

Guidelines  
For  
Competency Based Training Programme  
In  
**DNB- HEALTH ADMINISTRATION  
INCLUDING HOSPITAL ADMINISTRATION**



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## **OBJECTIVES OF THE PROGRAMME**

### **Programme goal**

The candidate after 03 years of DNB training should acquire the competencies so that the trainee is able to carry out the job functions of a healthcare administrator, including planning and management of services within the ethical as well as legal framework.

### **Programme objective**

- To manage operations of hospitals and other healthcare establishments including their human, finance, and materials resources
- To apply principles of management to plan, implement and control systems as well as processes in healthcare settings
- To plan hospitals and healthcare establishments
- To plan and implement healthcare programmes

## **ELIGIBILITY CRITERIA FOR ADMISSION**

### **DNB HOSPITAL & HEALTH ADMINISTRATION Course:**

1. Any medical graduate with **MBBS** qualification, who has qualified the **Entrance Examination** conducted by NBE and fulfill the eligibility criteria for admission to DNB **Broad Specialty** courses at various NBE accredited Medical Colleges/ Institutions/Hospitals in India is eligible to participate in the centralized counseling for allocation of DNB **HEALTH ADMINISTRATION INCLUDING HOSPITAL ADMINISTRATION** seats purely on merit cum choice basis.
2. Admission to 3 years DNB **HEALTH ADMINISTRATION INCLUDING HOSPITAL ADMINISTRATION** course is only through **Entrance Examination** conducted by NBE and Centralized Merit Based Counseling conducted by National Board of Examination as per prescribed guidelines.

### **Duration of Course: 3 Years**

Every candidate admitted to the training programme shall pursue a regular course of study (on whole time basis) in the concerned recognized institution under the guidance of recognized post graduate teacher for assigned period of the course.

## TEACHING AND TRAINING ACTIVITIES

The fundamental components of the teaching programme should include the following: -

1. Case presentations & discussion- once a week
2. Seminar - Once a week
3. Journal club - Once a fortnight
4. 15 days rotation in all wards and departments of hospital as well as supportive services with a view to understand and resolve administrative issues. The findings to be documented for assessment by the faculty.
5. Faculty lecture teaching- Once a week
6. Audit of medical records and administrative issues of the Hospital - Once a Month
7. One poster and one oral presentation at least once during their training period in a recognized conference.
8. Study visits to the following nearby healthcare facilities:-
  - (a) Sub Centre
  - (b) Primary Health Centre
  - (c) Community Health Centre
  - (d) District Hospital
  - (e) Government Medical College
  - (f) Super Specialty Private Hospital
  - (g) Under construction Hospital Project

**Theoretical:** The theoretical knowledge would be imparted to the candidates through discussions, journal clubs, symposia and seminars. The students are exposed to recent advances through discussions in journal clubs. These are considered necessary in view of an inadequate exposure to the subject in the undergraduate curriculum.

**Symposia:** Trainees would be required to present a minimum of 20 topics based on the curriculum in a period of three years to the combined class of teachers and students. A free discussion would be encouraged in these symposia. The topics of the symposia would be given to the trainees with the dates for presentation.

**Journal Clubs:** This would be a fortnightly academic exercise. A list of suggested Journals is given towards the end of this document. The candidate would summarize and discuss the scientific article critically. A faculty member will suggest the article and moderate the discussion, with participation by other faculty members and resident doctors. The contributions made by the article in furtherance of the scientific knowledge and limitations, if any, will be highlighted.

**Research:** The student would carry out the research project and write a thesis/ dissertation in accordance with NBE guidelines.

## SYLLABUS

### I - General Administration and Management

Sl	Topic	Contents
1.	Development of Management Concept	<ul style="list-style-type: none"> <li>• History and growth of Management science</li> <li>• Traditional vs. modern management</li> <li>• Evolution of management theory</li> <li>• Management as a profession</li> <li>• Ethics in management</li> </ul>
2.	Management Function & Tools	<ul style="list-style-type: none"> <li>• Management levels and skills</li> <li>• Functions &amp; Principles of management</li> <li>• Challenges to a manager</li> <li>• Systems Approach</li> <li>• Role of the executive</li> <li>• Management tools</li> <li>• Styles of management</li> <li>• Committees</li> </ul>
3.	Fundamentals of Planning and Decision Making	<ul style="list-style-type: none"> <li>• Hierarchy and Types of Plans</li> <li>• Steps in planning</li> <li>• Managerial decision making</li> </ul>
4.	Organisation Structure	<ul style="list-style-type: none"> <li>• Organisational design and function</li> <li>• Hospital Organisation</li> <li>• Matching structure and strategy</li> <li>• Functional organization</li> <li>• Line and staff authority</li> <li>• Delegation/ Decentralisation</li> </ul>
5.	Office procedure and Disciplinary proceedings	<ul style="list-style-type: none"> <li>• Definition of Office &amp; office procedures</li> <li>• Drafting official letters</li> <li>• Service rules &amp; procedure</li> <li>• Conduct rules</li> <li>• Disciplinary proceedings</li> </ul>
6.	Communication	<ul style="list-style-type: none"> <li>• Basic concepts</li> <li>• Types of communication</li> <li>• Barriers of communication</li> <li>• Principles of good communication</li> <li>• Communication in Healthcare</li> </ul>
7.	Personnel Management & Human Resource Development	<ul style="list-style-type: none"> <li>• Definition &amp; Importance</li> <li>• Work study &amp; Method study</li> <li>• Manpower planning</li> <li>• Recruitment &amp; selection</li> <li>• Job analysis</li> <li>• Job description</li> <li>• Job evaluation</li> <li>• Job enrichment</li> <li>• Training &amp; development</li> <li>• Performance Appraisal</li> <li>• Grievance Redressal</li> <li>• Absenteeism</li> </ul>

8.	Organisational Behavior and Group Dynamics	<ul style="list-style-type: none"> <li>• Basics of sociology, anthropology, psychology</li> <li>• Characteristics of workgroups</li> <li>• OB labs</li> <li>• Dynamics of organizational behavior</li> <li>• Motivation &amp; Leadership</li> <li>• Conflict management</li> <li>• Transactional analysis</li> <li>• Team building</li> <li>• Change Management</li> <li>• Johari Window</li> <li>• Grievance redressal systems</li> </ul>
9.	Financial Management	<ul style="list-style-type: none"> <li>• GDP, GNP, National Economic Policies</li> <li>• Budgeting, types of budget</li> <li>• Working Capital, Cash flow analysis</li> <li>• Financial Statement and Ratios</li> <li>• Balance Sheets</li> <li>• Elements of cost, cost accounting</li> <li>• Fixed assets and Depreciation</li> <li>• Break even analysis, Cost effectiveness, Cost benefit analysis</li> <li>• Financial Management in hospitals</li> <li>• Cost containment in hospitals</li> </ul>
10.	Material Management	<ul style="list-style-type: none"> <li>• Importance of Material Management</li> <li>• Theory of Demand and Supply</li> <li>• Inventory control</li> <li>• Purchase cycle</li> <li>• Tender System</li> <li>• Economic order quantity, Safety stock, Lead time</li> <li>• Receipt and Inspection of Stores</li> <li>• Distribution, Standardisation, Codification</li> <li>• Condemnation and Disposal</li> <li>• Stores documentation</li> <li>• Equipment audit</li> <li>• Logistics and Supply chain management</li> <li>• Role of computers in Stores Management</li> </ul>
11.	Risk Management	<ul style="list-style-type: none"> <li>• Ergonomics and its application in hospitals</li> <li>• Occupational hazards</li> <li>• Workman Compensation Act</li> <li>• Definition, scope and importance of industrial relations</li> </ul>
12.	Information System	<ul style="list-style-type: none"> <li>• Information system analysis and design</li> <li>• HMIS a tool to managerial control</li> </ul>
13.	Modern Management Techniques	<ul style="list-style-type: none"> <li>• Quantitative methods of Management</li> <li>• OR techniques and their application in healthcare</li> <li>• Management by objective</li> </ul>
14.	Marketing Management	<ul style="list-style-type: none"> <li>• Concept of Marketing</li> <li>• Marketing strategies, evaluation and control</li> <li>• Marketing Information &amp; research</li> <li>• Market &amp; medical ethics</li> <li>• Social Aspects of marketing</li> <li>• Privatization of Health</li> <li>• Public Private Partnership (PPP)</li> <li>• Outsourcing</li> <li>• Medical Tourism</li> <li>• Corporate Social Responsibility</li> </ul>

## II - Health care and Health Administration

Sl	Topic	Contents
1.	Development of Health Services in India	<ul style="list-style-type: none"> <li>• Evaluation of health care services</li> <li>• Definition &amp; dimensions of health</li> <li>• Review of different reports on Health care</li> </ul>
2.	Medical Sociology	<ul style="list-style-type: none"> <li>• Sociological perspectives of Health, illness and healing</li> </ul>
3.	Health & Disease	<ul style="list-style-type: none"> <li>• Concept of health &amp; disease</li> <li>• Concept of well being</li> <li>• Natural history of disease and role of hospitals in various levels of prevention</li> </ul>
4.	Research Methodology in Health and Hospital Administration	<ul style="list-style-type: none"> <li>• Concept of health indicators</li> <li>• Types of surveys</li> <li>• Selecting a problem, making hypothesis</li> <li>• Research Protocol writing</li> <li>• Determining objectives</li> <li>• Bibliographical data</li> <li>• Sample size determination</li> <li>• Data collection techniques and tools</li> <li>• Questionnaires and Interview techniques</li> <li>• Observation technique</li> <li>• Analysis of data</li> <li>• Report writing</li> <li>• Errors of Measurement</li> </ul>
5.	National Health Policy	<ul style="list-style-type: none"> <li>• National Health Policy – 2017</li> <li>• Role of Health education and communication</li> <li>• Health Committees</li> <li>• National Health Programmes</li> <li>• Millennium Developmental Goals and Sustainable development goals</li> </ul>
6.	Biostatistics	<ul style="list-style-type: none"> <li>• Concept of Biostatistics</li> <li>• Presentation of data</li> <li>• Frequency of distribution</li> <li>• Measurements of central tendency</li> <li>• Measurement of dispersion</li> <li>• Sampling &amp; Sampling error</li> <li>• Testing of hypothesis</li> <li>• Test of significance</li> </ul>
7.	Epidemiology	<ul style="list-style-type: none"> <li>• Evolution and uses of epidemiology</li> <li>• Definitions and terminology</li> <li>• Natural history of disease and role of hospital in various levels of preventions</li> <li>• Types of epidemiology</li> <li>• Methods of epidemiological studies</li> <li>• Socio-economic status and occupation as determinant in disease distribution</li> <li>• Cause and effect relationship</li> <li>• Epidemiology of hospital infection</li> <li>• Epidemiology of</li> <li>• Non-Communicable diseases</li> <li>• Trauma and RTA</li> <li>• Diabetes</li> <li>• Coronary Artery Disease (CAD)</li> <li>• How to investigate an epidemic and role of the hospital in its control</li> <li>• Common diseases in India-their epidemiology and prevention</li> </ul>



		<ul style="list-style-type: none"> <li>• Screening and surveys</li> <li>• Concept of health Indicators</li> <li>• Disability adjusted life years (DALY's)</li> <li>• Quality adjusted life years (QALY's)</li> <li>• Disability adjusted life expectancy (DALE)</li> <li>• Physical quality of life Index (PQLI) etc</li> </ul>
8.	Health Statistics and Health Information System in India	<ul style="list-style-type: none"> <li>• Need</li> <li>• Common rates &amp; ratio</li> <li>• Incidence &amp; prevalence rates and</li> <li>• Morbidity</li> <li>• Mortality</li> <li>• Health reports</li> <li>• Notifiable Diseases</li> <li>• Health care Delivery system</li> <li>• ICD -10 &amp; ICD – 11</li> </ul>
9.	Hospital Utilization Statistics	<ul style="list-style-type: none"> <li>• Community Indices: Bed population ratio, Hospital admission rate , Per capita Hospitalisation rate</li> <li>• Hospital utilisation Indices: Average daily census, Bed occupancy rate, bed turnover rate, bed turn over interval, Average length of stay</li> </ul>
10.	Medical Records	<ul style="list-style-type: none"> <li>• Definition, historical background, types of medical records, retention of records, computerisation of medical records, medical record audit, MR Department</li> </ul>
11.	Health Economics	<ul style="list-style-type: none"> <li>• Basics of health economics</li> <li>• Analysis of demand and supply</li> <li>• Health Insurance Schemes and social</li> <li>• Security scheme like CGHS, ESI in India</li> <li>• Medical care system &amp; Health</li> <li>• Insurance System in different countries</li> </ul>
12.	Population Dynamics	<ul style="list-style-type: none"> <li>• Demography and family planning</li> </ul>
13.	Ethics Laws and Acts	<ul style="list-style-type: none"> <li>• Code of Medical Ethics and duties of physicians</li> <li>• Legal issues in Hospital administration</li> <li>• Laws and Acts applicable to hospitals</li> <li>• Medico legal Cases</li> <li>• Industrial relations and laws</li> <li>• Patient's rights &amp; provider's responsibility - Medical Malpractice</li> <li>• Medical ethics and ethical issues in end of life decisions</li> <li>• Dying Declaration</li> <li>• Importance (section 32 &amp; 157) of Indian Evidence Act and Death Certificate -</li> </ul>

### III - Hospital Planning and Hospital Administration

Sl	Topic	Contents
1.	Hospital	<ul style="list-style-type: none"> <li>• History and development of hospitals</li> <li>• Definition, types, control, role and functions</li> <li>• Hospitals in India today, their number, types, size, distribution, ownership, utilization, issues &amp; trends</li> </ul>
2.	Nursing Administration	<ul style="list-style-type: none"> <li>• Introduction to Nursing profession</li> <li>• Nursing organization structure</li> <li>• Nurse as a social and professional entity</li> <li>• Staffing norms in various types of hospitals and different departments.</li> <li>• Recent trends in nursing profession and nursing</li> </ul>
3.	Public Relations in Hospital	<ul style="list-style-type: none"> <li>• Public relations</li> </ul>
4.	Employees Welfare	<ul style="list-style-type: none"> <li>• Welfare schemes</li> <li>• Occupational safety</li> <li>• Conflict management</li> <li>• Stress management</li> <li>• Counseling</li> </ul>
5.	Quality in Health Services	<ul style="list-style-type: none"> <li>• Quality concept</li> <li>• Verifiable standards and parameter</li> <li>• Various Quality Models</li> <li>• Total Quality management</li> <li>• Kaizen</li> <li>• Lean management</li> <li>• Six Sigma in healthcare</li> <li>• Hospital and Healthcare Accreditation</li> </ul>
6.	Future of Hospital Administration	<ul style="list-style-type: none"> <li>• Performance Review</li> <li>• Hospital statistics &amp; quality control</li> <li>• Recent trends in hospital</li> <li>• Challenges to administrators</li> <li>• Reengineering</li> <li>• Telemedicine</li> <li>• Artificial intelligence</li> </ul>
7.	Hospital Planning- General consideration	<ul style="list-style-type: none"> <li>• Changing system of Health Services concept in planning, designing and space</li> <li>• Site surveys for planning a hospital</li> <li>• Planning for hospitals macro and micro aspects</li> <li>• Hospital building an overview</li> <li>• External architectural aspects and landscaping</li> <li>• Internal arrangements</li> <li>• Hospital hygiene and sanitation</li> <li>• Lighting &amp; HVAC</li> <li>• Design considerations including evidence based design and Architect Brief</li> <li>• Planning and designing specialised hospitals</li> <li>• Taking over and commissioning a new hospital</li> <li>• Alteration and additions in an existing hospital</li> <li>• Planning the Hospital Engineering Services</li> <li>• Repair and maintenance schedule</li> <li>• Equipment planning for a new hospital</li> <li>• Green buildings</li> </ul>

#### IV. Administration of Clinical and Non Clinical Services and Administrative Procedures

	Topic	Contents
1.	Clinical Services	<ul style="list-style-type: none"> <li>• Outpatient services</li> <li>• Surgical services</li> <li>• Operating department</li> <li>• Paediatric services</li> <li>• Dental services &amp; Maxillo-facial Surgery</li> <li>• Psychiatric services</li> <li>• Radiodiagnosis</li> <li>• Radiotherapy services</li> <li>• Accident and Emergency services</li> <li>• Hospital Laboratory services</li> <li>• Obstetrics and Gynecology services</li> <li>• Intensive care unit</li> <li>• Dialysis unit</li> <li>• Day care units</li> <li>• Bone marrow transplant unit (BMT)</li> <li>• Nuclear medicine</li> <li>• Lithotripsy centre</li> <li>• Physiotherapy centre</li> <li>• Burns centre</li> <li>• Malignant Diseases Treatment Centre</li> <li>• Trauma centre</li> <li>• Geriatric services</li> <li>• Antibiotic Policy</li> <li>• Standard Precautions</li> <li>• Spill Management</li> <li>• Occupational hazards and safety in healthcare</li> </ul>
	Non-Clinical services and Administrative procedure	<ul style="list-style-type: none"> <li>• Enquiry &amp; registration</li> <li>• Admission office</li> <li>• Inspection, Medical Superintendent's rounds</li> <li>• Hospital Standing Orders</li> <li>• Hospital Welfare Services</li> <li>• Indian Red Cross society and hospitals</li> <li>• Nursing services</li> <li>• Ward management including welfare and recreational facilities</li> <li>• House-keeping including Pest control</li> <li>• Medical stores and Pharmacy services</li> <li>• Blood Bank and Transfusion-services</li> <li>• Central Sterile Supply Department (CSSD)</li> <li>• Dietary service</li> <li>• Linen and laundry services</li> <li>• Hospital engineering services</li> <li>• Fire Fighting services</li> <li>• Ambulance services</li> <li>• Fatal documents</li> <li>• Mortuary</li> <li>• Equipment management</li> <li>• Transportation in hospitals (Intramural, Extramural)</li> <li>• Biomedical waste management</li> <li>• Solid waste management</li> <li>• Hospital Information system (HIS)</li> <li>• Structural requirement for infection control in hospitals</li> <li>• Hospital formulary</li> <li>• Essential drugs list (EDL)</li> <li>• Patient feedback &amp; Discharge procedure</li> <li>• Disaster Management</li> </ul>

		<ul style="list-style-type: none"><li>• Fire Safety in Hospitals</li><li>• Hospital Safety and Security</li><li>• Enterprise Resource Planning (ERP)</li><li>• Hospital Media Relations &amp; Marketing Non – Profit Organizations</li></ul>
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## **COMPETENCIES**

- Presentation and communication skills
- Problem solving skills
- Leadership skills
- Planning and monitoring of the health activities
- Analysis of data
- Evaluation of the activities and programmes
- Research
- Mentoring
- Training and development of manpower

## THESIS PROTOCOL & THESIS

Research shall form an integral part of the education programme of all candidates registered for DNB degrees of NBE. The basic aim of requiring the candidates to write a thesis protocol & thesis/dissertation is to familiarize him/her with research methodology. The members of the faculty guiding the thesis/dissertation work for the candidate shall ensure that the subject matter selected for the thesis/dissertation is **feasible, economical and original**.

The candidates are required to submit thesis during their training as prescribed by NBE.

### Guidelines for Thesis Protocol

The protocol for a research proposal (including thesis) is a study plan, designed to describe the background, research question, aim and objectives, and detailed methodology of the study. In other words, the protocol is the 'operating manual' to refer to while conducting a particular study.

The candidate should refer to the NBE guidelines for preparation and submission of Thesis Protocol before the writing phase commences. The minimum writing requirements are that the language should be clear, concise, precise and consistent without excessive adjectives or adverbs and long sentences. There should not be any redundancy in the presentation.

The development or preparation of the Thesis Protocol by the candidate will help her/him in understanding the ongoing activities in the proposed area of research. Further it helps in creating practical exposure to research and hence it bridges the connectivity between clinical practice and biomedical research. Such research exposure will be helpful in improving problem solving capacity, getting updated with ongoing research and implementing these findings in clinical practice.

Research Ethics: Ethical conduct during the conduct and publication of research is an essential requirement for all candidates and guides, with the primary responsibility of ensuring such conduct being on the thesis guide. Issues like Plagiarism, not maintaining the confidentiality of data, or any other distortion of the research process will be viewed seriously. The readers may refer to standard documents for the purpose.

## PROTOCOL REQUIREMENTS

1. The thesis protocol should be restricted to the following word limits:
  - Title : 120 characters (with spacing)
  - Synopsis [structured] : 250-300
  - Introduction : 300-500
  - Review of literature : 800-1000
  - Aim and Objectives : Up to 200
  - Material and Methods : 1200-1600
  - 10-25 References [ICMJE style]
2. It is mandatory to have ethics committee and scientific research committee approval before initiation of the research work.
3. The concerned NBE accredited hospital shall be required to evaluate the thesis protocol at its own level through Institutional Ethics Committee (IEC) and Scientific Research Committee (SRC) and approve the thesis protocol for carrying out the research work. The constitution of IEC & SRC has to be in accordance with the guidelines prescribed by NBE.
4. After the thesis protocol has been assessed and evaluated by IEC & SRC and has been approved for carrying out the research work, the same has to be submitted to NBE within 3 months of joining of DNB candidate in the concerned hospital for DNB training.

### Guidelines for Thesis

1. The proposed study must be approved by the institutional ethics committee and scientific research committee.
2. The thesis should be restricted to the size of 80 pages (maximum). This includes the text, figures, references, annexures, and certificates etc. It should be printed on both sides of the paper; and every page has to be numbered. Do not leave any page blank. To achieve this, following points may be kept in view:
  - a. The thesis should be typed in 1.5 space using Times New Roman/Arial/ Garamond size 12 font, 1" margins should be left on all four sides. Major sections viz., Introduction, Review of Literature, Aim & Objectives, Material and Methods, Results, Discussion, References, and Appendices should start from a new page. Study proforma (Case record form), informed consent form, and patient information sheet may be printed in single space.
  - b. Only contemporary and relevant literature may be reviewed. Restrict the introduction to 2 pages, Review of literature to 10-12 pages, and Discussion to 8-10 pages.
  - c. The techniques may not be described in detail unless any modification/innovations of the standard techniques are used and reference(s) may be given.
  - d. Illustrative material may be restricted. It should be printed on paper only. There is no need to paste photographs separately.

3. Since most of the difficulties faced by the residents relate to the work in clinical subject or clinically-oriented laboratory subjects, the following steps are suggested:
  - a. The number of cases should be such that adequate material, judged from the hospital attendance/records, will be available and the candidate will be able to collect case material within the period of data collection, i.e., around 6-12 months so that he/she is in a position to complete the work within the stipulated time.
  - b. The aim and objectives of the study should be well defined.
  - c. As far as possible, only clinical/laboratory data of investigations of patients or such other material easily accessible in the existing facilities should be used for the study.
  - d. Technical assistance, wherever necessary, may be provided by the department concerned. The resident of one specialty taking up some problem related to some other specialty should have some basic knowledge about the subject and he/she should be able to perform the investigations independently, wherever some specialized laboratory investigations are required a co-guide may be co-opted from the concerned investigative department, the quantum of laboratory work to be carried out by the candidate should be decided by the guide & co-guide by mutual consultation.
4. The clinical residents are not ordinarily expected to undertake experimental work or clinical work involving new techniques, not hitherto perfected OR the use of chemicals or radioisotopes not readily available. They should; however, be free to enlarge the scope of their studies or undertake experimental work on their own initiative but all such studies should be feasible within the existing facilities.
5. The DNB residents should be able to freely use the surgical pathology/autopsy data if it is restricted to diagnosis only, if however, detailed historic data are required the resident will have to study the cases himself with the help of the guide/co-guide. The same will apply in case of clinical data.
6. Statistical methods used for analysis should be described specifically for each objective, and name of the statistical program used mentioned.

### **General Layout of a DNB Thesis:**

- **Title-** A good title should be brief, clear, and focus on the central theme of the topic; it should avoid abbreviations. The Title should effectively summarize the proposed research and should contain the PICO elements.
- **Introduction-** It should be focused on the research question and should be directly relevant to the objectives of your study.
- **Review of Literature** - The Review should include a description of the most relevant and recent studies published on the subject.
- **Aim and Objectives** - The 'Aim' refers to what would be broadly achieved by this study or how this study would address a bigger question / issue.
- The 'Objectives' of the research stem from the research question formulated and should at least include participants, intervention, evaluation, design.



- **Material and Methods-** This section should include the following 10 elements: Study setting (area), Study duration; Study design (descriptive, case-control, cohort, diagnostic accuracy, experimental (randomized/non-randomized)); Study sample (inclusion/exclusion criteria, method of selection), Intervention, if any, Data collection, Outcome measures (primary and secondary), Sample size, Data management and Statistical analysis, and Ethical issues (Ethical clearance, Informed consent, trial registration).
- **Results-** Results should be organized in readily identifiable sections having correct analysis of data and presented in appropriate charts, tables, graphs and diagram etc.
- **Discussion**—It should start by summarizing the results for primary and secondary objectives in text form (without giving data). This should be followed by a comparison of your results on the outcome variables (both primary and secondary) with those of earlier research studies.
- **Summary and Conclusion-** This should be a précis of the findings of the thesis, arranged in four paragraphs: (a) background and objectives; (b) methods; (c) results; and (d) conclusions. The conclusions should strictly pertain to the findings of the thesis and not outside its domain.
- **References-** Relevant References should be cited in the text of the protocol (in superscripts).
- **Appendices** -The tools used for data collection such as questionnaire, interview schedules, observation checklists, informed consent form (ICF), and participant information sheet (PIS) should be attached as appendices.

### Thesis Submission to NBE

1. As per NBE norms, writing a thesis is essential for all DNB candidates towards partial fulfillment of eligibility for award of DNB degree.
2. DNB candidates are required to submit the thesis before the cut-off date which shall be 30th June of the same year for candidates appearing for their scheduled December final theory examination. Similarly, candidates who are appearing in their scheduled June DNB final examination shall be required to submit their thesis by 31st December of preceding year.
3. Candidates who fail to submit their thesis by the prescribed cutoff date shall NOT be allowed to appear in DNB final examination.
4. Fee to be submitted for assessment (In INR): 3500/-
5. Fee can be deposited ONLY through pay-in-slip/challan at any of the Indian bank branch across India. The challan can be downloaded from NBE website [www.natboard.edu.in](http://www.natboard.edu.in)
6. Thesis should be bound and the front cover page should be printed in the standard format. A bound thesis should be accompanied with:

- a. A Synopsis of thesis.
  - b. Form for submission of thesis, duly completed
  - c. NBE copy of challan (in original) towards payment of fee as may be applicable.
  - d. Soft copy of thesis in a CD duly labeled.
  - e. Copy of letter of registration with NBE.
7. A declaration of thesis work being bonafide in nature and done by the candidate himself/herself at the institute of DNB training need to be submitted bound with thesis. It must be signed by the candidate himself/herself, the thesis guide and head of the institution, failing which thesis shall not be considered.

### **Constitution Institutional Ethics Committee:**

1. The accredited hospital should have an Institutional Ethics Committee (IEC) which is multidisciplinary and multi-sectorial in composition. The Institutional Ethics Committee (IEC) shall review all ethical aspects of the project proposals received by it from DNB trainees in an objective manner & shall provide advice to researchers on all aspects of the welfare and safety of all the concerned after ensuring the scientific soundness of the proposed research through appropriate Scientific Review Committee.
2. The accredited hospital / institute is required to have an Institutional Ethics Committee (IEC) as per Biomedical Research Guidelines of ICMR. It should be registered with the Drug Controller General of India (DCGI).
3. The number of persons in an ethics committee should be kept fairly small (8 - 12 members). It is generally accepted that a minimum of five persons is required to form the quorum without which a decision regarding the research should not be taken. The IEC should appoint from among its members a Chairman who should be from outside the Institution to maintain the independence of the Committee. The Member Secretary should be from the same Institution and should conduct the business of the Committee. Other members should be a mix of medical/nonmedical, scientific and non-scientific persons including lay persons to represent the differed points of view.

The composition may be as follows:

- Chairperson
  - One - two persons from basic medical science area
  - One - two clinicians from various Institutes
  - One legal expert or retired judge
  - One social scientist/ representative of non-governmental voluntary agency
  - One philosopher/ ethicist/ theologian
  - One lay person from the community • Member Secretary
4. In case the institution does not have an Institutional Ethics Committee (IEC) registered with DCGI, the accredited hospital may tie up with a nearby institution to utilise its DCGI registered IEC. A Memorandum of Understanding in this regard shall be required to be submitted to Accreditation Department of NBE

**Constitution of Scientific Research Committee/Institutional Research Committee**

1. In addition to the Institutional Ethics Committee (IEC), the applicant hospital should also have an Institutional Research Committee/Scientific Research Committee (SRC) to mentor & review the research projects in the hospital.
2. The SRC shall comprise of following members: • Head of the Institute - Shall be the Chairman of the Committee • Statistician • Local teaching faculty of the level of Professor/Sr. Consultant from other hospitals/institutions • Guide & Co-Guide(s) of concerned DNB trainee • Basic Sciences Faculty
3. Further members can be incorporated as a part of the above committee and all Guide/Co-Guides will act as ex-officio members.
4. SRC has to be constituted in-house (as per composition prescribed above) as it includes thesis guides of DNB candidates. The thesis protocols of DNB trainees shall be required to be approved by the IEC and SRC.

**(To be issued only on Official letterhead of the hospital)**

Ref. No:

Dated:

To,  
Deputy Director (Medical),  
National Board of Examinations  
Medical Enclave, Ansari Nagar,  
Mahatma Gandhi Marg (Ring Road)  
New Delhi-110029

**Subject: - Thesis Protocol Approval Letter (Institutional Ethics Committee & Scientific Research Committee and its Composition)**

Sir,

This is for your kind information that the research proposal/thesis protocols of below listed DNB candidates have been considered and reviewed by the Scientific Research Committee (SRC) of the Institute/hospital in its meeting held on \_\_\_\_\_ and by the Institutional Ethics Committee (IEC) in its meeting held on \_\_\_\_\_. S.N. Name of Candidate Specialty Session Testing ID/Roll No. Thesis Topic Title the IEC which reviewed the proposals is duly registered with the Drug Controller General of India (DCGI) and SRC of the hospital is composed as per guidelines prescribed by NBE for the purpose. The authenticated copies of composition of both the committees are enclosed herewith. Both the committees i.e. IEC and SRC have approved conducting the study on above listed research proposal(s) of DNB candidate(s) for the purpose of writing their DNB theses. It is further certified that the proposed research protocol(s) have not been/shall not be submitted elsewhere for any degree, fellowship or any other titles for recognition. The minutes of aforesaid meetings of IEC and SRC are available with the hospital and can be reproduced before NBE, if so required, at any point of time.

**Name & Signature of the  
Academic Head/DNB Coordinator**

**Name & Signature of  
Administrative Head of the Institute**

Encls.:

1. Composition of Institutional Ethics Committee (IEC)
2. Composition of Scientific Research Committee (SRC) Please affix official stamp of the Hospital Please affix official stamp

## **LOG BOOK**

A candidate shall maintain a log book of operations (assisted / performed) during the training period, certified by the concerned post graduate teacher / Head of the department / senior consultant.

The log book should show evidence that the before mentioned subjects were covered (with dates and the name of teacher(s) The candidate will maintain the record of all academic activities undertaken by him/her in log book .

1. Personal profile of the candidate
2. Educational qualification/Professional data
3. Record of case histories
4. Procedures learnt
5. Record of case Demonstration/Presentations

## **LEAVE RULES**

### **LEAVE RULES FOR DNB/FNB TRAINEES**

The following revised leave rules shall apply to the candidates, those who join on or after 2018. Those who joined before 2018, the old leave rule shall be applicable.

1. DNB/FNB Trainees are entitled to avail leave during the course of DNB/FNB training as per the Leave Rules prescribed by NBE.
2. A DNB/FNB Trainees can avail a maximum of 30 days of leave in a year excluding regular duty off/ Gazetted holidays as per hospital/institute calendar/policy. This leave shall be processed at the institutional level.
3. Any kind of study leave is not permissible to DNB/FNB Trainees.
4. Under normal circumstances leave of one year should not be carried forward to the next year. However, in exceptional cases such as prolonged illness, the leave across the DNB/FNB training program may be clubbed together with prior approval of NBE.
5. Unauthorized absence from DNB/FNB training for more than 7 days may lead to cancellation of registration and discontinuation of the DNB/FNB training and rejoining shall not be permitted.
6. Any Leave availed by the candidate other than the eligible leave (30 days per year) shall lead to extension of DNB /FNB training. The training institute has to forward such requests to NBE along with the leave records of the candidate since his/her joining and supporting documents (if any) through the Head of the Institute with their recommendation/comments. NBE shall consider such requests on merit provided the seat is not carried over and compromise with training of existing trainees in the Department.
7. Any extension of DNB/FNB training beyond the scheduled completion date of training is permissible only under extra-ordinary circumstances with prior approval of NBE. Such extension is neither automatic nor shall be granted as a matter of routine.
8. DNB/FNB trainees are required to complete their training by a prescribed cutoff date (as per information bulletin of Exit exam) for being eligible to DNB/FNB Exit examination.
9. The eligibility for DNB/FNB Final Examination shall be determined strictly in accordance with the criteria prescribed in the respective information bulletin.

**CLARIFICATION ON MATERNITY/PATERNITY LEAVE FOR DNB/FNB TRAINEES**

1. As per the revised leave rules dated 20.03.2018 candidates join on or after 2018 can avail Maternity / Paternity leave, as per the Central or State Government policies, whichever is applicable to DNB/FNB training institute.
2. Any Leave availed by the DNB/FNB Trainee other than the eligible leave mentioned in the revised leave rules dated 20.03.2018, shall lead to extension of DNB /FNB training to complete the prescribed duration of training as mentioned in the information bulletin and registration letter.
3. DNB/FNB trainees are eligible for stipend either during the leave period or extension of training period as per the policies of DNB/FNB training institute and prevailing rules.
4. DNB/FNB trainees are required to complete their training, including the extension of training (wherever applicable), by the prescribed cut-off date, for being eligible to DNB/FNB Exit examination.
5. The eligibility for DNB/FNB Final Examination shall be determined strictly in accordance with the criteria prescribed in the respective information bulletin.



## EXAMINATION

### FORMATIVE ASSESSMENT

Internal Appraisal includes various formal and informal assessment procedures by which evaluation of student's learning, comprehension, and academic progress is done by the teachers/ faculty to improve student attainment. The nature of evaluation to be followed in Internal Appraisal should be on Formative Norms ONLY as it shall aim to give feedback on teaching and learning and become an integral part of the effective teaching .The end goal of Internal Appraisal should be to collect information which can be used to improve the student learning process .

***The purpose of the exercise is to assist the NBE accredited hospitals/ institutions to develop in to a center of academic excellence.***

Internal Appraisal is essentially positive in intent, directed towards promoting learning; it is therefore part of teaching. Validity and usefulness are paramount in internal appraisal and should take precedence over concerns for reliability.

The Internal Appraisal consists of three parts:

- Part I :- Conduction of theory examination
- Part-II :- Feedback session on the performance in the theory examination
- Part-III :- Work place based clinical assessment

The assessment scheme consists of three parts as indicated below:-

<b>PART – I</b>	<b>CONDUCT OF THEORY EXAMINATION</b>	A trainee has to appear for theory exam to be held on a single day only.
<b>PART – II</b>	<b>FEEDBACK SESSION ON THE THEORY PERFORMANCE</b>	The evaluated answer sheets of the trainees shall be handed back to them after completion of assessment, for discussion with their respective Head of Departments & faculty.
<b>PART – III</b>	<b>WORK PLACE BASED CLINICAL ASSESSMENT *</b>	After theory examination, trainees have to appear for Clinical Assessment.

***\* The Work Place Based Clinical Assessment is to be conducted for final year trainees ONLY. It is NOT applicable for the first year trainees in accordance with the prescribed guidelines.***

## **FINAL EXAMINATION**

The summative assessment of competence will be done in the form of DNB Final Examination leading to the award of the degree of Diplomate of National Board in Surgical Gastroenterology. The DNB final is a two-stage examination comprising the theory and practical part. An eligible candidate who has qualified the theory exam is permitted to appear in the practical examination.

### **Theory Examination**

- The theory examination comprises of **Four** papers, maximum marks 100 each.
- There are 10 short notes of 10 marks each, in each of the papers. The number of short notes and their respective marks weightage may vary in some subjects/some papers.
- Maximum time permitted is 3 hours.
- Candidate must score at least 50% in the aggregate of **Four** papers to qualify the theory examination.
- Candidates who have qualified the theory examination are permitted to take up the practical examination.
- The paper wise distribution of the Theory Examination shall be as follows:

**Paper I** (General Administration and Management)

**Paper II** (Health Care and Health Administration)

**Paper III** (Hospital Planning and Hospital Administration)

**Paper IV** (Administration of Clinical and Non Clinical Services and Administrative Procedures)

### **Practical Examination:**

1. Maximum Marks: 300.
2. Comprises of Clinical Examination and Viva.
3. Candidate must obtain a minimum of 50% marks in the Clinical Examination (including Viva) to qualify for the Practical Examination.
4. There are a maximum of three attempts that can be availed by a candidate for Practical Examination.

5. First attempt is the practical examination following immediately after the declaration of theory results.
6. Second attempt in practical examination shall be permitted out of the next three sessions of practical examinations placed alongwith the next three successive theory examination sessions; after payment of full examination fees as may be prescribed by NBE.
7. Absentation from Practical Examination is counted as an attempt.
8. Appearance in first practical examination is compulsory;
9. Requests for Change in center of examination are not entertained, as the same is not permissible.
10. Candidates are required not to canvass with NBE for above.

### **Declaration of DNB Final Results**

1. DNB final is a qualifying examination.
2. Results of DNB final examinations (theory & practical) are declared as PASS/FAIL.
3. DNB degree shall be conferred at the convocation of NBE.

## **RECOMMENDED TEXT BOOKS AND JOURNALS**

### **Books**

#### **Paper I: General Administration and Management**

1. Management: Management: A Global, Innovative and Entrepreneurial Perspective - Harold Koontz
2. Management - JF Stoner
3. Organisational Behaviour - Stephen P Robbins
4. Management of Organisational Behaviour - Paul Hersey
5. Human Behaviour at work - Keith Davis
6. Personnel and Human Resource Management - David Adenzo, Stephen P Robbins
7. Principles of Operations Research - Harvey M Wagner
8. Industrial Engineering and Management - OP Khanna
9. Material Management Inventory Control and Logistics - AK Dutta
10. Financial Management for Hospital Administration - GB Kulkarni
11. Hospital Stores Management: An integrated approach - Dr Shakti Gupta, Dr Sunil Kant
12. Principles of Marketing - P Kotler & Armstrong
13. Essentials of Healthcare Marketing - E Brokovich
14. How to Market your Hospital without Selling your Philosophy - GD Kunders

#### **Paper II: Healthcare and Health Administration**

1. Parks textbook of Preventive and Social Medicine - K Park
2. National Health Programmes in India: National policies & legislations related to health - Jugal Kishore
3. Understanding health Economics - A guide for healthcare decision makers - Paul R Macrone, UK Kogan
4. Biostatistics & Research Methodology - Mahajan
5. Epidemiology in Health Services Management, - G.E. Alan Dever
6. Epidemiology - Leon Gordis
7. Medical negligence and the Law in India: Duties, Responsibilities , Rights - Tapas Kumar Koley
8. Medico legal aid to hospitals and doctors with consumer protection law - MS Pandit & Shobha Pandit
9. Medical Ethics Challenges and prospects in India - Subrata Sharma

#### **Paper III: Hospital Planning and Hospital Administration**

1. Principles of Hospital Administration - JR Mc Gibony
2. Principles of Hospital Administration and Planning - BM Sakharkar
3. Planning and Approach to Health Facilities( 5 Volumes) - WHO
4. Hospital Administration Handbook - HS Rowland & BL Rowland
5. Hospital Planning and Administration - R Lewelyn Davies and HMC Macaulay
6. Planning, Designing and Maintaining of Hospitals - GD Kunders

7. Medical and Dental Space Planning: A comprehensive guide to design, equipment and clinical procedures - Jain Malkin
8. Hospital Infection Control Guideline: Principles and Practice - Sanjeev Singh, Shakti Kumar Gupta, Sunil Kant
9. Juran's Quality Handbook - Joseph M Juran
10. Handbook of Healthcare quality & patient safety - Gyani G, Thomas A
11. Handbook of Human Factors and Ergonomics in Healthcare and Patient Safety - Pascale Carayon
12. Quality in Healthcare - Al Alassaf
13. Applying quality management in Healthcare - Diane L Kelly
14. Quality & Accreditation of Healthcare Organisations - WHO
15. Accreditation Manual : NABH
16. American Institute of Architects - Hospital & Healthcare Facilities
17. National Building Code 2016 - Bureau of Indian Standards
18. IPHS guidelines

#### **Paper IV: Management of Clinical and Non Clinical Services**

1. Hospital Special Care Facilities - Harold Lauffman
2. Hospital Beds - J Yates
3. Antibiotic Policies: Controlling Hospital Acquired Infection - Ian M Gould Jos Van Der Meer
4. District Healthcare Facilities - WHO
5. Constructional and Functional requirements for road ambulances: (National Ambulance Code) - Department of Road transport and Highways, Govt of india
6. Health Building Note (01-16) (Department of Health Govt. of UK)
7. Hospital and Health Services Administration: Principles and Practices - Tabish Syed Amin
8. Leveraging Lean in Hospital ancillary Services: Charles Protzman and Joyce Kerpchar
9. Handbook of Hospital Security and Safety - James T Turner
10. Emergency Medical Services & Disaster Management - Dr PK Dave, Dr Shakti Gupta, Dr NK Parmar, Dr Sunil Kant

**Journal & Magazines**

1. Health Policy and Planning
2. Hospital and Health Network
3. Health Service Management & Research
4. Express Healthcare
5. JAHA: Journal of Academy of Hospital Administration
6. Physician Executive Journal
7. Health Service Management Review
8. World Hospitals and Health Services
9. Journal of Healthcare Management (ACHE)
10. Harvard Business Review
11. Journal on Hospital Infection
12. International Journal for evidence based healthcare
13. Hospital Design Manual
14. International Journal of Research Foundation of Hospital and Healthcare Administration