

UNIVERSITY OF JAMMU

(NAAC ACCREDITED A++ GRADE UNIVERSITY)

Baba Sahib Ambedkar Road, Jammu-180006 (J&K)

Email: academicsectionju14@gmail.com

NOTIFICATION

(25/March/Adp/93)

It is hereby notified for the information of all concerned that the Vice-Chancellor, in anticipation of the approval of the Competent Bodies, has been pleased to authorize the adoption of the revised syllabi of **Bachelor of Science in Anesthesia Technology** (as given in the annexure) for the examinations to be held in the year as indicated below:

| Programme | Year | Title | Course No | Examination to be held in the year |
|----------------------------------|--------|-------------------------------------|-----------|------------------------------------|
| B.Sc Anesthesia Technology | Second | Applied Pathology (Section A) | BAT-202 | 2025, 2026 and 2027 |
| | Third | Anesthesia Technology - Clinical | BAT-301 | 2025, 2026 and 2027 |
| | | Anesthesia Technology - Applied | BAT-302 | 2025, 2026 and 2027 |
| | | Anesthesia Technology - Advanced | BAT-303 | 2025, 2026 and 2027 |

Note: The Syllabi of the courses is available on the University Website:
www.jammuuniversity.ac.in

No. F.Acd/III/25/ 193 09-320

Dated: 26/03/2025

Copy for information & necessary action to:-

1. Principal / Dean Faculty of Medical Science.
2. Sr. P.A to the Controller of Examinations.
3. Dr. Rachna Sabharwal, Coordinator, B.Sc. Paramedical courses, GMC, Jammu.
4. All Members of the Board of Studies in Nursing.
5. Principals of all concerned Colleges.
6. Joint Registrar / Deputy Registrar (Exams Prof./Eval. Prof./ Confidential / Registration)
7. University Website for Uploading of the same in the University website.

DEAN ACADEMIC AFFAIRS

Sumit
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18/03/2025

Annexure

CLASS : B.Sc Anesthesia Technology 2nd Year,
B.Sc Cardiac Care Technology 2nd Year,
B.Sc Respiratory Care Technology 2nd Year,
B.Sc OTT Technology 2nd Year
COURSE TITLE: Section A Applied Pathology
COURSE CODE: BAT202/ BCCT202/BRCT202/BOT/202

APPLIED PATHOLOGY

I. CARDIOVASCULAR SYSTEM

- Atherosclerosis — Definition, risk factors, briefly Pathogenesis & morphology clinical significance and prevention.
- Hypertension — Definition, types and briefly Pathogenesis and effects of Hypertension.
- Pathophysiology of Heart failure.
- Ischaemic heart diseases—Definition, Types, Briefly Pathophysiology, Pathology & complications of various types of I-I-D.
- Pericardial effusion—causes, effects and diagnosis.

II. HAEMATOLOGY

- Anaemia — Definition, morphological types and diagnosis of anaemia.
- Brief concept about Haemolytic anaemia and polycythaemia.
- Leukocyte disorders — Briefly leukaemia, leukocytosis, agranulocytosis etc.
- Bleeding disorders — Definition, classification, causes & effects of important types of bleeding disorders. Briefly various laboratory tests used to diagnose bleeding disorders.

III. RESPIRATORY SYSTEM

- Chronic obstructive airway diseases — Definition and types. Briefly causes, Pathology and complications of each type of COPD.
- Briefly concept about obstructive versus restrictive pulmonary disease.
- Pulmonary congestion and edema
- Pleural effusion — causes, effects and diagnosis.

IV. RENAL SYSTEM

- Clinical manifestations of renal diseases. Briefly causes, mechanism, effects and laboratory diagnosis of AIRF & CRS. Briefly Glomerulonephritis and Pyelonephritis.

PRACTICALS

1. Describe & diagnosis of the following gross specimens.
 - a. Atherosclerosis.
 - b. Myocardial infraction
 - c. Chronic glomerulonephritis.
 2. Interpretation & diagnosis of the following charts.
 - a. Hematology Chart—AML, CIVIL, Hemophilia, neutrophilia, eosinophilia.
 - b. Urine chart — ARF, CRF, Acute glomerulonephritis.
 3. Estimation of Hemoglobin.
 4. Estimation Bleeding & Clotting time.
- ✓ The syllabus of Pathology subject for B.Sc MLT(2nd year) and B.Sc Renal Dialysis(2nd year) shall remain the same as earlier.

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Dept. of Pathology
Govt. Medical College,
BANGALORE.

Annexure

Third Year Annual Examination to be held in the Year 2025,2026,2027
CLASS: B.sc Anaesthesia Technology 3rd Year
COURSE TITLE : Anaesthesia technology- Clinical
COURSE CODE : BAT301
DURATION OF EXAMINATION: 3 Hours

B.Sc. 3rd Year Anaesthesia Technology

Theory: 50 Hrs Practical: 50 Hrs Clinical: 250 Hrs

Paper-I Anaesthesia Technology – Clinical

1. Pre-operative preparation

- History of present & past illness, co-morbidities, fasting
- Physical examination – General & sptemc
- ASA grading
- Airway assessment.

2. Pre-medication before surgery & relevant investigations

3. Investigations relevant before surgery

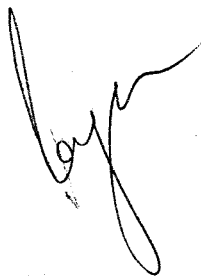
4. Criteria for accepting the case of surgery, written & informed consent.

5. Preparation of OT

- Testing the machine
- Checking laryngoscopes, tubes, airways, suction apparatus, O2 cylinder
- Setting up of anaesthesia drug trolley, difficult airway cart
- Temperature monitoring
- Testing Gas supply, flow meters, valves, breathing circuits, vapourisers, O2 flush
- Care and Checking of Ultrasound machine in OT

6. Emergency drugs

- a. Atropine
- b. Epinephrine
- c. Noradrenaline
- d. Isoprenaline
- e. Ephedrine
- f. Aminophylline
- g. Hydrocortisone
- h. Soda Bicarbonate
- i. Dextrose
- j. Dopamine
- k. Non-epinepheue
- l. Dobutamine
- m. Amiadarone
- n. Calcium Gluconate
- o. Nitroglycerine
- p. Potassium



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DURATION OF EXAMINATION: 3 Hours

- q. B blockings
- r. Esmolol/labetalol
- s. CCBS-Diltiazem

7. Monitoring the patient under Anaesthesia

- Invasive
- Non-invasive

8. Induction, maintenance & Reversal of Anaesthesia

- Intubation, confirming positioning, securing ETT
- Maintenance of anaesthesia
- Fluid/Blood Balance
- Reversal from Anaesthesia

9. I/V infusion a) peripheral b) central venous

- Site of cannulation
- Preparation
- Finding a vein
- Technique

10. Arterial cannulation

- Indications
- Allen's Test
- Procedure
- Care of arterial cannula

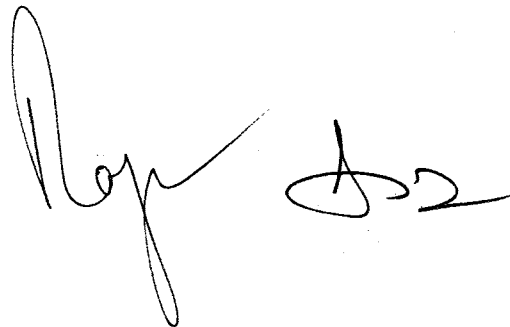
11. Protection of patient under Anaesthesia

- Positioning
- Protection of eyes, ears, skin, lips, tongue
- Veins, peripheral nerves
- Prevention of injury

12. On table complications & management

- Displaced/ blocked tube
- Increase resistance in Bag
- De-saturation
- ETCO2 monitoring
- Anaphylaxis
- Resp arrest in spinal anaesthesia
- Hypo/hypertension
- Tachy/brady arrhythmias
- Seizures

13. Difficult airway management

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DURATION OF EXAMINATION: 3 Hours

- Supra glotic airways
- Oro/Nasopharyngeal airway
- Bougie / stylet
- Fibroptic
- Ambu bag

14. Setting of PACU

- Monitoring in PACU
- Complication expected in PACU & their management
- Shifting from PACU

SCHEME OF EXAMINATION:

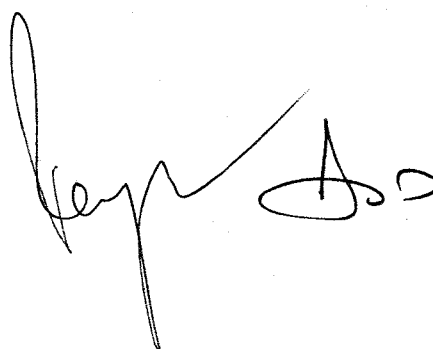
Theory:

There shall be one theory paper of three hours duration carrying 100 marks. Distribution of type of questions and marks for paper-I- Anaesthesia Technology- Clinical shall be given under:

| TYPE OF QUESTIONS | NUMBER OF QUESTIONS | MARKS | SUB TOTAL |
|-------------------|---------------------|--------|-----------|
| LONG ESSAY (LE) | 3 (TO ATTEMPT 2) | 2 X10 | 20 |
| SHORT ESSAY (SE) | 12 (TO ATTEMPT 10) | 10 X 5 | 50 |
| SHORT ANSWER (SA) | 12 (TO ATTEMPT 10) | 10 X 3 | 30 |
| TOTAL MARKS | | | 100 |

Practical Examination:

One common practical for all the three papers with equal weightage of marks i.e. 40 practical marks for each paper.



Third Year Annual Examination to be held in the Year 2025,2026,2027
CLASS: B.sc Anaesthesia Technology 3rd Year
COURSE TITLE : Anaesthesia technology- Applied
COURSE CODE : BAT302
DURATION OF EXAMINATION: 3 Hours

B.S.C. 3RD YEAR ANAESTHESIA TECHNOLOGY

Theory: 50 Hrs Practical: 50 Hrs Clinical: 250 Hrs

B.Sc. 3rd Year Anaesthesia Technology-Applied

Paper-II Anaesthesia Technology – Applied

1. History of Anesthesia maintenance & Reversal
2. Induction of Anaesthesia
3. Stages of Anaesthesia
4. Regional anaesthesia- spinal & epidural, indications, contra-ind, compenalin
5. Peripheral Nerve Blocks
6. Neuro muscular transmission & Nerve stimulation
7. PACU
 - Setting up of PACU
 - Monitoring of PACU
 - Management of complications
8. Anaesthetic drugs
 - Propofol
 - Thipentone
 - Ketamine
 - Muscle relaxants
 - N2O, O2, air inhalational agents
 - Local anaesthetics
 - Narcotic drugs, morphine, fentanyl, pethidine
 - Reversal agents
 - Benzodiazapines
9. Monitoring of patient under anaesthesia TOF, BIS
10. Other drugs –Mitirone, Isoprenaline, Mephenterine
11. CPR
12. Difficult airway
13. Complications during Anaesthesia
 - I. **Related to equipment**
 - Hypoxemia
 - Hypercapnea
 - Increased airway pressures
 - Decreased airway pressures
 - Deep anaesthesia
 - Thermal & electrical injuries
 - Monitoring instruments
 - Presenting anesthesia equipment complications



Third Year Annual Examination to be held in the Year 2025,2026,2027
CLASS: B.sc Anaesthesia Technology 3rd Year
COURSE TITLE : Anaesthesia technology- Applied
COURSE CODE : BAT302
DURATION OF EXAMINATION: 3 Hours

- a. Being prepared with back up ventilation
 - b. Pre-use checkup
 - c. Maintenance
 - d. User education
- II. **Related to Airway**
- Difficult intubations
 - Airway trauma.
14. Basic Life Support
15. Sensitization of Hospital Codes

SCHEME OF EXAMINATION:

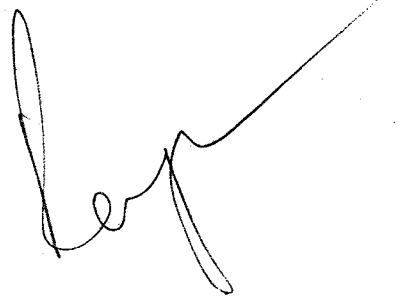
Theory:

There shall be one theory paper of three hours duration carrying 100 marks. Distribution of type of questions and marks for paper-II- Anaesthesia Technology- Applied shall be given under:

| TYPE OF QUESTIONS | NUMBER OF QUESTIONS | MARKS | SUB TOTAL |
|-------------------|---------------------|--------|-----------|
| LONG ESSAY (LE) | 3 (TO ATTEMPT 2) | 2 X10 | 20 |
| SHORT ESSAY (SE) | 12 (TO ATTEMPT 10) | 10 X 5 | 50 |
| SHORT ANSWER (SA) | 12 (TO ATTEMPT 10) | 10 X 3 | 30 |
| TOTAL MARKS | | | 100 |

Practical Examination:

One common practical for all the three papers with equal weightage of marks i.e. 40 practical marks for each paper.



Third Year Annual Examination to be held in the Year 2025,2026,2027
CLASS: B.sc Anaesthesia Technology 3rd Year
COURSE TITLE : Anaesthesia technology- Advanced
COURSE CODE : BAT303
DURATION OF EXAMINATION: 3 Hours

B.SC. 3RD YEAR ANAESTHESIA TECHNOLOGY

Theory: 50 Hrs Practical: 50 Hrs Clinical: 250 Hrs

Paper-III Anaesthesia Technology – Advanced

A. Anaesthesia & co-existing disease

1. Hypertension
2. IHD
3. Congestive heart failure
4. Arrhythmias & Heart Blocks
5. Preparations for cardiac surgery & monitoring
6. Use of Heparin & other anti-coagulants
7. Anaesthesia for open heart
8. Care of arterial & venous lines
9. Maintenance of Body temperature
10. Shock, low cardiac output & cardiac arrest

B. Respiratory

- Physiology of breathing, ventilation
- PFTS & lung mechanics
- COPD & chronic Bronchitis
- Bronchial asthma
- Anaesthesia for patients with Respiratory disorder
- ABG
- URTI & Surgery
- Humidification & Aerosol Therapy
- Ventilators & methods of ventilation

C. Thoracic surgery

- Types and uses of double lumen tubes
- Anaesthesia for bronchoscopy
- Thymectomy

D. Liver

- Hepatic physiology
- LFTS
- Effect of Anaesthesia on Hepatic function
- Jaundice
- Cyanosis
- Anaesthesia for patients with chronic liver disease

E. Renal

- RFT
- AKI

Third Year Annual Examination to be held in the Year 2025,2026,2027
CLASS: B.sc Anaesthesia Technology 3rd Year
COURSE TITLE : Anaesthesia technology- Advanced
COURSE CODE : BAT303
DURATION OF EXAMINATION: 3 Hours

- CKD
- Anaesthesia for patients with kidney disease
- Dialysis

F. Endocrinology

- Diabetes mellitus & anaesthesia
- Thyroid disease & anaesthesia
- Obesity & anaesthesia
- Pheochromocycloma and anaesthesia

G. Obstetric Anaesthesia

- Drug safety in pregnancy
- Epidural analgesia
- Anaesthesia for LSCS
- Special situations
- Pre-eclampsia PIH
- Abrupt placentae
- Anaesthesia for DNC/Polypectomy

H. Paediatric Anaesthesia

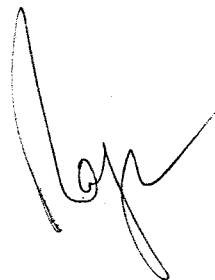
- Neonatal resuscitation
- Airway anatomy, difference from adults management in Paediatric patients
- Induction, maintenance & recovery
- Apgar score
- Drugs dosage fluids, blood management in paediatric patients
- Temperature control in Paediatric patients especially Neonates
- Anaesthesia for a child with URTI
- Special situations – surgery for meningocoele
 - Surgery for Tonsillitis
 - Surgery for cleft lip & palate

I. Neuro

- ICP
- Anaesthesia for Neurosurgery
- Anaesthesia for Head trauma
- Various positions in Neurosurgery & their complications

J. NORA

- Anaesthesia for MRI, Endoscopy.



Third Year Annual Examination to be held in the Year 2025,2026,2027
CLASS: B.sc Anaesthesia Technology 3rd Year
COURSE TITLE : Anaesthesia technology- Advanced
COURSE CODE : BAT303
DURATION OF EXAMINATION: 3 Hours

SCHEME OF EXAMINATION:

Theory:

There shall be one theory paper of three hours duration carrying 100 marks. Distribution of type of questions and marks for paper-III- Anaesthesia Technology- Advanced shall be given under:

| TYPE OF QUESTIONS | NUMBER OF QUESTIONS | MARKS | SUB TOTAL |
|-------------------|---------------------|--------|-----------|
| LONG ESSAY (LE) | 3 (TO ATTEMPT 2) | 2 X10 | 20 |
| SHORT ESSAY (SE) | 12 (TO ATTEMPT 10) | 10 X 5 | 50 |
| SHORT ANSWER (SA) | 12 (TO ATTEMPT 10) | 10 X 3 | 30 |
| TOTAL MARKS | | | 100 |

Practical Examination:

One common practical for all the three papers with equal weightage of marks i.e. 40 practical marks for each paper.

