Odisha University of Health Sciences
Dhanwantari Bhavan, Bhubaneswar, Odisha

LOG BOOK
For
POST GRADUATE STUDENTS

Department of: ANESTHESIOLOGY

Name of the Institution: _____

Prepared by:
Log book Committee (Broad Specialties) 2023
OUHS, Bhubaneswar

ODISHA UNIVERSITY OF HEALTH SCIENCES, DHANWANTARI BHAVAN, BHUBANESWAR.

LOG BOOK
for
POST GRADUATE STUDENTS

Department of: ANESTHESIOLOGY

Name of the Institution: _____

INDEX

CERTIFICATE

This is to certify that, this logbook contains bonafide work of **Dr.** _____, a Post-Graduate student of the Department of **ANESTHESIOLOGY**, of _____, Odisha for the session _____.

Date:

Post Graduate Guide **Head of the Department**

Dean & Principal

GENERAL INSTRUCTIONS:

This log book is intended to be a record of all the activities of Postgraduate students, as they perform and participate in the course, including training.

1. It shall solely be the responsibility of the student to ensure that, the desired entries are made in day-to-day basis and relevant documents if any are kept.
2. It shall be the responsibility of the HOD to ensure that, all students maintain their log books in an orderly manner.
3. Each student shall enter his/her leave record in the concerned section immediately after returning from leave.
4. The learners feedback form should be filled up before submitting the log book for the University Examination. It is expected that, students should give their feedback with all seriousness and help the University in improving and strengthening the Postgraduate education.
5. Submission of Logbook: The up-to-date log book is a pre-requisite for fill up of forms for the University Examination and hence the completed Logbook shall be submitted to the department when the same is asked for.
6. INSTRUCTIONS FOR FILLING THE LOG BOOK:

Please Note: All assessments would be in Likert's5-pointscale/score:	
Score	**Interpretation**
0	Poor
1	Below average
2	Average
3	Good
4	Very good

   a. All entries should be properly entered and duly signed from the Supervisor / Unit In charges / Guide / HOD, as required.
   b. Under Instructions from the Head of Department, suitable corrections can be incorporated.
   c. Research participation pertaining to Conferences, Poster / Oral presentation and publication shall be entered directly in a Consolidated form.
   d. At the end of training, it's mandatory to fill up the feedback form and submit it to Postgraduate Office.
   e. It is an integral part of practical evaluation in the University examination.
   f. After the practical examination it shall be returned back to the student.
   g. There would be periodic evaluation regarding maintenance of log book by Postgraduate education office, and in case of any deficiency, the student would be responsible and suitable action may be taken against them for the same.
   h. Additional pages [if required] can be added.

PERSONAL PROFILE OF THE STUDENT:

Name:		**Paste your PP size Photograph**
Address:		
E-mail ID:		
Phone No.:		
DOB (dd/mm/yy):		
Blood group:		
Vaccination status:		

Registration Number:	**Name of the Medical Council:**	**Valid up to:**

OUHS Registration Number:	

Qualification Details	**College**	**University**	**Month & Year of completion**
MBBS			

Experience before joining:

Designation	**Department**	**Institution**	**From**	**To**

Date: **Signature of the PG student**

COURSE DETAILS:

Degree / Diploma			
Date of Joining		Date of completion	

Details of Postings [as per Curriculum by NMC]:

Unit / Specialty / Section	Year of PGT	From	To	Duration

Participation in Research Methodology training:

Name of the Institution	From	To	Signature of the Guide / HOD

Participation in BCBR Course

Name of the institute	Date of registration	Date the examination	Date of publication of result	Signature of the HOD

Participation in BCME training:

Name of the Institution	From	To	Signature of the HOD

Participation in BCLS / ACLS training:

Name of the Institution	From	To	Signature of the HOD

Leave record:

Sl. No.	From	To	Reason:	Signature of the Unit Head
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Total No. of Leaves				

Signature & Seal of the Head of Department

DETAILS OF PARTICIPATION IN ACADEMIC PROGRAMS:						
Sl. No.	**Date**	**Name of the Academic Program**	**International / National / State / Institutional Event**	**Organized by**	**Nature of participation [Delegate / Presentation if any]**	**Initials of the HOD**
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PUBLICATIONs	
Title:	
Authors:	
Name of the journal:	
Indexed in [NMC approved agency only]:	
Status of publication:	
Citation if published:	
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Authors:	
Name of the journal:	
Indexed in [NMC approved agency only]:	
Status of publication:	
Citation if published:	
Title:	
Authors:	
Name of the journal:	
Indexed in [NMC approved agency only]:	
Status of publication:	
Citation if published:	

Internal Assessment Results:

Year		Theory [100]	Practical/Clinical/ Oral [100]	Total out of 200 [%]
1ST	I			
	II			
	III			
2ND	I			
	II			
	III			
3RD	I			
	Prelims			

Date:

Signature & Seal of the Head of Department

DETAILS OF THE DRP SCHEDULE [AS PER CURRICULUM BY NMC]:

Name of the Institution	Year of PGT	From	To	Duration

Sl. No.	Day / Date	Place of work	Nature of work	Activity learn [Should include: 1. Patient care / Diagnostic services as per the subject. 2. Health care Management activities both HR & Logistics, Communication skill. 3. Team work	Level of participation [Observation / Performs under observation / Performs independently]	Signature of the DRPC
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REFLECTIONS

CERTIFICATE OF COMPLETION OF DISTRICT RESIDENCY PROGRAM

It is certified that Dr. _____has satisfactorily completed the District Residency program w.e.f. _____to _____. During his/her District Residency Program training at _____ District, his / her performance has been reported to be _____.

Department:
Date:
Place:

Signature of Guide / Mentor **Signature of Head of Department**

Signature of the District Residency Program Coordinator

Signature of the Medical Superintendent

Signature of the CDM PHO

STRUCTURED TRAINING PROGRAM:

Teaching learning methods:

1. Lectures:
2. Student Seminar [Topic]:
3. Journal club:
4. Bedside clinic/Group discussion/Academic grand rounds:
5. Interdepartmental colloquium.
6. Student symposium.
7. Rotational clinical / community / institutional postings:
   The post graduate student should be exposed to the following areas of clinical anaesthesia practice: 1. Pre-anaesthesia clinic 2. Pain clinic 3. Recovery and Post anaesthesia Care Unit (PACU) 4. Intensive Care Units 5. Dialysis and transplant 6. All specialty theatres 7. Peripheral areas: Radiology, MRI, ECT and other interventional laboratories.

Sl. No.	Operation theater postings	Duration in months
1	General surgery	6
2	Urology	1
3	Ophthalmology	1
4	Otorhinology	2
5	Dental	1
6	Orthopedics/Trauma/Casulaty	3
7	Gynecology	3
8	Obstetrics	3
9	Pediatric surgery	2
10	Burns/Plastic surgery	1
11	CTVS	2
12	Neurosurgery	2
12	ICU	4
13	Pain	1
14	Recovery	1
15	Organ transplant, Radiotherapy, Radiology, ECT, Cardiac cath	3
	Total	**36**

8. UG Teaching:

Evaluation of STUDENTS SEMINAR PRESENTATION:	
Guidelines for evaluation of Seminar Presentation	
SI. No.	**Points to be considered**
1	Whether other relevant publications consulted
2	Whether cross references have been consulted
3	Completeness of preparation
4	Clarity of Presentation
5	Understanding of subject
6	Ability to answer questions
Corollary Grading in all checklists: Poor-0, Satisfactory-1, Average-2, Good-3, Very Good-4.	

SI. No.	Date	Seminar Topic	Presented / Participated	Average Grade*	Name of the Moderator	Initials of the Moderator
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Evaluation of JOURNAL REVIEW PRESENTATION:	
Guidelines for evaluation of Journal Review Presentation	
SI. No.	**Points to be considered**
1	Article chosen is relevant and appropriate
2	Extent of understanding of scope & objectives of the paper by the candidate
3	Whether understood the Material, Methods, Observation and statistical analysis
4	Whether cross references have been consulted
5	Ability to respond to questions on the paper / subject
6	Ability to analyse the paper and co-relate with the existing knowledge
7	Ability to defend the paper
8	Clarity of presentation
Corollary Grading in all checklists: Poor-0, Satisfactory-1, Average-2, Good-3, Very Good-4.	

SI. No.	**Date**	**Journal Topic**	**Presented / Participated**	**Average Grade***	**Name of the Moderator**	**Initials of the Moderator**
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Evaluation of BEDSIDE CLINIC/GROUP DISCUSSION/ACADEMIC GRAND ROUNDS:	
Guidelines for evaluation	
SI. No.	**Points to be considered**
1	Clarity of Presentation
2	Completeness of history
3	Ability to arrive at a differential diagnosis & diagnosis
4	Ability to defend the diagnosis
5	Ability to answer questions
6	Understanding of subject
Corollary Grading in all checklists: Poor-0, Satisfactory-1, Average-2, Good-3, Very Good-4.	

SI. No.	Date	Topic	Presented / Participated	Average Grade*	Name of the Moderator	Initials of the Moderator
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Evaluation of STUDENTS SYMPOSIUM:	
Guidelines for evaluation of Students symposium	
SI. No.	**Points to be considered**
1	Whether other relevant publications consulted
2	Whether cross references have been consulted
3	Completeness of preparation
4	Clarity of Presentation
5	Understanding of subject
6	Ability to answer questions
Corollary Grading in all checklists: Poor-0, Satisfactory-1, Average-2, Good-3, Very Good-4.	

SI. No.	Date	Topic	Presented / Participated	Average Grade*	Name of the Moderator	Initials of the Moderator
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Evaluation of INTERDEPARTMENTAL COLLOQUIUM [CCR / CPC / Autopsy conference:	
Guidelines for evaluation:	
SI. No.	**Points to be considered**
1	Completeness of history
2	Clarity of presentation
3	Logical order
4	Accuracy of general physical examination
5	Diagnosis
6	Ability to defend diagnosis
7	Ability to justify differential diagnosis
8	Ability to plan management of the case
Corollary Grading in all checklists: Poor-0, Satisfactory-1, Average-2, Good-3, Very Good-4.	

SI. No.	Date	Case History	Diagnosis	Presentation / Participation	Initial of the Guide / HOD
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Evaluation of UG Teaching Skills:	
Guidelines for evaluation of UG Teaching skills:	
SI. No.	**Points to be considered**
1	Communication of the purpose of the talk
2	Evokes the interest of audience in the subject
3	Introduction & Sequence of ideas
4	Speaking style [enjoyable / monotonous etc., specify]
5	Attempts audience participation
6	Answer the questions asked by the audience
7	Summary of the main points at the end
8	Rapport of speaker with his audience
9	Effectiveness of the talk
10	Use of AV aids appropriately
Corollary Grading in all checklists: Poor-0, Satisfactory-1, Average-2, Good-3, Very Good-4.	

SI. No.	**Date**	**Topic of teaching**	**Class / Practical / Clincs / Demos**	**Average Grade***	**Name of the Supervising faculty**	**Initials of Guide/ Faculty**
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THESIS

(To be submitted for registration of the Thesis topic within six months from the date of joining the course.)

Title of the Topic:

Name of the Guide:

Name of the Co-guide(s) if any:

Guidelines for evaluation of Thesis [Synopsis]	
Sl. No.	**Points to be considered**
1	Interest shown in selecting a topic
2	Appropriate review of literature
3	Discussion with guide and other faculty
4	Quality of protocol
5	Preparation of proforma
Corollary Grading in all checklists: Poor-0, Satisfactory-1, Average-2, Good-3, Very Good-4.	

Evaluation of Thesis [Synopsis]:

Sl. No.	**Date**	**Average Grade***	**Name of the Faculty & Designation**	**Initials of the Faculty**

Signature of the Candidate: **Signature of the Guide** **Signature of the HoD:**

THESIS WORK

(To be filled before submitting the dissertation to the University & retained in this book)

Name of the Topic:

Name of the Guide(s):

Date of Registration of Thesis Topic:

Date of approval of the Thesis:

Date of Submission of Thesis:

PERIODIC EVALUATION OF THESIS WORK

Guidelines for periodic evaluation of Thesis	
Sl. No.	**Points to be considered**
1	Periodic consultation with guide / co-guide
2	Regular collection of case material
3	Discussion with guide / co-guide
4	Departmental presentation of progress of work
5	Assessment of final output
6	Others
Corollary Grading in all checklists: Poor-0, Satisfactory-1, Average-2, Good-3, Very Good-4.	

Evaluation of Thesis:

Date of the review	Average Grade*	Name of the members of the review committee	Initials of the Guide
12th month			
18th month			
24th month			
30th month			

Signature of the Candidate: **Signature of the Guide** **Signature of the HoD:**

COMPETENCIES TO BE LEARNT:

At the end of the course, the student should acquire skills in the following broad areas and be able to:

1. Demonstrate ability as a perioperative physician, in terms of
2. Acquiring mastery in careful and relevant history taking, physical examination in clinical evaluation of the patient preoperatively.
3. Collecting and synthesizing preoperative data from parent hospital and other sources and to develop a rational strategy for the peri-operative care of the patient.
4. Thorough and systematic approach to preoperative evaluation of patients with and without systemic diseases, undergoing different types of operations.
5. Prioritizing problems, present cases clearly and systematically to attending consultants.
6. Developing working relationships with consultants in other specialties to assist in preoperative evaluation and get a good consultation.
7. Interacting with preoperative patients and developing effective counseling techniques for different anaesthetic techniques and peri-operative procedures. ϖ Assessing and explaining risk of procedure and taking informed consent.
8. Managing information in preoperative evaluation and outcome enhancement and communication skill to patients and relatives.
9. Ability to choose and order the required investigations to be done in a particular patient peri operatively.
10. Demonstrate ability in performing Pre-operative equipment check, selection of drugs, Preparation of work table etc.
11. Identify conditions like difficult airway by following difficult airway algorithms.
12. Demonstrate ability to establish topical airway anaesthesia for awake intubation
13. Demonstrate management of a Failed intubation drill on a Mannequin according to latest guidelines
14. Demonstrate ability to monitor and assess depth of anaesthesia
15. Demonstrate abilities to manage body fluid composition; volume status; replacement of fluid and blood loss; use of whole blood and blood components.
16. Demonstrate abilities to manage Electrolyte and acid base derangements; osmolarity and osmolality.
17. Demonstrate acquisition of skills to initiate mechanical ventilation; select appropriate type and mode of ventilator; and monitor proper functioning of ventilator.
18. Identify the need to perform intra-operative laboratory tests, blood gases, coagulation profile and interpret the results with clinical co relation
19. Demonstrate ability to manage co-morbid conditions and anaesthesia
20. Demonstrate ability to perform cannulation of arteries, central and peripheral veins.
21. Demonstrate ability in using and interpreting the following routine non-invasive and invasive monitors intra-operatively:
    a. Electrocardiogram with ST-segment analysis
    b. Noninvasive blood pressure
    c. Capnograph: values and changes in values and waveform.
    d. Pulse oximetry: values and changes in values
    e. Neuromuscular blockade monitor
    f. Invasive arterial pressure: waveform and changes in the waveform
    g. Central venous pressure: values and waveform
    h. Pulmonary artery pressure: Values and waveforms, pulmonary capillary wedge tracing.
        i. Cardiac output
        ii. Mixed venous oxygen saturation

iii. Evoked potential
iv. Transesophageal echocardiography: basic understanding

22. Demonstrate skills in providing basic life support, advanced cardiac life support, trauma life support and paediatric-neonatal life support, train medical and paramedical staff in BLS and ALS.
23. Demonstrate mastery in common procedures like vascular access, use of latest invasive and non-invasive monitoring equipment, lumber puncture, management of appropriate mechanical ventilation and total care of Intensive Care Patient.
24. Demonstrate ability to administer general anaesthesia and regional anaesthesia for ASA I to V, under supervision.
25. Demonstrate ability to give extradural block (EDB) lumbar and thoracic, Spinal Block, and Peripheral Nerve Blocks under supervision.
26. Demonstrate ability to use ultrasound machine for giving blocks and venous cannulation.
27. Demonstrate ability to plan and administer anaesthesia to all emergency patients under supervision including patients for Cardiac, Neurosurgery, Pediatric surgery,
28. and for all major surgeries, able to manage critically ill patients and treat intractable pain.
29. Demonstrate following abilities in Emergency Anaesthesia, Trauma and Resuscitation:
    a. Organize resources in case of mass casualty.
    b. Perform triage.
    c. Assess, transport and manage mass casualties / disaster management and camp anaesthesia.
    d. Manage massive haemorrhage and massive blood transfusion.
    e. Transport critically ill patient.
    f. Perform anaesthetic management of geriatric patients with fracture neck of femur
    g. Manage severe burns patients, rapidly progressing spinal compression, massive haemoptysis and lobectomy, peritonitis from various suspected causes, preparation and management of bowel obstruction, septicaemic shock, acute upper airway obstruction such as foreign body, epiglottitis, infections, cardiac tamponade from examples post cardiac surgery, malignant pericardial effusion, peri-operative management of rupture aneurysm of abdominal aorta
    h. Basic Cardiac Life Support and Advanced Cardiac Life Support, Basic Trauma Life Support, Advanced Trauma Life Support, and Cerebral preservation.
    i. Management of intra-operative cardiac arrest
    j. Management of intra-operative bronchospasm
30. Demonstrate ability to document a Medico-legal aspect.
31. Demonstrate ability to provide special sedation /anaesthesia requirements outside operating Room, eg Radiology: for CT, MRI (especially in relation to dye allergy and embolization, Oncho radiotherapy, Electroconvulsive shock therapy (modified ECT. Non-invasive cardio-radiologic procedures including balloon angioplasty and cardiac catheterization, Non-invasive neuro-radiologic procedures, lithotripsy etc .
32. Demonstrate ability to analyze data and write a thesis, present scientific data, participate in anaesthesia audit.
33. Demonstrate ability to critically review and acquire relevant knowledge from the journals about the new development in the specialty
34. Demonstrate following abilities in the Post Anaesthesia Care Unit (PACU)
    a. Assess the patient's recovery and condition for a safe discharge or transfer.
    b. Observe, recognize and treat the commonly occurring problems likely to arise in the Post-anaesthsia Care Unit (PACU) especially those in relation to cardio-respiratory systems:

i. Airway integrity and compromise.
ii. Arrhythmia
iii. Hypertension
iv. Hypotension
v. Pain prevention and pain relief
vi. Nausea and vomiting
vii. Decreased urine output
viii. Emergence delirium
ix. Delayed emergence from anaesthesia
x. Shivering
xi. Post-obstructive pulmonary edema.

c. Assess patient recovery and the parameters for transfer from the PACU to the ward, ICU, home.
d. Score the patient's condition according to the Aldrete system, including fast tracking after out-patient surgery.

35. Demonstration of following abilities in Intensive Care Unit
    a. Understanding the spectrum of critical illnesses requiring admission to ICU.
    b. Recognizing the critically ill patient who needs intensive care -Trauma, burns, all types of shock, Sepsis, SIRS and ARDS, Poisoning, infectious patient (HIV, Hepatitis) and patients with metabolic disturbances.
    c. Monitoring progress of patients by physiological scoring systems
    d. Practicing infection control practices and control of nosocomial infections.
    e. Inserting central venous lines, arterial lines using ultrasound and interpreting the data.
    f. Managing cardiovascular instability, respiratory failure and postoperative pulmonary complications
    g. Understanding of the operation of mechanical ventilators including different ventilatory modalities non-invasive ventilation, complications and modes of weaning.
    h. Principles and application of Oxygen Therapy
    i. Glycemic control in the critically ill patient
    j. Practice of Hypothermia and prevention of cerebral injury after cardiac arrest
    k. Delivering appropriate nutritional support - enteral and parenteral.
    l. Proper use of sedative/hypnotic drugs in the ICU.
    m. Practicing ethical and legal aspects of critical care
    n. Good communication skills with patient and relatives.
    o. Proper Sterilization of ICU equipment.
36. Demonstration of following abilities in Acute and Chronic Pain Management
    a. Assessment of patients with pain including: history taking, physical examination, and interpretation of investigations.
    b. Classify types of pain - acute chronic, traumatic, cancer pain, etc. with the knowledge of Pain pathways in detail.
    c. Practice the different modalities of physical therapy that may relieve both acute and chronic pain
    d. Practice the acute pain, cancer pain guidelines and WHO treatment ladder.
    e. Practice routes of administration and risk/benefits of drugs used for acute and chronic pain relief, patient controlled analgesia and treat the common pain syndromes.
    f. Demonstrate practice of pain management in patients with problem drug use, drug dependency and addiction and identify the parameters for referral to a pain medicine specialist.

37. Demonstrate Organization of acute pain service and role of acute pain nurse for pain assessment in various groups of patients, Physiological changes secondary to Pain, practice different modalities of pain control. Pharmacology and side effects of opioid analgesia and non-opioid analgesia, principle of patient-controlled analgesia and assessment of its efficacy, Pharmacology and side effects of epidural/intra-thecal opioid. Neurological assessment of epidural blockade and management of failed block. Management of regional blockade – brachial plexus, para-vertebral and intra-pleural block. Management of epidural abscess. Substance abuse and acute pain control. Pain control in concurrent medical diseases – COAD, IHD, bleeding tendency, geriatric. Pain control in burns patients. Pain control in trauma patients included multiple rib fracture
38. Demonstration of abilities to manage Chronic Pain
    a. Practice different modalities of chronic pain management - physical therapy, psychotherapy, (including cognitive behavioural approaches), neuroablation, neuro-augmentation, spinal opioid, interventional neuro-blockade, non-opioid analgesia.
    b. Anatomy, indication, technique and complication of chemical sympathectomy (lumbar sympathectomy, stellate ganglion block, celiac plexus block).
    c. Practice principles of management of cancer pain, principle of management of non-cancer neuropathic pain - phantom limb pain, post-herpetic neuralgia, complex regional pain syndrome, trigeminal neuralgia. Principle of management of non-cancer nociceptive pain - myofascial pain, lower back pain, intractable angina, burns, chronic pancreatitis, PVD.
    d. Practice Epidural steroid injection (all levels) and long-term epidural catheterization.
    e. Observe and practice following blocks: Infra-orbital nerve, Intercostal nerve
    f. Recognize complications associated with each blocks and know appropriate treatment of each
    g. Know the indications for stimulation techniques such as transcutaneous electrical nerve stimulation (TENS), dorsal column stimulation, and deep brain stimulation.
    h. Mechanisms and side effects of other therapies used for treating pain.
    i. The principles of pain management in special patient groups including the elderly, children, disabled, intellectually handicapped and those unable to communicate.
    j. Awareness of the principles for insertion and management of implantable drug delivery pumps.
    k. Awareness of the basic principles of palliative care.
39. Demonstrate practice of Regional Anaesthesia
    a. Applying general principles of pharmacology of local anaesthetics and various adjuvants.
    b. Familiarizing with the relevant anatomy for regional techniques.
    c. Application of indications and contraindications to regional anesthetic technique including central neuraxial blocks, peripheral nerve blocks and sympathetic nerve blocks.
    d. Assessing adequacy of regional anaesthesia, and learn techniques of supplementation of inadequate blocks.
    e. Providing effective anxiolytics and sedation of patients by both pharmacologic and interpersonal technique.
    f. Performing the following regional anaesthesia techniques:
    g. o Brachial plexus, cervical plexus, stellate ganglion block, lumbar plexus, lumbar sympathetic, Sciatic nerve block, Femoral nerve block, 3 in 1 block, Wrist block, Popliteal Nerve block, Trigeminal nerve block, Retro bulbar blocks, Paravertebral blocks, Intercostal blocks, Caudal block – adult and pediatric, Ankle block, Epidural

block/Catheter, Subarachnoid block, Bier's block, All peripheral nerves of the upper and lower limbs.

40. Demonstrate practice of Thoracic Anaesthesia
    a. Pre-operative assessment of patients undergoing Thoracotomy (lung resection), thoracoscopy, video assisted thoracoscopy and mediastinoscopy ϖ Various approaches and their relevant equipments for lung isolation.
    b. Various double lumen tubes and their placement.
    c. Application of Principle of chest drain.
    d. Respiratory Physiology and management of one lung ventilation (OLV).
    e. Indications, contraindications and hazards of OLV.
    f. Application of the knowledge of Anatomy of lung and broncho-pulmonary segments.
    g. Anatomy and techniques for intercostals nerve block and thoracic epidural.
    h. Management of thoracic epidural anaesthesia and analgesia ϖ Anatomy, techniques and placement of paravertebral block/catheter.
    i. Post-operative care of patients after lung surgery.
    j. Peri-operative management of patients with myasthenia gravis.
    k. Peri-operative management of patients with mediastinal mass.
    l. Anaesthetic management of mediastinoscopy, major airway stenting.
    m. Lung volume reduction surgery and problems.
41. Demonstrate practice of Cardiovascular Anaesthesia:
    a. Application of the knowledge of Anatomy and physiology of valvular disease, coronary arteries and their territories. Pulmonary circulation, coronary circulation, cerebral circulation, visceral circulation.
    b. Application of the knowledge of Distribution of blood volume to different organs and systems and their control. Microcirculation. Venous system, venous pressure, its influence on various functions.
    c. Regulation of blood pressure, hypotensive anaesthesia.
    d. Anatomy and physiology of all operable congenital heart disease like ASD, VSD, PDA, TOF, transposition of great vessels.
    e. Application of the knowledge of anatomy and physiology of vascular heart disease like co-arctation of aorta.
    f. Assessment of cardiac patient with ischaemic heart, valvular heart disease and other diseases listed above. Understanding of cardiac catheterization, echocardiography, stress testing, and radio-nucleide imaging.
    g. Application of Principle and complication of cardiopulmonary bypass
    h. Application of Principle of trans-esophageal echocardiography ϖ Application of Principle of circulatory support: inotropes, IABP, pacing ϖ Coagulation and management of coagulopathy.
    i. Off pump bypass
    j. Intra-operative management of aortic surgery and major peripheral vascular surgery, aneurysm grafts, recanalisation procedures.
    k. Understanding of the adult patient with congenital heart disease and their management during anaesthesia.
    l. Postoperative cardiac critical care, including cardiovascular problems, analgesia.
    m. Insertion of invasive monitoring for arterial monitoring, central venous pressure monitoring, pulmonary artery catheter insertion and interpretation.
    n. Robotic cardiac surgery.
42. Demonstrate practice of Paediatric Anaesthesia
    a. Application of knowledge of Anatomical changes in paediatric patient and neonates.

b. Application of knowledge of Physiology and pharmacology in paediatric
c. patient.
d. Guideline for pre-operative fasting in children and pre-medication.
e. Anaesthetic equipment: laryngoscopes, airways, endotracheal tubes, LMAs, PLMA and breathing circuit for children.
f. Anaesthesia management for premature and newborn.
g. Emotional problems for parent and child and principles of premedication. Consent by parents and their presence during induction. To become skilled in communicating with children, parents and other relatives.
h. Problems of transporting a sick pediatric patient from the ward to the operating room and back with regard to temperature maintenance, cardiovascular stability, ventilation and oxygenation.
i. Estimate preoperatively blood volume, hourly fluid requirements, fluid deficit, third space loss, acceptable blood loss and apply principles of fluid and blood replacement in the perioperative period.
j. Induce and maintain anaesthesia by inhalation, intravenous, intramuscular and rectal routes and monitor pediatric patients.
k. Understand the benefits, risks and techniques of regional anaesthesia in children. Anatomy and techniques of caudal, dorsal penile and inguinal regional block, spinal and epidural block
l. Learn to recognize and treat post anaesthesia complications like apnea, laryngospasm, acid-base and electrolyte disturbances, febrile and convulsing child and bleeding child.
m. Common problems related to common congenital syndromes presenting for surgery. Anaesthetic management of a child with concurrent disease – Down's, Pierre Robin syndrome, von Willebrand's disease, Goldenhar's, Sturge-Weber, Tracher-Colin, Prune-Belly, and cyanotic and non-cyanotic congenital heart disease.
n. Paediatric resuscitation: drugs, doses and defibrillation of children of all ages, from the very premature neonates to those children with complex coexisting disease.
o. Management of patients requiring paediatric intensive care, ventilatory management, and support of circulation.
p. Resuscitation of neonates and children of all ages. A period of one to two months in a PICU is recommended for all post graduate students undergoing advanced training in paediatric anaesthesia.
q. Paediatric pain management
r. Assessment of a child with URTI, with a heart murmur.
s. Management of fluid and electrolytes in children.
t. Anaesthetic management of a malignant hyperthermia susceptible child.
u. Anaesthetic management of FB bronchus, oesophagus, Wilm's tumour, congenital diaphragmatic hernia, tracheo-oesophagus fistula, thoracotomy.
v. Anaesthesia for Fetal Surgery.
w. Sedation techniques including the selection, management and monitoring of children for diagnostic and therapeutic procedures, with particular attention to working in areas outside the theatre suite.

43. Demonstrate practice of Transplant anaesthesia
    a. Application of knowledge of basic pathophysiology of renal and liver failure. Principles of anesthetizing an immuno-compromised patient.
    b. Principles of anesthetizing patient with end stage renal/liver disease and patient with organ transplantation. Perioperative management.
44. Demonstrate practice of Neuroanaesthesia

a. Application of basic knowledge of cerebral circulation and intra cranial pressure and its implications
b. Anaesthesia to patients with neurologic disease, head injury undergoing neurologic or non-neurologic surgery and for diagnostic procedures requiring anaesthesia.
c. Anesthetic implications of the most common neurosurgical procedures, transnasal, trans-sphenoidal pituitary surgery. Posterior fossa surgery.
d. Surgery for supratentorial pathology.
e. Application of basic concepts behind electrophysiologic monitoring of the brain and spinal cord.
f. Application of knowledge of general principles of positioning the patient for surgery and the advantages and disadvantages of each position.
g. Effects of anaesthesia on the electroencephalogram (EEG) and evoked potentials.
h. Differential diagnoses and treatment alternatives of intraoperative intracranial hypertension ("tight brain")
i. Management of Head Trauma, and its anesthetic management and various protocols regarding their management and associated trauma.
j. Intracranial surgery and spinal surgery, both routine and emergency.
k. Monitoring: techniques for detection and management of air embolism.
l. Lumbar puncture and CSF drainage.
m. Non-surgical management of the head trauma patient, Systemic complications of severe brain injury.
n. Management of subarachnoid haemorrhage and vasospasm.
o. Diagnosis and management of patients with brainstem death; and dealing
p. with patient's relatives

45. The following are special procedures which the post graduate student must be able to perform
    a. Blind Nasal intubation
    b. Failed intubation drill (includes Fiberoptic Laryngo/
    c. Bronchoscope)
    d. Double Lumen Tube
    e. Bronchial Blocker placement
    f. Jet Ventilation
    g. Suctioning and physiotherapy of wet lung
    h. Intubation in Neonates
    i. Initiation and management of ventilation
    j. Combined Spinal Epidural
    k. Brachial Plexus Block
    l. Intravenous Regional Anaesthesia
    m. Elbow, Wrist, Digital, Sciatic, Femoral, Lateral Cutaneous Nerve
    n. of thigh, Ankle - each
    o. Cervical-Superficial and Deep, Stellate, Splanchnic - each
    p. Central Venous Line by Brachial, Jugular and Subclavian veins
    q. Radial and Femoral Artery cannulation
    r. CVP monitoring
    s. Pulmonary Capillary Wedge Pressure
    t. Neuro-muscular transmission Monitoring
    u. Anaesthetic Depth eg. BIS monitoring
46. Demonstration of anesthetic abilities in the intraoperative period keeping into consideration the specific requirement of the surgical procedure – ENT, Orthopaedic, Gynaecology – Obstetrics, General surgery, Onchosurgery, replacement surgeries, urosurgery, vascular, plastic, Thoracic, Dental etc.

Sl. No.	Competency addressed	Nature of Activity	Level of competency achieved}			Signature of the Faculty
			O	PS	PI	
O – Observed, PUS – Performed under supervision, PI – Performed independently						
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FEEDBACK BY THE STUDENT

(To be filled up at the time of filling up of forms for University Examination. The filled up form is to be sent in a sealed envelope addressed to the Vice-Chancellor, OUHS, Bhubaneswar. It will be opened only after the student has passed.)

Name of Student:
Department:
Period of study: From_____ to _____

Due date of examination:

Date of submission of Thesis/Topic:

Name of Guide:

Name of H.O.D.:

i. Do you think that, your goal of pursuing post-graduate education in the subject is achieved: Yes/No

ii. Do you think that, you have been trained adequately by the department in:

a.	Professional experience	Yes/No
b.	Academic teaching	Yes/No
c.	Recent advances	Yes/No
d.	Exposure to specialist from outside the institution	Yes/No
e.	Interaction with the patients	Yes/No
f.	Interaction with the colleagues	Yes/No
g.	Interaction with seniors	Yes/No
h.	Thesis/Research	Yes/No
i.	Article preparation	Yes/No
j.	Workshop	Yes/No
k.	Conferences	Yes/No
l.	C M E	Yes/No

iii. Do you think that, you have been trained as a fairly competent consultant: Yes/No

iv. Were you harassed by your guide during the training period: Yes/No, if yes Name &Type:

v. What was the attitude of HOD?:

vi. What was attitude of other staff members:

vii. Were you forced for anything by anybody: Money/Tuition/Gifts/Other/None, if yes then by Whom:

_____

viii. Any comment about interaction with other depts./colleague:

ix. Hostel:

x. Extra-curricular activity

   a. Sports

   b. Cultural

xi. Teaching aids:

xii. Library:

   a. Central

   b. Department

xiii. Work place safety:

xiv. Deficiencies you would like to point out particularly:

xv. Brief comments:

Signature & Date

Postgraduate Students Appraisal Form

Pre / Para /Clinical Disciplines

Name of the Department/Unit : Name of

the PG Student :

Period of Training : FROM……TO……

Sr. No.	PARTICULARS	Not Satisfactory	Satisfactory	More Than Satisfactory	Remarks
		1 2 3	4 5 6	7 8 9	
1.	Journal based / recent advances learning				
2.	Patient based /Laboratory or Skill based learning				
3.	Self directed learning and teaching				
4.	Departmental and interdepartmental learning activity				
5.	External and Outreach Activities / CMEs				
6.	Thesis / Research work				
7.	Log Book Maintenance				

Publications **Yes/ No**

Remarks*_____

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***REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.**

SIGNATURE OF ASSESSEE **SIGNATURE OF CONSULTANT** **SIGNATURE OF HOD**