Needle Holder b) Scissors c) BP handle
7. Radiation methods of sterilization.
8. Recovery room.
9. 'Split skin grafting'.
10. Define biopsy. List the various types of biopsy. How will you send the specimen to pathology laboratory,
    OR
    Tracheostomy.
11. Explain the difference between antiseptics and disinfectants.
12. Lithotomy position.

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

13. Surgical spirit.
14. Surgeries done in lateral position.
15. Incision
    OR
    Upper GI endoscopy.
16. Laminar airflow.
17. Splints.
18. Types of blood groups.
19. Steps of surgical scrubbing.
20. Pasteurization.
    OR
    Hydrogen peroxide.
21. Types of spinal needles.
22. Triple maneuver.

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# Rajiv Gandhi University of Health Sciences, Karnataka

## III Year B.Sc. Operation Theatre Technology Degree Examination - 03-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

### Applied Operation Theatre Technology
### PAPER - II (RS2)
### Q.P. CODE: 2927

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 about Biomedical waste management – Principles and practice.
2. Explain the steps in preparing patient and OT posted for orthopaedic procedure.
3. Discuss in detail – Anaemia – definition, types, pathogenesis and treatment. Write a brief note on haemolytic anaemia and Polycythemia.

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

4. Antihypertensive drugs – mechanism of action, side effects and uses
5. Intravenous colloids – types and uses
6. Complications of local anaesthetics/regional anaesthetics
7. OT sterilization and laminar air flow
8. Intraoperative monitoring for a neurosurgery case
9. Significance of ECG (electrocardiogram)
10. Patient warming devices
11. Classification of anaesthesia blocks.
12. Nutritional importance of lipids, carbohydrates and proteins
13. Common renal procedures
14. Day care surgeries – list the procedures and common reasons for re-admission.
15. Care of a patient mental impairment

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. List the colour coding of intravenous cannula.
17. Mephenteramine
18. Neuromuscular blocking reversal drugs
19. Quality control indicators of sterilization
20. Informed consent
21. Post-operative care of patient
22. Electrolyte supplements
23. List the breathing circuits
24. Universal precautions
25. Patient positioning for spine surgery
26. Procotoscopy
27. Process of specimen collection – Urine, blood for coagulation factors

# Rajiv Gandhi University of Health Sciences, Karnataka

## III Year B.Sc. Anesthesia Technology Examination – 03-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

Applied Anaesthesia Technology - Paper – II (RS2)
Q.P. CODE: 2933

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 hypoxemia, clinical sign of hypoxemia hazards of oxygen therapy?
2. What is cardiac arrest? What are the types of cardiac arrest? How will you perform cardiopulmonary reruscitation?
3. Describe anaesthesia machine check list.

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

4. Bain circuit
5. Local anaesthetic toxicity
6. Immediate complications of incompatible blood transfusion
7. Combitube
8. Proseal LMA
9. Different concentration of Lignocaine and its uses
10. Pulse oximeter
11. Metabolic Acidosis
12. Venturi mask
13. Endotracheal intubation
14. Types of humidifier
15. Pre anaesthetic medication

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Capnograph
17. Pethicks test
18. Aims of premedication
19. ECG findings in myocardial infarction
20. Contraindications for spinal anaesthesia
21. Adverse effects of morphine
22. Treatment of intra operative bronchospasm
23. Furosemide
24. Composition of sodalime and baralyme
25. Reversal of anaesthetic
26. Non shockable rythms during cardiac arrest
27. Sodium bicarbonate

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# Rajiv Gandhi University of Health Sciences, Karnataka

## III Year B.Sc. Operation Theatre Technology Advanced Degree Examination – 05-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

### OPERATION THEATRE TECHNOLOGY ADVANCED - PAPER – III (RS2)
Q.P. CODE: 2928

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. Classification of suture materials and its applications
2. Discuss a problem faced in positioning a patient on an operating table
3. Cholecystectomy, its indications, procedure, intra and postoperative complication

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

4. Thyroidectomy procedure
5. Radical mastectomy
6. Classify burn what is rule of 9
7. Laparoscopic appendicectomy
8. Trans urethral resection of prostate
9. What is skin grafting? Explain the types of skin grafts
10. Intra ocular lens implantation
11. Female sterilization
12. Cast application in fractures
13. Nasogastric intubation
14. Define hernia. Explain inguinal herniorrhaphy
15. Liver needle biopsy

**SHORT ANSWERS (Answer any Ten)** 10 x 3 = 30 Marks

16. Suction apparatus
17. Colonoscopy
18. Management of post spinal hypotension
19. Adrenaline
20. Artery forceps
21. Surgical stapler
22. Name equipment required to be used for a difficult airway in anaesthesia
23. Name two instruments used for cutting long-bones in orthopedic surgery
24. What is hiatus hernia?
25. Perianal abscess
26. Episiotomy
27. Venesection

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# Rajiv Gandhi University of Health Sciences, Karnataka

## III Year B.Sc. Anesthesia Technology Degree Examination – 05-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

### ADVANCED ANAESTHESIA TECHNOLOGY (RS2)
### Q.P. CODE: 2934

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 hypothyroidism? Discuss the anaesthetic management of a hypothyroid patient posted for open cholecystectomy.
2. Define and classify shock. Discuss the management strategies in shock.
3. Write the physiological changes in normal pregnancy. Write about labour analgesia

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

4. Diabetes mellitus-anaesthetic consideration
5. Double lumen tube
6. Induction agents
7. Opiods in anaesthesia
8. Aortocaval syndrome
9. Glasgow coma scale
10. Soda lime
11. Cardiopulmonary resuscitation
12. CVP monitoring
13. Pulse oximetry
14. Spinal anaesthesia
15. Balanced anaesthesia

**SHORT ANSWERS (Answer any Ten)** 10 x 3 = 30 Marks

16. Renal function tests
17. Massive blood transfusion
18. Mechanical ventilation
19. Obstructive sleep apnea
20. Bed side pulmonary function tests
21. Protamine
22. Thymectomy
23. Humidification
24. Antihypertensive drugs
25. Atracurium
26. Antisialogogues
27. Lignocaine

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anaesthesia Technology Degree Examination – 03-Jun-2024

Time: Three Hours Max. Marks: 100 Marks

## ANAESTHESIA TECHNOLOGY – APPLIED - PAPER-II (RS-3)

## Q.P. CODE: 3272

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 are the commonly performed Nerve blocks and head and neck? Write about Stellate Ganglion blocks, signs of block and complications.
2. Indications of Epidural anaesthesia, epidural needles and the methods to locate epidural space.
   OR
   Expand MAC – Discuss in detail about Inhalational anaesthetic agents.

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

3. Systemic side effects of Controlled Hypotension and contraindications.
4. Methods of local analgesia.
5. Ropivacaine, systemic effects and anaesthetic properties.
   OR
   Factors prolonging the Neuromuscular blockade.
6. Systemic effects of depolarizing agents.
7. Succinyl choline.
8. Airway pressure.
9. Treatment of intraoperative MI.
10. Ephedrine dose and uses.
    OR
    Adrenaline, dose and uses.
11. History of anaesthesia.
12. Ketamine and dissociative anaesthesia.

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

13. Mallampatti classification.
14. Uses of Benzodiazepines.
15. ECG
    OR
    NIBP
16. Write some complications of CVP catheterization.
17. Reasons for Hypothermia.
18. How do you monitor the depth of anaesthesia?
19. TRIAD of general anaesthesia.
20. Nitrous oxide
    OR
    Tramadol.
21. Management of airway trauma.
22. Thermal and electrical injuries.

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# Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Anaesthesia Technology Degree Examination – 05-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

## ANAESTHESIA TECHNOLOGY - ADVANCED – PAPER – III (RS-3)

Q.P. CODE: 3273

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 in detail about anaesthesia for Renal disease
2. Discuss in detail about shock - definition, types and management
   OR
   Discuss in detail about congestive cardiac failure – symptoms and management

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

3. Double lumen endotracheal tube
4. Anaesthesia for pre-eclampsia
5. Anaesthesia for Bronchoscopy
   OR
   Anaesthesia for Thymectomy
6. Cryoprecipitate
7. Intra operative and post operative pain management
8. **Inhalational and induction in paediatric patient.**
9. Normal arterial blood gas values
10. Preoperative investigation for shock
    OR
    What is Air embolism?
11. Jackson Rees breathing system and Bain's circuit
12. Ectopic pregnancy

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

13. Neonatal resuscitation
14. Obesity and anesthesia
15. Management of diabetic ketoacidosis
    OR
    Management for postoperative headache
16. Anaesthesia for open heart surgery
17. What is rapid sequence induction?
18. COPD
19. Percutaneous tracheotomy
20. Intercostal drainage
    OR
    Central Venous Pressure
21. Heparin and Protamine
22. Postoperative cognitive dysfunction

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# Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Anaesthesia Technology & Operation Theatre Technology Degree Examination – 03-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

## Anaesthesia & OT Technology – Applied -PAPER-II

## Q.P. CODE: 3394

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. Requisite skill and knowledge to deal with immediate post op problems like severe shivering, possible airway problems, hypotension, oxygen supplementation
2. Surgical fluid losses and maintenance requirement
3. What are the various invasive radiographic procedure? Add a note on angiography

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

4. Types and choice of fluids with respect to colloids / crystalloid
5. CT consoles
6. Upper G I endoscopy
7. Difference between Baska mask and Igel
8. Neuraxial analgesia
9. Pulmonary artery pressure monitoring
10. Lithotripsy
11. How to start transfusion in operation theatre? Complications of blood transfusion
12. Intra-operative monitoring parameters
13. Transcutaneous Electrical Nerve Stimulation (TENS)
14. Emergency LSCS
15. Discuss the management of exposed person with special emphasis on post exposure prophylaxis

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

16. Fire in operation theatre-causes
17. Radiation protection during intra operative use of C-arm
18. Pulse oximetry
19. Anaphylaxis in OT
20. What are invasive monitors?
21. Indications of regional anesthesia
22. Local anaesthetic toxicity
23. Advantages of Pre-medication
24. Plasma components
25. APGAR score
26. High spinal
27. Uses of CVP

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anaesthesia Technology & Operation Theatre Technology Degree Examination – 05-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

## Anaesthesia & OT Technology – Advanced -PAPER-III

## Q.P. CODE: 3395

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. Define surgical site infections. Describe the clinical features, diagnosis and management of SSI.
2. Explain the technique of central venous catheterization. Enumerate the indications and complications of the procedure.
3. Explain the procedure of tracheostomy. Describe the care of tracheostomy patient.

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

4. Triage.
5. **Care of bed sores.**
6. Clinical features and management of severe asthma.
7. Antibiotic resistance.
8. Steps of hand scrubbing.
9. Total parenteral nutrition.
10. Electrical burns clinical features and management.
11. Procedure of feeding tube placement.
12. Informed consent.
13. Care of peripheral venous line.
14. Incentive spirometry.
15. Transfusion reactions.

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

16. Code yellow.
17. Three drugs used to treat arrhythmias.
18. ABCs of resuscitation.
19. Name three inotropes.
20. Chest physiotherapy.
21. Three clinical features of blunt abdominal trauma.
22. Three indications of arterial cannulation.
23. Name three ventilator modes.
24. Name thee complications of urinary catheterization.
25. Name three IV fluids.
26. Rule of 9
27. Treatment of elevated intracranial pressure.

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc Operation Theatre Technology Degree Examination – 03-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

## OPERATION THEATRE TECHNOLOGY – APPLIED- PAPER-II (RS-3)

## Q.P. CODE: 3409

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. Care of anaesthetized patient under general anaesthesia in OT.
2. Hazards of blood transfusion and blood products. Write the components of blood and collection of samples.
   OR
   How is temperature monitored in adults and infants inside the OT management of Hypothermia and causes?

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

3. Classification of local anesthetics. Discuss its complications.
4. Pulse oxymetry – Normal wave form, principle and uses.
5. Non-depolarizing muscle relaxants.
   OR
   Formation and circulation of CSF.
6. Name various inhalational agents and describe briefly about isoflurane.
7. Emergency intubation of patient in ICU.
8. Setting of difficult intubation trolley.
9. Describe normal capnogram with labelled diagram.
10. Describe the anatomy of larynx with diagram.
    OR
    Name intravenous fluids and describe any two.
11. Complications of general anaesthesia in detail.
12. How do you assess the airway of patient?

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

13. Adjustable pressure limit valve.
14. Prone positions complications.
15. Ambu bag.
    OR
    Scavenging system.
16. Ethylene oxide.
17. Blood products.
18. Boyles machine safety measures.
19. Video laryngoscopy.
20. Oral Ring Adair Elwin (RAE).
    OR
    LMA
21. Diathermy.
22. Epidural needle.

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Operation Technology Degree Examination – 05-Jun-2024

Time: Three Hours | Max. Marks: 100 Marks

OPERATION THEATRE TECHNOLOGY – ADVANCED – PAPER-III (RS-3)

## Q.P. CODE: 3410

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. Name various orthopedic procedures. Write indications, surgical steps and OT management of Total Knee Replacement.
2. Describe physical preparation and draping of surgical site.
   OR
   Describe ideal position for intubation. Discuss various complications associated with G.A

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

3. Dilatation and curettage – indications, surgical steps and complications.
4. Complications of spinal anaesthesia.
5. Write short note on aorto-femoral bypass grafting.
   OR
   Interposition grafting.
6. Sub-duralhaemotoma.
7. Care of a baby delivered by C-section.
8. Steps in thyroid surgery.
9. Indications and uses of absorbable sutures.
10. Instruments for tonsillectomy.
    OR
    Arthroscopy.
11. I.V canulation in OT.
12. Complications of laparoscopic procedures.

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

13. Name few arthroscopic surgeries.
14. Double lumen tube.
15. List three indications for upper GI endoscopy.
    OR
    Surgeries for cataract.
16. Uses of USG in OT.
17. List three indications for LSCS.
18. Choice of anaesthesia for circumcision in a pediatric case.
19. C-Arm
20. Indications for Craniotomy.
    OR
    Trendelenburg position.
21. Name three head and neck procedures.
22. Cadaver donor in organ transplant.

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Operation theatre Technology Degree Examination – 22-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## Clinical Operation Theatre Technology - PAPER – I (RS2)

Q.P. CODE: 2926

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 moist heat sterilization? Explain the process with examples.
2. What is radiation hazard? What are the precautions you take and how do you prevent it in OT.
3. Discuss in detail position, draping, preparation and management of a patient posted for right inguinal hernioplasty.

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

4. Skin preparation solution.
5. Ultrasonic cleaning.
6. Bipolar cautery.
7. Laser team.
8. OT attire.
9. Gowning.
10. Radiation sterilization.
11. Instruments for abdominal trauma operations.
12. Monitoring in OT.
13. Describe care of operating microscope.
14. Hand scrubbing.
15. Importance of fabrication.

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

16. What is colostomy?
17. ETO sterilization.
18. Name three neuro surgical instruments.
19. Mention three complications of laparoscopic procedures.
20. Haemorrhoidectomy – position and precautions.
21. Advantages of steam sterilization.
22. Various instruments for biopsy.
23. Define decontamination.
24. Mesh repair.
25. Bio-indicators used in sterilization test.
26. Basic design for constructing a surgical suite.
27. What are principles of sterile technology?

# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anaesthesia Technology Degree Examination – 22-Nov-2024

Time: Three Hours Max. Marks: 100

## ANAESTHESIA TECHNOLOGY – CLINICAL – PAPER-I (RS-3)

## Q.P. CODE: 3271

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. List the techniques of intubation. What are the things needed to the kept ready for intubation? What are its complications?
2. Write a detail note on preanaesthetic evaluation
   OR
   How do you grade patient for surgery using ASA – classification? What preop investigations done need for COPD patient for lap cholestectomy?

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

3. Anticholinergics as premedication explain
4. Airway assessment in preoperative period
5. Renal function test
   OR
   CVP monitoring
6. Double lumen endotracheal tubes and its types
7. Hazards of oxygen therapy
8. Techniques to confirm endotracheal tube
9. Adrenaline
10. Dosage, uses and infusion of Dobutamine
    OR
    Narcotis used in anaesthesia. Write a brief note
11. What do you mean by informed consent?
12. Anesthesia machine checklist

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

13. Sites of cannulation. How do you perform difficult cannulation?
14. High pressure system in anaesthesia machine
15. NPO guidelines for adult ad paediatrics
    OR
    Ondensetron dose, action and uses in anaesthesia
16. Protection during anaesthesia
17. Causes of post op tachycardia
18. Atropine
19. Drugs used for hypotension treatment
20. Parts of laryngoscopes
    OR
    Pointing effect
21. Preparation for ET tube removal
22. Aminophyline – dose, uses, importance

# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anaesthesia Technology Degree Examination – 22-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## Clinical Anaesthesia Technology, Paper – I (RS2)

Q.P. CODE: 2932

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 are the preoperative preparation of a patient for various surgeries?
2. Write in detail about monitoring in anaesthetic during intra operative and post operative period.
3. Describe breathing system. Draw a neat labelled diagram of Bain circuit. Mention the advantages and disadvantages of Bain circuit.

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

4. History of anaesthesia.
5. What is central gas supply? Write the advantages.
6. AMBU bag.
7. Protection of patient during positioning.
8. Airway assessment.
9. Urine analysis.
10. Atropine.
11. Premedication drugs.
12. Testing of anaesthesia machine.
13. Vaporizers.
14. Write the parts of laryngoscope. Mention the complications during laryngoscopy.
15. Role of pulse oxymeter in anesthesia.
16. Reversal agents.
17. Parts of a cylinder.

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

18. Consent.
19. Use of Magills forceps.
20. Oxygen Flush.
21. I GEL.
22. Mention the types of endotracheal tube.
23. Technique of cannula insertion.
24. Propofol.
25. Name the drugs which reduces pre operative anxiety.
26. Use of ETCO2 monitoring.
27. NPO.
28. General anaesthesia protocol for a normal healthy person.
29. Sodalime.

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# Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Anaesthesia Technology & Operation Theatre Technology Degree Examination – 22-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## Anaesthesia & OT Technology – Clinical -PAPER-I

## Q.P. CODE: 3393

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. Name different measures used for personal protections. How do you manage a patient with positive hbsAg posted for surgery?
2. What are the principles of sterilization? Explain the technique of surgical scrubbing, gowning and gloving
3. What are the stages of anaesthesia? Explain the complications of general anaesthesia

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

4. Handling of instruments
5. Tracheostomy
6. PCNL
7. Burr hole
8. Liver biopsy
9. Gowning
10. D and C
11. Cystoscopy
12. Burns
13. Cataract
14. Awake intubation
15. Colostomy

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

16. Preoperative Nil per oral guidelines (NPO)
17. Nasal prong
18. Bronchospasm
19. X-ray changes in pneumothorax
20. Intraoperative anaesthesia record
21. Soda lime
22. Post operative pain management
23. Arthroscopic surgeries
24. TURP syndrome
25. Sterilization of anaesthetic equipments
26. Special considerations in paediatric surgery
27. Mammography

# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Operation Theatre Technology Degree Examination - 25-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## APPLIED OPERATION THEATRE TECHNOLOGY
## PAPER - II (RS2)
## Q.P. CODE: 2927

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 monitoring of patient under general anesthesia in detail
2. Indications of blood transfusion. Intraoperative complications and its management
3. Explain endotracheal intubation, indications, procedure, equipment and complications

### SHORT ESSAYS (Answer any Ten) — 10 x 5 = 50 Marks

4. Classify breathing circuits. Explain Bain's circuit and write its advantages
5. Blood loss measurement
6. MRI – merits and demerits
7. Epidural anesthesia
8. Care of anesthetized patients
9. Spinal Anaesthetic adjuvants
10. Classify local anesthetics. Briefly explain Lignocaine
11. Complications of spinal anesthesia
12. Explain Propofol and write uses
13. Maintenance of asepsis in OT
14. Day care surgery
15. Gastroscope

### SHORT ANSWERS (Answer any Ten) — 10 x 3 = 30 Marks

16. C-arms
17. Dobutamine
18. Ketamine
19. Sevoflurane
20. Atracuronium
21. CT scan
22. Mammography
23. Why preoxygeneration is required before induction in anesthesia?
24. Pulse Oxymeter
25. Balanced anesthesia
26. Capnography
27. ABG analyses

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Operation Theatre Technology Advanced Degree Examination – 27-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## OPERATION THEATRE TECHNOLOGY ADVANCED
## PAPER – III (RS2)
## Q.P. CODE: 2928

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 preoperative preparation of a patient for an emergency Vascular surgery
2. Describe radical mastectomy and discuss breast reconstruction surgery
3. Explain various abdominal incisions

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

4. Above knee amputation
5. Transurethral resection of prostate and its complications
6. Explain tonsillectomy and write its post operative complications and managements
7. Vaginal hysterectomy
8. Define Hernia. Explain inguinal herniorrhaphy
9. Intra ocular lens implantation
10. Describe Craniotomy
11. Total hip replacement
12. Indications for thoracotomy in chest injuries
13. Explain spinal anesthesia
14. Lithotomy position
15. Classify Burns. What is rule 9?

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Perianal abscess
17. Gastroscopy
18. Lipoma
19. C-arm
20. Benefits of laparoscopic surgery
21. Ethilon
22. Endoscope sterilization
23. Thiopentone sodium
24. What is bone cement?
25. Safety features in anesthesia machine
26. Atropine sulphate
27. Cystoscopy

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anesthesia Technology Examination – 25-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## APPLIED ANAESTHESIA TECHNOLOGY - PAPER – II (RS-2)

Q.P. CODE: 2933

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. Compare and contrast thiopentone and propofol.
2. Mention the complications of spinal anaesthesia. Explain the management of hypotension and bradycardia during spinal anaesthesia.
3. Recent advanced cardiac life support (ACLS) guidelines for cardiopulmonary resuscitation (CPR).

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

4. Pulseless electrical activity (PEA).
5. What is minimum alveolar concentration (MAC)? Give MAC vales of different inhalational agents.
6. Name five complications you expect in the post-operative period after anaesthesia. Describe the drugs and necessary equipments you need to handle such complications in the recovery room.
7. Compare lignocaine and bupivacaine.
8. Adrenaline.
9. How do you prepare equipments and drugs for administration of spinal and epidural anaesthesia in the operation theatre?
10. Indications, dosage, mechanism of action and uses of Fentanyl.
11. How will you prevent thermal and electrical injuries in the operation theatre in anaesthetized subjects?
12. What are the methods used for performing a nerve block? What are the advantages of using a ultrasound guided nerve block?
13. Non depolarizing muscle relaxants.
14. Isoflurane.
15. Causes of tachycardia under anaesthesia and its management.

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Different types of hypoxias.
17. Indications of tracheostomy.
18. Methods to confirm endotracheal intubation.
19. Morphine.
20. Classify analgesics and give examples.
21. Drugs used in CPR.
22. Local anaesthetic systemic toxicity (LAST).
23. Short note on brachial plexus block.
24. Causes of Hypercapnia.
25. Causes of increased airway pressure.
26. Midazolam.
27. Equipments used in difficult airway.

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Anesthesia Technology Degree Examination – 27-Nov-2024

Time: Three Hours Max. Marks: 100

## ADVANCED ANAESTHESIA TECHNOLOGY (RS-2)

Q.P. CODE: 2934

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. Define chronic renal failure. Enumerate the pathophysiological changes seen in a patient with renal failure. What are the indications for dialysis?
2. What is Ischemic Heart Disease (IHD)? Explain anaesthetic management of a patient with IHD posted for laparotomy
3. Enumerate physiological changes during pregnancy. Describe epidural analgesia for labor pain

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

4. APGAR score
5. Liver function tests
6. Bronchodilators and its use
7. Post Anaesthesia Care Unit (PACU)
8. Causes and management of intra operative hypotension
9. Functional residual capacity
10. Central Venous Pressure (CVP) monitoring
11. Status asthmatics
12. Complications of diabetes mellitus
13. Indications for double lumen tube
14. Complication of blood transfusion
15. Trans urethral resection of prostate syndrome (TURP)

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Heparin
17. Mallampati scoring
18. Uses of pre medications
19. **Hyperkalemia**
20. Obstructive sleep apnea
21. Pulmonary function tests – Name three
22. Midazolam
23. Causes of intra operative hypothermia
24. Fentanyl
25. Capnography
26. **Glasgow coma scale.**
27. Causes of difficult intubation

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# Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Anaesthesia Technology Degree Examination – 25-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## ANAESTHESIA TECHNOLOGY – APPLIED - PAPER-II (RS-3)

Q.P. CODE: 3272

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 in detail about spinal and epidural anaesthesia. Enumerate the advantages of combined spinal epidural anaesthesia

2. Discuss in detail about cardiopulmonary resuscitation. Recent guidelines in basic and advanced cardiac life support
   OR
   Discuss intravenous anaesthetic drugs in detail

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

3. Hyperbaric Bupivacaine
4. Post operative pain management
5. Mallampatti classification of airway
   OR
   Day care anaesthesia
6. Rapid sequence intubation
7. Inotropic agents
8. Ketamine
9. Intro operative fluid management
10. Rocuronium
    OR
    Desflurane
11. Field block
12. Types of spinal needles

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

13. **Opioid Analgesics**
14. Post dural puncture headache
15. Nitrous oxide
    OR
    Soda lime indicators
16. Succinyl choline
17. Stages of ether anaesthesia
18. Nasogastric tube
19. Ankle block
20. Noradrenaline
    OR
    Adrenaline
21. CVP – Central Venous Pressure
22. Management of post operative shivering

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# Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Anaesthesia Technology Degree Examination – 27-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## ANAESTHESIA TECHNOLOGY - ADVANCED – PAPER – III (RS-3)

Q.P. CODE: 3273

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 Neonates resuscitation in detail
2. Discus Anaesthetic management of Morbid obesity. Explain body mass index
   OR
   Discuss anaesthetic management of ischemic heart disease. Explain angina pectoris

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

3. Positioning under anaesthesia
4. Anaphylaxis
5. Double lumen tubes
   OR
   Combi tube
6. Classify arrhythmias and discuss about their management
7. Reversal and extubation problems in open heart surgery
8. Post dual puncture headache
9. Precautions for patients with HIV
10. Paediatric pre-medication
    OR
    Setting up of monitoring system
11. Bronchospasm
12. Air embolism

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

13. Anaesthesia for Bronchoscopy
14. Aortocaval compression
15. Vasodilators
    OR
    Plasma components
16. Acute transfusion reactions
17. Complications of spinal anaesthesia in obstetric patients
18. Intra Cranial Pressure (ICP)
19. Tourniquet effects
20. Ayre's t-piece
    OR
    Precautions during intra hospital transfer of patients
21. Deep Vein Thrombosis (DVT)
22. Systemic Hypertension

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# Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Operation Theatre Technology Degree Examination – 22-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## OPERATION THEATRE TECHNOLOGY – CLINICAL – PAPER-I (RS-3)

## Q.P. CODE: 3408

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. Physical layout of surgical suite, location, preoperative holding area. PACU and supporting services.
2. Potential sources of injury to the caregiver and the patient.
   OR
   Prevention of infection in OT.

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

3. Setting up the instrument table.
4. Layout of CSSD and record keeping.
5. Write in detail about the components of appropriate attire.
   OR
   Steps of manual cleaning.
6. Draw a flow chart of methods of sterilization.
7. Classification of disinfectants.
8. Gowning and gloving.
9. Ultrasonography.
10. Anaesthesia in Breast procedure.
    OR
    Anaesthesia in laser surgeries.
11. Thermal sterilization.
12. Special procedure rooms.

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

13. Name some abdominal surgeries.
14. Name few micro surgeries.
15. Working and features of autoclave.
    OR
    Serum bath.
16. Dry heat.
17. Hot air oven.
18. Electro cautery uses in OT.
19. Hand hygiene.
20. Personal protection equipment (PPE).
    OR
    Body cover.
21. Lubrication.
22. Advantages of CSSD.

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# Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Anaesthesia Technology & Operation Theatre Technology Degree Examination – 25-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## Anaesthesia & OT Technology – Applied -PAPER-II

## Q.P. CODE: 3394

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 preoperative preparations of the patients undergoing MRI procedures – safety considerations, monitoring issues and anaesthetic management
2. Discuss the difficult airway management in detail
3. Explain the monitoring of patient for general anaesthesia

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

4. Emergency intubation
5. Electrocautery
6. Describe the regional blocks techniques
7. Precautions in blood transfusion and complications
8. Blood gas analysis
9. Monitoring the depth of anaesthesia
10. How the informed consent is taken? What are the indications for informed consent?
11. Anaphylaxis
12. Fluid requirement maintenance
13. TURP syndrome
14. IVF procedure
15. Patient controlled analgesia (PCA)

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

16. Complications of local anaesthesia
17. List few interventional procedures
18. Labour analgesia
19. Indications of epidural anaesthesia
20. Postoperative nausea and vomiting (PONV)
21. Assessment of blood loss
22. Criteria for discharge in PACU
23. **Indications of defibrillator.**
24. Care of anaesthetized patient in OTT
25. Management of intraoperative hypotension
26. Capnography
27. Neuroleptanalgesia

## Correction 25.11.2024 Morning

# Q.P Code: 3394

## Read the question No. 23as

## 23. Indications of defibrillator.

# Rajiv Gandhi University of Health Sciences, Karnataka

Third Year B.Sc. Anaesthesia Technology & Operation Theatre Technology Degree Examination – 27-Nov-2024

Time: Three Hours | Max. Marks: 100 Marks

## Anaesthesia & OT Technology – Advanced -PAPER-III

## Q.P. CODE: 3395

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 tracheostomy- Procedure, Indication and complications.**
2. Surgical site infections – classification, diagnosis and management
3. Explain noninvasive and invasive cardiovascular monitoring in detail

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

4. Secondary and tertiary triage of the trauma patient
5. Burns injury
6. Feeding tube placement
7. Hand hygiene
8. ACLS
9. Maintenance requirement of fluids
10. Define Asepsis. Explain the significance of medical and surgical asepsis
11. Types of airway devices
12. Oxygen toxicity
13. Informed consent
14. Ambu bag
15. External disaster management in hospitals

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

16. Supraglottic airways
17. Defibrillator
18. Mention the types of hypoxia
19. Etco2
20. Significance of isolating patients
21. Chest physiotherapy
22. Alarm setting of ventilator
23. Inotropic support
24. Status epilepticus
25. **Indications of ET tube insertion.**
26. Bedsore management
27. Airway suctioning