

MD[Anaesthesiology]

BF/2008/12

Basic Sciences as applied to Anaesthesiology

[Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the anatomy of Stellate ganglion. Discuss the indications, technique and complications of Stellate ganglion block. [25]
 2. Write short notes on: [25]
 - a. Capnography.
 - b. Pin-index system.
 - c. Brain death.
 - d. Anaphylaxis.
 3. Describe physiology of Ventricular contraction and describe the mechanism of action of commonly used inotropic agents in relation to this. Classify the various inotropic agents. What are the drugs used for Catecholamine resistant shock. [25]
 4. Write short notes on: [25]
 - a. Methaemoglobinemia and anaesthetist.
 - b. Bainbridge reflex.
 - c. Etomidate.
 - d. Desflurane.
-

MD[Anaesthesiology]

BF/2008/12

Clinical Sciences as applied to Anaesthesiology

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss pathophysiology of Chronic renal failure. Describe anaesthetic management of such a patient for renal transplant surgery. [20]
 2. Discuss the anaesthetic challenges in 'Total hip replacement' surgery. [20]
 3. **Discuss in brief:** [30]
 - a. Management of amniotic fluid embolism.
 - b. Thromboelastography.
 - c. Statins and the anaesthetist.
 4. **Write short notes on:** [30]
 - a. Antimicrobial resistance in ICU.
 - b. Nerve injuries in relation to anaesthesia.
 - c. Fast tracking in anaesthesia.
-

MD[Anaesthesiology]

BF/2008/12

Principles and Practice of Anaesthesiology

[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

All questions carry equal marks.

1. Potassium and anaesthesiologists.
 2. Anaesthetic management of post tonsillectomy bleeding.
 3. Problems in Prone position.
 4. Anaesthetic considerations for perforating eye injury.
 5. Enteral nutrition in Intensive care patients.
 6. Principles and application of Pulse oximetry in anaesthesia.
 7. Management of severe intraoperative hypertension.
 8. Various complications of Brachial plexus blockade.
 9. Difficult Intubation/Airway protocol.
 10. Management of post operative pain after upper abdominal surgery.
-

MD[Anaesthesiology]

BF/2008/12

Recent advances in Anaesthesiology including principles of resuscitation and Intensive care therapy

[Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the anaesthetic and intensive care management of Traumatic cervical spine injury. [20]
 2. Describe a plan of rescue and treatment of about 100 patients traveling in two buses coming from opposite direction-head on collision. [20]
 3. **Write short notes on:**
 - a. Ventilation induced pneumonia. [10]
 - b. Tracheostomy in ICU. [10]
 - c. Present & future role of pulmonary artery catheter. [10]
 4. **Write short notes on:**
 - a. Management of Acutely burned patient. [10]
 - b. Transfusion related acute lung injury. [10]
 - c. Biological effect of Laser light. [10]
-

MD[Obstetrics & Gynaecology]

BF/2008/12

Basic Sciences as related to Obstetrics and Gynaecology [Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the pharmacology of Prostaglandins and discuss their therapeutic role in obstetrics. [40]
 2. **Write short notes on:**
 - a. Anti phospholipid syndrome. [15]
 - b. Biology of Hair growth and management of Hirsutism. [15]
 3. **Write short notes on:**
 - a. Galactorrhoea. [15]
 - b. Physiological changes in pregnancy. [15]
-

MD[Obstetrics & Gynaecology]

BF/2008/12

Obstetrics including diseases of Neonates

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Outline management of a primigravida at 32 weeks twin pregnancy in preterm labour. [25]
 2. Describe high risk factors for gestational diabetes. How will you manage a primigravida detected to have gestational diabetes at 34 weeks pregnancy. [25]
 3. **Write short notes on:**
 - a. Birth asphyxia. [10]
 - b. Diagnosis of fetal aneuploidy. [10]
 4. **Write short notes on:**
 - a. Management of Rh iso-immunized newborn. [10]
 - b. Fetal renal tract malformations. [10]
 - c. Care of preterm neonate. [10]
-

MD[Obstetrics & Gynaecology]

BF/2008/12

Principles and Practice of Gynaecology and Gynaecological Pathology

[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. **Write short notes on:**
 - a. Advantages and disadvantages of laparoscopic myomectomy compared with conventional myomectomy. [10]
 - b. Role of Ovarian drilling in infertility. [10]
 2. Enumerate the high risk factors in a patient of molar pregnancy. How will you manage a 22 years old patient of high risk molar pregnancy. [20]
 3. Enumerate the causes of Urinary incontinence. Discuss ways to prevent urinary fistulas during hysterectomy. [20]
 4. Discuss the management of an adnexal mass in a 35 years old lady. [20]
 5. **Write briefly on:**
 - a. Newer methods of female sterilization. [10]
 - b. How will you manage a 5 years old girl brought to the OPD with history of purulent discharge at vulva. [10]
-

MD[Obstetrics & Gynaecology]

BF/2008/12

Recent Advances in Obstetrics & Gynaecology

[Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe various agents used for Cervical ripening for induction of labour. [12]
 2. Diagnosis of Luteal phase defect. [11]
 3. Medical management of ectopic pregnancy. [11]
 4. Intra-partum fetal monitoring. [11]
 5. Role of Uterine artery embolization for fibroid uterus. [11]
 6. Comparative evaluation of different tests used for tubal patency. [11]
 7. Surgical management of atonic PPH. [11]
 8. Alternative therapy for management of menopausal symptoms. [11]
 9. Role of chemo-radiation for Carcinoma cervix. [11]
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MD[Medicine]

BF/2008/12

Basic Sciences as related to Medicine

[Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss homeostasis of Calcium in Humans. [30]

 2. **Write short notes on:**
 - a. Porto-systemic shunts. [7]
 - b. Various neurotransmitters. [7]
 - c. Blood brain barrier. [6]

 3. **Write in detail:**
 - a. Pleura. [6]
 - b. Pseudogout. [7]
 - c. Complications of Haemodialysis. [7]

 4. Discuss briefly, regulatory mechanism of Blood pressure. What is Shock syndrome. Outline its management strategies. [30]
-

MD[Medicine]

BF/2008/12

Principles of Medicine

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Write principles of diagnosis and management of a case of Acute respiratory failure. [30]
 2. Write recent advances in the diagnosis and management of a case with Chronic myeloid leukaemia. [30]
 3. **Write short notes on:**
 - a. Hypercoaguable states. [13]
 - b. Thyrotoxic crisis. [13]
 - c. Aortic dissection. [14]
-

MD[Medicine]

BF/2008/12

Practice of Medicine

[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the current status of Coronary risk factors in Indian perspective.
What are optimal goal levels of various risk factors in high risk individuals.
[25]
 2. **Write short notes on:**
 - a. Current treatment of Kalazar. [10]
 - b. Management of Haemophillia. [15]
 3. **Discuss the following:**
 - a. Cerebral Lupus. [10]
 - b. Myxoedema coma. [10]
 - c. Multidrug resistant tuberculosis. [10]
 - d. Paraneoplastic neurological syndromes. [10]
 - e. Non alcoholic steato-hepatitis. [10]
-

MD[Medicine]

BF/2008/12

Recent Advances in Medicine

[Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the current management of Chronic hepatitis B. [20]
2. Discuss recent trends in the management of severe sepsis. [20]
3. Discuss recent advances in the diagnosis and management of Parkinson's disease. [20]
4. **Write short notes on:** [20]
 - a. Low HDL Cholesterol.
 - b. Cancer vaccines.
5. **Discuss in brief:** [20]
 - a. Cardiac resynchronization therapy.
 - b. Glycoprotein IIb/IIIa receptor inhibitors.

MD[Physiology]

BF/2008/12

General Physiology

[Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the Transport of substances across the cell membranes. [30]
 2. **Write notes on:** [4x10=40]
 - a. Mitochondrial Ion channels.
 - b. Genesis of resting membrane potential.
 - c. Stem cell and its application.
 - d. Sodium potassium pump.
 3. Describe the programmed cell death. [30]
-

MD[Physiology]

BF/2008/12

Clinical sciences as related to Physiology

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the role of various reflexes in the maintenance of muscle tone and posture. [34]

 2. **Write physiological basis of:** [3x11=33]
 - a. Why duration of contraction in smooth muscles is longer than skeletal muscles.
 - b. Prepotential in pacemaker tissues.
 - c. Use of Botulinum toxin in Achalasia cardia.

 3. **Write short notes on:** [3x11=33]
 - a. Carbon dioxide dissociation curve.
 - b. TmG.
 - c. Use of Anabolic steroids in sports.
-

MD[Physiology]

BF/2008/12

Biophysics, Biochemistry & Histology related to systemic physiology

[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss in detail the mechanical properties of lung and chest wall in human during normal respiratory cycle. [30]

 2. Describe the biochemical role of Liver and muscles in regulation of Glycogen metabolism with reference to the multiple sources of ATP in a marathon runner. [30]

 3. **Write short notes on any TWO of the following:** [2x20=40]
 - a. Signal transduction via JAK-STAT pathway.
 - b. Biophysical properties of a smooth muscle.
 - c. Ionic basis of the fast response and the slow response in a Cardiac tissue action potential.
-

MD[Physiology]

BF/2008/12

Systemic Physiology including recent advances

[Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the pathophysiology of Heart failure. Give physiological basis and recent concepts of its treatment. [25]
 2. Write notes on the following: [3x15=45]
 - a. High altitude Pulmonary Oedema.
 - b. Phagocytosis with its disorders.
 - c. Dumping syndrome.
 3. Discuss briefly: [3x10=30]
 - a. Fate of H^+ in the urine.
 - b. Tests to assess tubular functions.
 - c. Timed vital capacity.
-

MD[Social & Preventive Medicine]

BF/2008/12

Basic Sciences as Applied to Community Medicine

[Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. **Differentiate between:**
 - a. Prospective & retrospective Cohort study. [5]
 - b. Folkways & Mores. [5]
 - c. Qualitative and Quantitative data. [5]
 - d. Verbal & non-Verbal communication. [5]
2. **Write short notes on:**
 - a. Carriers & their epidemiological significance. [10]
 - b. Social control - its characteristics and needs. [10]
3. **Briefly describe:**
 - a. Meta Analysis. [10]
 - b. Gantt Charting & its utility. [10]
4. **Describe in brief:**
 - a. Stem cell banking. [5]
 - b. Cultural anthropology. [5]
 - c. Nutritional rehabilitation. [5]
 - d. Focus group discussion. [5]
5. **Write briefly about:**
 - a. Types of mental illnesses. [10]
 - b. Care of elderly. [10]

MD[Social & Preventive Medicine]

BF/2008/12

Public Health Administration & Management Sciences

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss the planning process in health. What are the alternative approaches to planning? Comment on the suitable approaches to planning in Indian context. [30]
2. **Write briefly on:** [3x120=30]
 - a. SWOT analysis.
 - b. Untied fund for primary health centers under NRHM.
 - c. International health regulations-2005.
3. **Write short notes on:** [4x10=40]
 - a. Inventory control.
 - b. Forecasting of epidemics.
 - c. National health policy-2002.
 - d. Indian Public health standards for CHC.

MD[Social & Preventive Medicine]

BF/2008/12

Community Medicine & Family Practice

[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Write briefly the health related Millennium development goals with special reference to maternal and child health along with the measures being taken to achieve these in India. [30]
 2. **Write in brief:** [30]
 - a. Emerging and re-emerging diseases.
 - b. Biomedical waste management.
 - c. Syndromic approach in STDs.
 3. **Write short notes on:** [40]
 - a. Primordial prevention.
 - b. Persons with disabilities act.
 - c. Link workers.
 - d. Auto disable syringe.
-

MD[Social & Preventive Medicine]

BF/2008/12

Recent Advances in Community Medicine

[Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. **Write short notes on:**
 - a. Rapid diagnostic tests for communicable diseases. [10]
 - b. Rapid assessment techniques for community diagnosis. [10]
 - c. Multi-variate analysis. [10]
 2. **Write short notes on:**
 - a. Quality assurance in health care. [10]
 - b. IPHS(Indian Public Health Standards). [10]
 - c. Health indicators and their role in health planning. [10]
 - d. Save the girl child campaign. [10]
 3. Discuss the status of Leprosy in India in context of National leprosy eradication programme. [30]
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MD[Dermatology,Venereology & Leprosy]

BF/2008/12

Basic Sciences as related to Dermatology,STD & Leprosy [Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the pathogenetic mechanisms of granulomatous inflammation and discuss the histopathological features of various types. [40]
 2. **Write short notes on:** [6x10]
 - a. Oral provocation tests.
 - b. Percutaneous absorption.
 - c. Electron microscopy in skin.
 - d. Cytokines.
 - e. Keratohyalin granules
 - f. Wood's lamp.
-

MD[Dermatology,Venereology & Leprosy]
BF/2008/12

**Principles and Practice of Dermatology,
STD & Leprosy**
[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

All questions carry equal marks.

1. Etiopathogenesis of Atopic dermatitis.
 2. Management of Oral Lichen Planus.
 3. Management of Skin Failure.
 4. Liposomal Amphotericin-B.
 5. Sweet's syndrome.
 6. Sclerotherapy.
 7. Pseudolymphoma.
 8. Dermal fillers.
 9. Sarcoidal granuloma.
 10. Gene therapy in Dermatology.
-

MD[Dermatology,Venereology & Leprosy]

BF/2008/12

Histopathology, Leprology and Venereology

[Paper-III]

Time : 3 Hours

M.M.: 100

*Note: Attempt all questions.
All questions carry equal marks.*

1. Chlamydia trachomatis.
 2. Pregnancy and syphilis.
 3. Eye and Leprosy.
 4. Toll receptors.
 5. Normal skin flora.
 6. Special stains in dermatopathology.
 7. Management of Trophic ulcers.
 8. Reversal reactions in leprosy.
 9. Lab diagnosis of H.progenitalis.
 10. Post exposure prophylaxis in HIV.
-

MD[Dermatology,Venereology & Leprosy]

BF/2008/12

Recent advances in Dermatology, Leprosy & Venereology and General medicine as related to Dermatology [Paper-IV]

Time : 3 Hours

M.M.: 100

*Note: Attempt all questions.
All questions carry equal marks.*

1. Photodynamic therapy and its use in dermatology.
 2. Drug induced Nail changes.
 3. The genetic basis of Psoriasis.
 4. Daptomycin.
 5. Vaccination for cutaneous/Skin diseases.
 6. Chikungunya : Cutaneous manifestations.
 7. Vit. D - its analogues and their role in treating skin diseases.
 8. M.Leprae genome and strain variation identification; implications for leprosy eradication.
 9. New second line HAART regime as recommended by NACO.
 10. Excimer Laser - Use in Dermatology.
-

MD[Pathology]

BF/2008/12

Pathophysiology & General Principles of Pathology including applied Pathology [Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Role of complement system as a diagnostic tool in clinical diseases. [20]
 2. Briefly mention the HLA system and its disease association. [20]
 3. Discuss Peripheral tolerance. [15]
 4. Discuss the role of Gene rearrangement as a diagnostic tool in Lymphoreticular neoplasms. [25]
 5. Flow cytometry in modern pathology. [20]
-

MD[Pathology]

BF/2008/12

Immunopathology, Molecular Biology, Cytogenetics and Experimental Pathology including cancer research

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the role of Immunochemistry in lesions of Skin. [35]
 2. **Briefly comment on:** [30]
 - a. Anti nuclear factor.
 - b. Southern blot technique.
 3. Describe major immunodeficiency diseases and describe their genetic defects. [35]
-

MD[Pathology]
BF/2008/12

**Histo-Pathology-Cytology including Recent Advances
in the concerned topics**
[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the classification, risk factors and complications of bronchogenic carcinoma. [25]
 2. **Write notes on:** [25]
 - a. Renal osteodystrophy.
 - b. Role of FNAC in diagnosis of thyroid tumours.
 3. Classify Ovarian tumours. Discuss the morphology, prognostic variables and molecular biology of serous ovarian tumours. [25]
 4. Discuss the application of molecular techniques in pathologic diagnosis. [25]
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MD[Pathology]

BF/2008/12

Haematology, Immunoheamatology & Blood Transfusion with recent advances in the concerned topics [Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. **Write briefly:**
 - a. Pure red cell Aplasia. [12¹/₂]
 - b. New Iron chelators. [12¹/₂]

 2. **Write short notes on:**
 - a. Hyper Eosinophilic syndrome. [12¹/₂]
 - b. 5q syndrome. [12¹/₂]

 3. Discuss Paroxysmal nocturnal hemoglobinuria. [25]

 4. **Discuss briefly:**
 - a. Nucleic acid testing. [12¹/₂]
 - b. Testing for unexpected antibodies. [12¹/₂]
-

MD[Pediatrics]

BF/2008/12

Basic Sciences as related to Pediatrics

[Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe pathophysiology and management of Congestive heart failure in children. [20]
 2. Discuss the development of immune system and classify major immune deficiency disorders. [20]
 3. Describe Sexual Maturity Rating. Discuss approach to delayed puberty in a female child. [20]
 4. Describe pharmacology and clinical use of drugs used for severe Bronchial asthma. [10]
 5. Write interpretation of blood gases. [10]
 6. Discuss surface replacement therapy. [10]
 7. **Write short notes on:** [10]
 - a. AFP surveillance.
 - b. Conjugate vaccines.
-

MD[Pediatrics]

BF/2008/12

Principles and Practice of Pediatrics [Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Discuss approach to a child with Hyperammonemia. [30]
 2. **Discuss briefly:**
 - a. Treatment of Diabetic Ketoacidosis. [20]
 - b. Management of Acute Respiratory failure. [20]
 3. **Write short notes on:**
 - a. Renal involvement in HSP. [10]
 - b. Kawasaki Disease. [10]
 - c. Indications of Balloon atrial septostomy. [10]
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MD[Pediatrics]

BF/2008/12

Preventive & Social aspects of Pediatrics and Diseases of Neonates & Infants

[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. a. Adoption. [15]
 b. Intra-uterine diagnosis of fetal diseases. [15]
 2. **Write short notes on:**
 a. Breath holding spells. [15]
 b. Emerging patterns of behavior from 1 to 3 year of age. [15]
 3. **Describe briefly:**
 a. Multiple gestation pregnancies. [10]
 b. Hypoglycemia in newborn. [10]
 c. Attention deficit hyperactivity disorder. [10]
 d. Uses of genetic counseling. [10]
-

MD[Pediatrics]

BF/2008/12

Recent advances in Pediatrics

[Paper-IV]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Modified EPSGAN criteria for diagnosis of Coeliac disease. [10]
 2. Management of severe diarrhoea in immunocompromised children. [10]
 3. Uses of Growth hormone in pediatric practice. [10]
 4. Microscopic Observation Drug-Susceptibility [MODS] assay for rapid detection of tuberculosis and drug resistant Tuberculosis. [10]
 5. Recent molecular and cellular advances in pediatric bone marrow transplantation. [10]
 6. Current status of clinical gene therapy in children. [10]
 7. Scope of bronchoscopy in pediatric patient: Diagnostic and interventional. [10]
 8. Early intervention in developmental delay. [10]
 9. Prospect of eradicating Poliomyelitis in 2008. [10]
 10. New developments in management of Type I Diabetes Mellitus. [10]
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MD[Radiotherapy]

BF/2008/12

Basic Sciences and Physics as applied to Radiotherapy

[Paper-I]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the pathological classification of Ovarian tumours. Describe the staging of CA Ovary. [25]
 2. What do you mean by Beam modification? What are different types of Beam modification devices? Discuss in detail about Wedge filter. [25]
 3. **Write short notes on:** [25]
 - a. Iridium - 192.
 - b. Paterson & Parker system of dose calculation.
 - c. Compton effect.
 4. **Write in brief:** [25]
 - a. 4-R's of Radiobiology.
 - b. Cell survival curve.
 - c. Q.A. tests for telecobalt unit.
-

MD[Radiotherapy]

BF/2008/12

Principles of Radiotherapy

[Paper-II]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Classify Lung Cancer. How will you manage a case of small cell lung cancer? [30]
 2. What are the causes of bleeding per rectum? How will you manage a case of Ca Rectum. [30]
 3. **Write short notes on:** [40]
 - a. Capecitabine.
 - b. Ca middle ear.
 - c. Construction of linear accelerator.
 - d. Intracoronary radiotherapy.
-

MD[Radiotherapy]

BF/2008/12

Practice of Radiotherapy & Chemotherapy

[Paper-III]

Time : 3 Hours

M.M.: 100

Note: Attempt all questions.

1. Describe the management of Hodgkin's disease - Stage - IA involving left cervical area. [25]
 2. Discuss the treatment of Stage-I Carcinoma Breast. Discuss the role of adjuvant radiation and chemotherapy in this stage. [25]
 3. Describe the management of Carcinoma Cervix Stage IB less than 4cm in size. Describe the role and various methods of intracavitary brachytherapy in such patient. [25]
 4. **Write short notes on:**
 - a. Prophylactic cranial irradiation. [12½]
 - b. Basal cell carcinoma. [12½]
-

MD[Radiotherapy]

BF/2008/12

Recent advances in Radiotherapy

[Paper-IV]

Time : 3 Hours

M.M.: 100

Note:: Attempt all questions.

All questions carry equal marks.

1. Name the hormone dependent tumors and describe in detail role of hormone therapy in breast cancer.
 2. Describe various imaging modalities in oncology and role of IGRT in modern radiotherapy.
 3. **Write short notes on:**
 - a. Mamosite.
 - b. Cyberknife.
 4. **Write short notes on:**
 - a. Smart oncology.
 - b. SRS
-