

NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Basic Medical Assistance and Nursing Care (CBMANC)
PAPER-I

Time : 3 Hours.

Full Marks : 80

*Answer Eight questions in all, selecting at least Four questions from each Group.
All questions carry equal marks.*

Group-'A'

1. Circulatory System से क्या समझते हैं? Heart कैसे काम करता है चित्र बना कर दर्शाएँ?
2. शरीर के विभिन्न प्रकार के Glands के नाम बताएँ । Pituitary Gland के बारे में बताइये ।
3. Tongue के बारे में बताएँ इसकी मानव शरीर में क्या उपयोगिता है ।
4. Nervous System क्या है ? Brain के बारे में बताएँ?
5. Write short notes on the following :—
 - (a) CSF
 - (b) SKIN

Group-'B'

6. Digestive System के Parts क्या है? Stomach & Intestine का चित्र बनाकर इनके बारे में बताएँ।
7. Male Reproductive System क्या है? Testes के बारे में चित्र बना कर दर्शाएँ ।
8. Respiratory System क्या है । Lungs के बारे में चित्र बना कर दर्शाएँ ।
9. शरीर के विभिन्न Vertebrae के नाम बताएँ । Humerous के बारे में बताइये ।
10. Write short notes on the following :—
 - (a) CSF
 - (b) Spleen



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Basic Medical Assistance and Nursing Care (CBMANC)
PAPER-II

Time : 3 Hours.

Full Marks : 80

*Answer Eight questions in all, selecting at least Four questions from each Group.
All questions carry equal marks.*

Group-'A'

1. थर्मामीटर (Thermometer) क्या है चित्र द्वारा वर्णन कीजिए ? थर्मामीटर को किस-किस जगह से नापते हैं?
2. Foley's Catheter कैसे लगाते है, और क्यों लगाते हैं? चित्र बनाएँ ।
3. Blood क्या है? इसको वर्गीकृत कीजिए ।
4. Preoperative Care में मरीज को कैसे तैयारी की जाती है ?
5. Write short notes on:—
 - (a) Ryle's Tube
 - (b) Airway

Group-'B'

6. C.P.R. क्या है तथा कैसे करते हैं? C.P.R. के steps दर्शाएँ ।
7. Doctor Clinic क्या है? इसमें क्या-क्या सुविधाएँ होनी चाहिए ।
8. Blood Pressure क्या है ? Systolic और Diastolic Pressure के बारे में बताएँ । चित्र बनाएँ (B.P. Instrument)
9. ECG क्या है और इसे कैसे करते हैं ?
10. Write short notes on:—
 - (a) Platelet
 - (b) Oximeter



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Basic Medical Assistance and Nursing Care (CBMANC)
PAPER-III

Time : 3 Hours.

Full Marks : 80

*Answer Eight questions in all, selecting at least Four questions from each Group.
All questions carry equal marks.*

Group-'A'

1. Fracture आप से क्या समझते हैं? इसके प्राथमिक उपचार कैसे करेंगे ।
2. First Aid क्या है? इसकी क्या उपयोगिता है?
3. Pre Operative और Post Operative Case में क्या सावधानियाँ बरतनी चाहिए ?
4. ABCD क्या है? इसको वर्णन कीजिए ?
5. Short notes on
 - (1) Bandage
 - (2) Dislocation

Group-'B'

6. Wound क्या है और इसके वर्गीकरण का वर्णन कीजिए ?
7. Resuscitation क्या है? इसे कैसे करते हैं और सावधानियाँ रखना है ।
8. मरीज के Vital Sign देखना है आप और कैसे तो क्या देखेंगे । विस्तृत जानकारी दें ।
9. RTA (Road Traffic Accident के Management का वर्णन कीजिए ।
10. Home Nursing क्या है? इसके Duties और Function बताइए ।



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Clinical Dental Technique (CCDT)
PAPER-I

(General Dental Anatomy, Pharmacology and Dental Embryology)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. What are the responsibilities of the dental assistant?
2. What are the line angles and pont angles?
3. What are the land marks of the face?
4. Write the differences between general anesthesia and local anesthesia?
5. Describe in detail the role in treatment of patient.
6. Describe major body system and their functions.
7. Describe in detail the role of slavery glands.
8. Describe different types of teeth and their functions.
9. What is the role and responsibility of dental technician?
10. Write short notes:-
 - (a) Bone Marrow
 - (b) Oral Mucosa



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Clinical Dental Technique (CCDT)
PAPER-II
(Dental Treatment Area And Instruments)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. What are the equipment of operative room? Describe.
2. How many kinds of hand pieces?
3. Write about desirous and permanent teeth?
4. Explain diagnostic instrument?
5. What is the process of wrapping of instrument?
6. Describe the need of sterilization in oral surgery.
7. Describe dental Dam and its use?
8. Write the difference between a fixed and removable denture.
9. Describe the process of wrapping of instrument for autoclaving.
10. Write short notes:-
 - (a) Crown and Bridge
 - (b) Onlay and inlay



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Clinical Dental Technique (CCDT)
PAPER-III
(Dental Office and Dental Photography)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. Write Short notes on:-
 - (a) Requisition and purchase order
 - (b) Service Contract
2. What is the importance of dental office staffs?
3. What are guidelines for telephone courtesy?
4. Explain the function and role of dental front office?
5. Describe about RVG and OPG.
6. What are the different conditions where dental photography can be used?
7. What is the role of chair side assistant?
8. Write Short notes on:-
 - a. Requisition and purchase order
 - b. Service Contract
9. Write Short notes on:-
 - (a) Patient reception area
 - (b) Importance of a telephone in a dental clinic
10. Describe in detail about the cycle of patient from reception to dental chair to treatment and to finish a case?



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Dental Mechanics (CDM)
PAPER-I
(Dental Anatomy and Dental Material Science)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. Describe the section of a human tooth molar?
2. What is the stabilization of the arches? Describe.
3. How many instruments and equipment are used in dental laboratories? Describe.
4. Write the process of mixing plaster.
5. Draw the laboratory prescription design?
6. Describe the fixed and implant impression material.
7. Describe the role of dental technician and dental mechanic?
8. What are the different types of denture base materials?
9. Describe the role of instrument and appliances for metal section.
10. Write short notes on:-
 - (a) Dental Compound
 - (b) Eruption of tooth.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Dental Mechanics (CDM)
PAPER-II

(Removal Prothodontia and Ortho Dentic Appliance)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. Write short notes:-
 - (a) Passive appliances.
 - (b) Base plate
2. What are the functions of arch wire?
3. Describe the fixed appliance and removal appliance?
4. What is the role of denture teeth setting?
5. Describe the principle of teeth setting of upper and lower jaw.
6. What is the role and responsibility of dental machines?
7. Write short notes on:-
 - (a) Alginate
 - (b) Retraction plate
8. Define about TMJ and muscle of mastication.
9. What is over jet and over bite? Describe.
10. What in balanced articulation.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Dental Mechanics (CDM)
PAPER-III

(Fix Prothodontia and Fixed Orthodontic Appliances)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. Describe how the models are made.
2. Describe the steps in waxing.
3. Describe the steps of R.P.D. and C.D. repair.
4. Write short notes on:-
 - (a) Alginate
 - (b) Teeth setting and articulating
5. Write steps in ceramic repair.
6. Describe the method of tooth technique.
7. Describe soldering and welding.
8. Describe the method of tooth carving.
9. How to take impression of complete denture? Describe.
10. Write short notes on:-
 - (a) Blue inlay wax
 - (b) Teeth setting



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Dental and Oral Hygiene (CDOH)
PAPER-I

(General Dental Anatomy, Pharmacology and Oral Embryology)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. What is a work of dental hygienist? Describe.
2. Define anatomy and physiology.
3. What is the need of numbering system?
4. Describe the major body systeme.
5. What are the basic differences in primary and secondary tooth?
6. Write short notes on the following:-
 - (a) Molars
 - (b) Function the bone
7. Explain the structure of the face and oral cavity.
8. Describe enamel and dentine in details?
9. Describe the method of pain control in dentistry.
10. Name the antibiotics commonly used.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Dental and Oral Hygiene (CDOH)
PAPER-II
(Basic Periodontal And Preventive Dentistry)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. What is need for the energy? Describe.
2. Describe types of periodontal diseases?
3. Describe scaling and its importance?
4. Describe the correct tooth brushing technique.
5. What is Gingivectomy and describe its steps.
6. Define the types of periodontal disease.
7. Describe the best oral care technique for all human being.
8. Write short notes on:-
 - (a) Periodontal dressing
 - (b) Topical fluorides
9. What are interdental cleaning aids and how effectively it cleans the teeth.
10. What are for critical signs if inflammation?



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Dental and Oral Hygiene (CDOH)
PAPER-III
(Sterilization and Dental Radiography)

Time : 3 Hours.

Full Marks : 80

Answer any Eight Questions. All questions carry equal marks.

1. What is the importance of maintaining sterilization?
2. Describe the process of autoclaving.
3. What is the process of chemical vapour sterilization?
4. What are the procedures for clearing room technique?
5. What are two different types of radiographs used in dentistry? Comment.
6. What are different forms of sterilization?
7. Write short notes on:-
 - (a) Come of film plates
 - (b) Chemical Vapor Sterilization
8. What are the rules of radiation protection?
9. What does R.V.G. stands for? Describe the point of R.V.G.?
10. What are the guidelines for treatment room area?



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Medical Laboratory Technique (CMLT)
PAPER-I

(Introduction to Laboratory Management and Hematology)

Time : 3 Hours.

Full Marks : 80

Question No. 1 of Section 'A' and Question No. 6 of Section 'B' are compulsory (each carrying 15 marks).

Answer any 2 questions from Section 'A' and any 3 questions from Section 'B'.

Section-'A'

1. Enumerate the responsibilities of a Medical laboratory technologist. 15
2. What do you mean by Accredited laboratory in medical Services? Enumerate the advantages of a accredited laboratory . 10
3. Define Biomedical Wastes. Enumerate the colour of bags used for BMW management. 10
4. Write short notes on :- 10
 - (a) Bihar clinical Establishment Act 2010
 - (b) Advantages of Hematology cell counts over manual counts.
5. Enumerate the uses of :- 10
 - (a) Critical care laboratory instruments. (b) Biochemistry analyzers'.

Group-'B'

6. Enumerate the various parameters in Complete Blood Count (CBC). Enumerate the steps of manual differential count WBC. 15
7. Define Anaemia. Enumerate the types of Anaemia. 10
8. Write short notes on : 10
 - (a) Platelets count (b) Manley's law
 - (c) Causes of Leukemia (d) Thrombocytopenia
9. Enumerate the types of Hemorrhagic disease. 10
10. Fill in the blanks :- 10
 - (a) Bone marrow is performed with _____ needle.
 - (b) Sickle cell Anaemia is a type of _____ disorder.
 - (c) Pernicious anaemia is a type of _____ Anaemia.
 - (d) hematology cell counter was invented by _____.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Medical Laboratory Technique (CMLT)
PAPER-II
(Clinical Biochemistry & Serology)

Time : 3 Hours.

Full Marks : 80

*Question No. 1 of Section 'A' and Question No. 8 of Section 'B' are compulsory (each carrying 15 marks).
Answer any 5 questions from Section 'A' and any 2 questions from Section 'B'.*

Section-'A'

1. Describe briefly the chemical examination of urine. 15
2. Enumerate the various methods of detection of HCG in urine and briefly describe any one of the methods. 10
3. Enumerate the various Diabetic profile tests. 10
4. Define control, calibrators used in automated biochemistry analyzer. 10
5. What are the normal values of :- 10
 - (a) Serum Amylase
 - (b) Serum Creatinine
 - (c) Serum Lipase
 - (d) HbAlc (Glycosylated Hemoglobin)
 - (e) Serum Urea
6. Enumerate the various Electrolytes in human serum. What are the causes of Hypokaleimia. 10
7. Write short notes on : 10
 - (a) Seminal Examination
 - (b) CSF

Group-'B'

8. Define Titre Enumerate the types of antigen-antibody. 15
9. Describe briefly the steps of RPR test. 10
10. Write short notes on : 10
 - (a) ASO titre
 - (b) Rheumatoid factor
11. Fill in the blanks :- 10
 - (a) Normal value of CRP is _____ .
 - (b) 2 methods of detection of CRP are _____ and _____ .
 - (c) _____ is done in Chemiluminiscense.
 - (d) _____ Test is done by ELISA method.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Medical Laboratory Technique (CMLT)
PAPER-III

(Microbiology (Bacteriology, Parasitology, Mycology, Virology))

Time : 3 Hours.

Full Marks : 80

*Question No. 1 is compulsory (each carrying 20 marks). Answer any other
Six questions. All questions carry equal marks.*

1. Enumerate the WHO validated test for Pulmonary Tuberculosis. Describe briefly the procedure of Mantoux test. 20
2. Enumerate the procedures of AFB staining. 10
3. Classify Protozoa. Enumerate the laboratory diagnosis of Entamoeba histolytica. 10
4. Define occult blood in stool. Describe briefly the procedure to demonstrate the presence of occult blood. 10
5. Classify the different types of bacterial culture media. Write briefly the uses of culture media. 10
6. Write short notes on: 10
 - (a) Laboratory diagnosis of urinary tract infection
 - (b) Laboratory diagnosis of Typhoid fever.
7. Write briefly on: 10
 - (a) Casts of Urine
 - (b) Diseases caused by Anthrax bacilli
8. Enumerate: 10
 - (a) 2 stool parasites
 - (b) 2 gastro intestinal bacteria
 - (c) 2 fungal skin diseases
 - (d) 2 viral infections
 - (e) 2 sexually transferred viral diseases
9. Fill in the blanks :- 10
 - (a) Dengue is caused by _____.
 - (b) Diphtheria is caused by _____.
 - (c) H1N1 is caused by _____.
 - (d) Father of Microbiology _____.
10. Enumerate the bacteria used as biological war weapon. 10



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Medical Laboratory Technique (CMLT)
PAPER-IV
(Histology, Cytology and Blood Banking)

Time : 3 Hours.

Full Marks : 80

*Question No. 1 of Section 'A' and Question No. 7 of Section 'B' are compulsory (each carrying 15 marks).
Answer any 4 questions from Section 'A' and any 3 questions from Section 'B'.*

Section-'A'

1. Enumerate the common fixatives. What are the main effects of fixation. 15
2. Briefly describe the structure of a human cell. 10
3. Describe briefly the method of decalcification. 10
4. Briefly describe the sectional method. 10
5. Write short notes on :- 10
(a) Exfoliative cytology (b) Cryostat
6. Fill in the blanks: 10
(a) Pap smear is done to diagnose _____ .
(b) Exfoliative cytology is done for diagnosing _____ .
(c) Dark field microscopy is used to detect _____ .
(d) Congo Red is used to demonstrate _____ .
(e) Giant cells are found in _____ .

Group-'B'

7. Describe briefly the preparation of 'O' cells for Coomb's test. 15
8. Enumerate the various types of blood grouping method. 10
9. Enumerate the application of direct anti-globulin test. 10
10. Enumerate the uses of platelet concentrate. 10



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Optometry and Ophthalmic Assistance (COOA)
PAPER-I

Time : 3 Hours.

Full Marks : 80

Answer any Five Questions. All questions carry equal marks.

1. (a) Draw the cross section of the eye with major parts labelled.
(b) Draw the labelled diagram of Eye Lids.
2. Discuss the anatomy and functions of cornea.
3. Explain the formation and drainage of Aqueous Humor in the Eye.
4. What is Dry Eye Syndrome? Discuss Aetiology, Signs, Symptoms, Diagnosis & Treatment.
5. Discuss Diabetic Retinopathy including Pathology, Signs, Symptoms, Diagnosis and Treatment.
6. Write short notes on :-
 - (a) Iritis
 - (b) Fuchs Corneal dystrophy
7. Classify Antiglaucoma medicines.
8. Write short notes on :-
 - (a) Intrinsic muscles of eye
 - (b) Important nerves supplying the orbit
9. Discuss the visual pathway with diagram and explain the visual field defects occurring due to lesions in different areas of the pathway.
10. Discuss chemical injury to the eye.



NALANDA OPEN UNIVERSITY

Annual Examination, 2016

Certificate in Optometry and Ophthalmic Assistance (COOA)

PAPER-II

Time : 3 Hours.

Full Marks : 80

Answer any Five Questions. All questions carry equal marks.

1. What are the different components of the eye optical system? Discuss contribution of each layer in the image formation on Retina.
2. What is Cataract? Discuss Aetiology, Classification, Signs, Symptoms and Treatment.
3. Discuss Eye Banking and the status of eye bank services in the state of Bihar.
4. What is Myopia? Discuss Clinical varieties and management of myopia.
5. Discuss Amblyopia and its management.
6. Write notes on:
 - (a) Ocular Prosthesis
 - (b) Bandage Contact Lens
7. Notes on:
 - (a) Complications of Contact lens wear
 - (b) Jackson's cross-cylinder
8. Discuss manifestations of Vitamin A deficiency in eye and steps for its prevention.
9. Discuss different types of IOL.
10. Discuss ocular manifestations of systemic viral infections.



NALANDA OPEN UNIVERSITY

Annual Examination, 2016

Certificate in Optometry and Ophthalmic Assistance (COOA)

PAPER-III

Time : 3 Hours.

Full Marks : 80

Answer any Five Questions. All questions carry equal marks.

1. Discuss the layout of an Operation Theatre.
2. Notes on:-
 - (a) Schirmer test with interpretation of results
 - (b) Trial set
3. Describe principles and procedures of keratometry. Describe different types of keratometers.
4. Describe the principles of retinoscopy with interpretation.
5. Notes on:-
 - (a) Pin hole
 - (b) Gonioscopy
6. Define sterilization. Describe the different techniques and procedures of sterilization.
7. What is the importance of Inter pupillary distance in spectacle dispensing.
8. Notes on:-
 - (a) Corneal topography
 - (b) FFA
9. Describe the principles and procedure of distance and near visual acuity test.
10. Notes on :-
 - (a) Pachymetry
 - (b) Squint evaluation



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Operation Theatre Assistance (COTA)
PAPER-I
(Anatomy, Physiology & General Pathology)

Time: 3 Hours.

Full Marks: 80

Answer any Eight Questions. Each question carries equal marks.

Group - A

1. Male Reproductive Parts कितने हैं ? विस्तार से उसका वर्णन कीजिए ।
2. Cardiac Cycle क्या है ?
3. CNS के कितने भाग हैं? Spinal Cord के बारे में जानकारी दीजिए ।
4. Write short note on :-
निम्नलिखित पर संक्षिप्त टिप्पणी लिखें
(a) Liver (लिवर)
(b) Thyroid (थायोरॉइड)
5. Upper Respiratory System के कितने भाग हैं एवं Lungs का क्या Function हैं ?

Group - B

6. ऑपरेशन के पहले मरीज को कैसे तैयार किया जाता है ?
7. अगर किसी मरीज को बहुत ज्यादा साँस फूलता है तो इमरजेंसी में आप क्या करेंगे ?
8. Artery एवं Vein में क्या अंतर है ।
9. Write short note on the following :-
निम्नलिखित पर संक्षिप्त टिप्पणी लिखें
(a) Thrombosis (थ्रोम्बोसिस)
(b) Pleura (प्लेयुरा)
10. Blood के कितने Components हैं? Blood का Function क्या है?



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Operation Theatre Assistance (COTA)
PAPER-II
(Microbiology, First Aid & Nursing)

Time: 3 Hours.

Full Marks: 80

Answer any Eight Questions. Each question carry equal marks.

Group-A

1. Inflammation क्या है । यह कैसे होता है? इसमें Signs क्या है?
2. What are the common bacterial Diseases?
3. Write short notes on :-
(a) Tetanus
(b) Embolism
4. Define First Aid and how will you give first Aid to patient having road Traffic accident.
5. Define Edema? What are the types of edema give some example of edema?

Group-B

6. Sterilization क्या है, कितने प्रकार का होता है, What are general rules of sterilization?
7. Write short note on :-
(a) Bed sore
(b) Fever
8. Dressing क्या है? कैसे किया जाता है, कृपया विस्तार से बताएँ ।
9. Tuberculosis के बारे में वर्णन कीजिए ।
10. Write short note on :-
(a) B.P instrument
(b) Pupils
11. Pulse क्या है, Common Sites of examination of pulse.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Operation Theatre Assistance (COTA)
PAPER-III

(Techniques of Operation Theatre Assistance, Equipment's and Instruments)

Time: 3 Hours.

Full Marks: 80

Answer any Eight Questions. All question carry equal marks.

Group-A

1. Explain in Detail about the preparation of patient before entering into the operation theatre.
2. Define anesthesia What are the types of anesthesia?
3. Define different types of sutures used in operation theatre?
4. Write Short Notes On:-
(c) Drain
(d) Ryle's Tube
5. What is the role of O.T. Assistant?

Group-B

6. Describe Draping?
7. Pre-Operative assessment of patient having diabetes.
8. Laproscopic surgery में क्या क्या instrument use होता है, Laparoscopy से Operation के विषय में बताइए ।
9. Post-Operative care of Patient
10. Write short note on :-
(a) Intubation
(b) Chest Tube



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Physiotherapy & Yoga therapy (CPYT)
PAPER-I
(Anatomy, Physiology & Pathology)

Time : 3 Hours.

Full Marks : 80

Answer any Two questions from A Section
Answer any Two questions from B Section
Answer any One questions from C Section

Section 'A'

1. What is Joint? What are Different types of Joints? Describe them in detail. 16
2. What are tissues? Describe them in details. 16
3. Write short note on :- 16
 - (a) Prostate
 - (b) Liver
 - (c) Stomach

Section 'B'

4. Describe circulation of Blood and discuss its function. 16
5. Describe Digestive System and its functions. 16
6. Write short note on :- 16
 - (a) Formation of Urine
 - (b) Bronchioles & its functions.
 - (c) Phagocytes.
 - (d) Breast feeding

Section 'C'

7. Describe Tumour and its types. Differentiate between Benign and Malignant tumours. 16
8. Write short note on :- 16
 - (a) Cardinal features of Inflammation.
 - (b) Tuberculosis
 - (c) Dyspnea



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Physiotherapy & Yoga therapy (CPYT)
PAPER-II
(Physiotherapy and Physiotherapeutic Measures)

Time : 3 Hours.

Full Marks : 80

Answer any Five questions. All questions carry equal marks.

Section 'A' (Answer any Three questions)

1. Explain PRE (Progressive Resistive Exs). Describe methods of PRE.
2. Describe mobilisation exercises of shoulder if in case of Perirthritis.
3. Define movement. Describe free exercises, its technique and uses.
4. Define posture. What are the factors responsible for assuming good posture.

Section 'B' (Answer any Two questions)

5. Contraindications of short wave diathermy (S or D).
6. Role of Physiotherapist and occupational therapist and social worker.
7. Write short notes on **any Four** of the following :-
 - (a) Ultra violet rays.
 - (b) Indication of Ultra Sound
 - (c) Use of Infra red
 - (d) Paraffin wax bath
 - (e) electric stimulation
 - (f) Static quadriceps exercises



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Physiotherapy & Yoga therapy (CPYT)
PAPER-III
(Physiotherapy and Physiotherapeutic Measures)

Time : 3 Hours.

Full Marks : 80

Answer any Five questions. All questions carry equal marks.

Section 'A' (Answer any Three questions)

1. Describe Sign Symptoms of cervical spondylitis. How you will manage a case of cervical spondylitis?
2. Describe management of Cerebral Palsy (CP).
3. Define Paraplegia. Describe management and training of Bowel and Bladder in Paraplegic Patient.
4. Explain causes of Anterior Poliomyelitis. Describe exercises in case of Poliomyelitic Patient.

Section 'B' (Answer any Two questions)

5. Describe management of Osteo-arthritis of Knee Joint.
6. Describe causes of Low Back Pain (LBP). Explain management of low back pain.
7. Write short notes on **any Four** of the following :-
 - (a) CTEV
 - (b) Posterior spinal muscles exercises
 - (c) Periarthritis of shoulder Joint
 - (d) Scoliosis
 - (e) Quadriceps exercises of Knee Joint
 - (f) Knock Knee



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Physiotherapy & Yoga therapy (CPYT)
PAPER-IV
(Yoga Therapy)

Time : 3 Hours.

Full Marks : 80

Answer any Five questions. All questions carry equal marks.

1. Discuss the technique of Bhujangasana and its benefits.
2. What is Surya Namaskar? Describe its benefits.
3. Describe 'Padmasana' and mention its benefits.
4. Discuss types of yoga. How yoga is different from exercise?
5. Define technique of Nadi-Sodhan Pranayama and its benefits.
6. Write notes on:-
 - (a) Knee bending
 - (b) Wrist bending
7. Write notes on:-
 - (a) Ashwini mudra
 - (b) Yog mudra
8. Why yogasana is more beneficial than exercise?
9. Describe the technique of Bhramari Pranayama and its benefits.
10. Write notes on:-
 - (a) Uddiyan Bandh
 - (b) Maha Bandh



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Radiography and Imaging Technique (CRIT)
PAPER-I
(Anatomy, Physiology, and General Pathology)

Time : 3 Hours.

Full Marks : 80

Answer any Five Questions. All questions carry equal marks.

1. What is connective tissue? Discuss about the cells of connective tissue.
2. Draw the Diagram of Hip bone with correct leveling.
3. What do you mean by Joints? How many Joints are found in human body? Discuss.
4. What do you mean by Cell Division? Write in details about types of Cell Division.
5. Write about the following:-
 - (a) What is brain?
 - (b) Name the covers of brain.
 - (c) Parts of brain.
 - (d) Blood Supply of brain.
6. What do you mean by Reflex action? Discuss the main functions of Reflex action in a human body.
7. How many spinal and cranial nerves are found in our body? Write their name with explanation.
8. Write short notes on *any Four* of the following:-
 - (a) Vital Capacity.
 - (b) Mechanism of Respiration
 - (c) Mixed Tumor
 - (d) Chemo taxis
 - (e) Leprosy
 - (f) Ziehl-Nelsons-Stain.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Radiography and Imaging Technique (CRIT)
PAPER-II
(Radiation Physics, Radiation Biology and Radiation Safety)

Time : 3 Hours.

Full Marks : 80

Answer any Five Questions. All questions carry equal marks.

1. (a) What do you mean by Atomic Structure?
(b) Write about Isotopes and Radio activity.
2. What is half value layer? What are the HVL of Lead, Carbon, Air and Aluminum?
3. Discuss the difference between X-ray and ordinary Sun Light.
4. Write short notes on **any Four** of the following :
(a) Pocket Docimeter (b) Film Badge (c) Beam Filter
(d) Decay Constant (e) Thermo luminescent Dosimeter
5. Write about the differences of the following:-
a) Normal and Cancer Cell
b) Semi Conductor Detectors and Radioactive decay
c) Gama Rays and X-ray
d) Compton Scattering and Pair Production.
6. What do you mean by Photoelectric? Discuss the Salient features of Photo electric process.
7. What do you mean by photoelectric absorption, Compton Scattering and Pair Production? Discuss their salient features.
8. Write the full form of the following:-
(a) TLD (b) PMT (c) HVL (d) LD (e) MDR
(f) RNA (g) DNA (h) MRNA (i) GD (j) OH
(k) LET (l) LDR (m) ICRU (n) CNS (o) ICRP
(p) ALARA



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Radiography and Imaging Technique (CRIT)
PAPER-III
(Radiographic and dark Room Technique)

Time : 3 Hours.

Full Marks : 80

Answer any Five Questions. All questions carry equal marks.

1. (a) What do you mean by Gird?
(b) Discuss the types of Gird.
(c) What are the factors affecting contrast of film?
2. (a) What do you mean by FOG?
(b) Discuss the types of FOG and mention about the different parts of Dark Room Equipment.
3. How many bones are found in complete human body and how articulate to form the skeleton? Discuss.
4. Define Carpal Bone. Discuss about the articulation of Carpal Bone.
5. Draw a diagram of Pelvic outlet and discuss about comparison of Male and Female Pelvic.
6. Write short notes on any three of the following:-
 - (a) Ligament.
 - (b) A Typical Thoracic Vertebra.
 - (c) Sacrum
 - (d) Hyoid Bone
7. Write about important vertebral level. How sciatic nerve is working in human body?
8. Write about the difference of any four of the following:-
 - (a) Central Beam and Central Ray.
 - (b) Dorsal Spine and Lumbar Spine.
 - (c) Basal View and Water View.
 - (d) Optic Foramina and Mastoids.
 - (e) Contrast Media and CT Angiography.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Electro Cardiography Technique (CECGT)
PAPER-I
Cardio Vascular System and E.C.G. Machine.

Time : 3 Hours.

Full Marks : 80

*Answer any Six questions. Question No. 1 is compulsory (carrying 15 marks)
and other Questions carrying 13 marks.*

1. Draw the diagram of Heart with Correct Leveling and also discuss the functions of Heart.
2.
 - a) What is Mediastinum?
 - b) What is Boundaries of Mediastinum?
 - c) What is the Contents of Mediastinum?
3. Define coronary Arteries & Coronary Veins and discuss the types of effects of obstruction in Coronary Circulation?
4. Write about electrical activity of the Heart?
5. What is Linearity Sensitivity, Time Constant and Stability or Drift?
6. Write about historical events in development of ECG Machine?
 - a) 1876 b) 1856 c) 1791 d) 1906
 - e) 1930 f) 1932
7. Write short notes on the following :-
 - (a) Aortic Valve
 - (b) Pulmonary Valve
 - (c) Aorta
 - (d) Superior & Inferior VenaCava
 - (e) E.C.G. Machine
8.
 - (a) Write about E.C.G. Machine?
 - (b) Discuss the types of E.C.G.
 - (c) Define technical specification of E.C.G. equipment.



NALANDA OPEN UNIVERSITY
Annual Examination, 2016
Certificate in Electro Cardiography Technique (CECGT)
PAPER-II
Recording and Interpretation of Electro Cardiaogram

Time : 3 Hours.

Full Marks : 80

Answer any Eight questions. All questions carry equal marks.

1. (a) What is non Respiratory Sinus Arrhythmia?
(b) What do you mean by Normal Sinus Rhythm?
2. What do you understand by E.C.G. interpretation and write about various components of the P-Q-R-S-T deflection?
3. Write about following:-
 - (a) Abnormal P-Wave.
 - (b) Abnormal P-R Interval
 - (c) Abnormal Q-R-S complex
 - (d) Abnormal T-Wave
4. Define Muscle Tremor? Discuss its various causes.
5. What is Leads and discuss the types of leads. Also discuss about Bipolar Limb Leads I, II, and III
6. Write short notes on any four of the following:-
 - (a) E.C.G. Paper (b) P-R Interval (c) S. Segment (d) Normal Valve
 - (e) R-S Wave (f) Q-T Inteval
7. Write full form of following:-
 - (a) Q.R.S (b) RAD (c) LAD (d) S.T.D. (e) CAL (f) LVH
 - (g) BAE (h) RBBB (i) A.V. Block (j) VF
8. Describe Einthoven Triangle?
9. Define Conduction disorder?
10. Define configuration of Q, RS with example.



NALANDA OPEN UNIVERSITY

Annual Examination, 2016

Certificate in Electro Cardiography Technique (CECGT)

PAPER-III

Cardiovascular Diseases and Extra Cardiac Disorders

Answer any Eight questions. All questions carry equal marks.

1. Write about Congenital heart disease?
2. What is Obstructive Lesions?
3. Define Mechanism of Arrhythmias?
4. Define Arterial Fibrillation, its etiology and characteristics in details?
5. (a) What is Myocardial Infarction?
(b) Write characteristics of abnormality of E.C.G. during Infarction?
6. Define Mitral Valve disease & its types.
7. Write short notes on any three of the following:-
(a) Pericardities (b) Rheumatic Heart disease (c) Pulmonary Embolism
(d) Hypo Thermia (e) CVA (Cerebro Vascular Accident)
8. Write full form of following:-
(a) REM (b) CVA (c) TMT (d) ASD (e) VSD
(f) IVS (g) LAD (h) PSVT (i) AVRT (j) AVC
9. Mention the Conduction disorder of Heart ?
10. Mention E.C.G. changes in Digitalis toxicity?

