



THE J&K BOARD OF PROFESSIONAL ENTRANCE EXAMINATIONS (BOPEE)

Tele/Fax: 0194-2433590, 2437647 (Srinagar): 0191-2479371, 2470102 (Jammu)

website: <http://www.jkbopee.gov.in>,

email: helpdeskjakbopee@gmail.com/coejakbopee@gmail.com



Subject: Admission Notification for M.Sc. Technology Courses-2023 at SKIMS, Soura Srinagar: Conduct of the Common Entrance Test thereof.

Reference: Notification No. 037-BOPEE of 2023 dated: 12.07.2023

Notification No. 130-BOPEE of 2023

Dated: 01.12.2023

Pursuant to the Notification No. 037-BOPEE of 2023 dated 12.07.2023, Offline Applications were invited from the candidates for admission to the M.Sc. Technology Courses for the Academic Session - 2023 at SKIMS, Soura Srinagar. It is hereby notified that the Board shall conduct the Common Entrance Test for the said Courses tentatively on 16.12.2023 at Srinagar only. All the concerned candidates are advised to visit the official website of the Board viz. www.jkbopee.gov.in for latest updates regarding downloading of the Admit Cards and other related information in this regard.

It is further notified that:

1. The duration of the Entrance Test shall be of two (2) hours duration comprising of 100 Questions of Multiple Choice Type and each Question shall carry one (01) Mark and there will be 0.25 Negative Marks for each Wrong Answer.
2. The Course wise prescribed Syllabus for the Common Entrance Test of the said Course(s) is annexed as **Annexure-A** to this Notification for reference/information of the concerned candidates.
3. The Common Entrance Test of the candidates who have passed B.Sc Technology Courses in specific branches shall be conducted on the basis of Graduate level course studied by them in these specific branches only during Graduation level as per the prescribed eligibility criteria.
4. The Common Entrance Test of the candidates who have passed B.Sc / B.Sc (Hons) examination shall be conducted on the basis of Core courses studied by them during Graduation level.

The other Terms and Conditions shall remain the same as mentioned in various communications/notifications issued by the Government of India, Government of UT of J&K and J&K BOPEE respectively from time to time in this regard.

E & O E

Sd/-

Controller of Examinations

J&K BOPEE

Dated: 01.12.2023

No: BOPEE-EXAM/29/2023 (7350761)

Copy to the: -

1. Principal Secretary to the Hon'ble Lieutenant Governor, Union Territory of J&K.

2. Principal Secretary to the Hon'ble Lieutenant Governor Union Territory of Ladakh.
3. Commissioner/Secretary to the Government, General Administration Department, J&K.
4. Commissioner/Secretary to the Government ARI & Trainings Department, J&K.
5. Secretary to the Government, Health & Medical Education Department, J&K.
6. Director, SKIMS, Soura, Srinagar for information.
7. Director, Information Department, J&K for information with the request to kindly get this Notification published in two leading English newspapers of Jammu/Srinagar/Leh/Kargil each having larger circulation.
8. Director Doordarshan Kendra, Jammu/Srinagar/Leh/Kargil for favour of wide publicity through daily news bulletins.
9. Director, All India Raido, Jammu/Srinagar/Leh/Kargil for favour of wide publicity through daily news bulletins.
10. Secretary, J&K, BOPEE for information.
11. President, J&K Paramedical Council, (GMC), Srinagar for information.
12. Vice-President Paramedical Council, (GMC), Jammu for information.
13. Registrar, J&K Paramedical Council, (GMC), Jammu for information.
14. Financial Advisor/CAO, J&K, BOPEE for information.
15. Assistant Legal Remembrancer, J&K, BOPEE for information.
16. Pvt. Secretary to the Chairman, J&K, BOPEE for kind information of the Chairman.
17. In-charge IT Section, J&K, BOPEE.
18. Stock file.

Annexure A

Syllabus for Common Entrance Test to be conducted by the Board for M.Sc Technology Courses having basic qualifications as B.Sc. in

RADIOLOGY & IMAGING TECHNOLOGY/MEDICAL IMAGING TECHNOLOGY/RADIATION & IMAGING TECHNOLOGY/RADIOLOGY/RADIOGRAPHY ETC

1 ANATOMY **MARKS 07**

- . Bones & joints
- . Layers of heart
- . Structure of stomach
- . Lungs
- . Nephron
- . Neuron

2 PHYSIOLOGY **MARKS 07**

- . Composition & function of blood
- . Blood bank
- . Physiology of Heart
- . Digestion & absorption process
- . Endocrine glands
- . Mechanism of vision, hearing

3. HEMATOLOGY **MARKS 06**

- . Process of formation of blood cells
- . ABO blood group
- . BLOOD BANK

4 BASICS OF PHYSICS **MARKS 10**

- . Units of measurements
- . Radiation physics & mathematics.
- . Mechanics
- . Sound.
- . electricity & magnetism

. Electromagnetic induction & waves

. Light

. Atomic structure

. Radioactivity

. Heat

5 RADIOGRAPHY

MARKS 05

. Clinical, spine & skull radiography

. Chest including thoracic cage

Abdomen

. Stereo & Macro radiography

. High KV technique

6. RADIATION PHYSICS & EQUIPMENTS

MARKS 05

. principles of radiation detection & measurements

. Biological effects of radiation

. Protective materials

7. MEDICAL PHYSICS

MARKS 10

. X-ray & gamma ray

. X ray table & grids

. Radioactivity

. X ray machine

. Mammography

. Tomography

. X- Ray & circuits

8. X- Ray FILM PROCESSING TECHNIQUE

MARKS 10

. X ray film

. Cassettes

. Radiographic image & processing

. Film archiving system

. Dark room

. Radiographic Illuminator

9. CONTRAST & SPECIAL RADIOGRAPHY PROCEDURE

MARKS 10

. Urinary system

- . GI system
- . Biliary system
- . Sonography & Sialography
- . Hysterosalpingo graphy
- . Myelography
- . Pelvimetry
- . Dacrocystography
- . Arthrography

10 Contrast & special radiography

MARKS 10

- . Pediatric radiography
- . Geriatric Radiography
- . Trauma/Emergency radiography
- . Radiological contrast

11 RADIATION PHYSICS & EQUIPMENTS

MARKS 10

- . Ultrasonography
- . Doppler system.
- . Computed radiography & tomography system
- .. Digital radiography
- . MRI Scanners.

12 MODERN IMAGING TECHNIQUE

MARKS 05

- . CT scan studies
- . PET
- . MRI scanners
- . Angiography.
- . Nuclear studies,

13 .QUALITY CONTROL, RADIOBIOLOGY, & RADIATION SAFETY

MARKS 05

- . Radiation quantities & units
- . Biological effect of radiation
- . Radiation protection
- . Q. A. In diagnostic radiology
- . Radiation hazard & control
- . Regulatory bodies

**Syllabus for Common Entrance Test to be conducted by the Board for
M.Sc Technology Courses having basic qualifications as**

MEDICAL LABORATORY TECHNOLOGY

1 ANATOMY

MARKS 07

- . Bones & joints
- . Structure of heart
- . Structure of stomach
- . Lungs
- . Nephron
- . Neuron

2 PHYSIOLOGY

MARKS 07

- . Composition & function of blood
- . Muscle nerve physiology
- . Physiology of Heart
- . Digestion & absorption process
- . Endocrine glands
- . Mechanism of vision, hearing

3 BIOCHEMISTRY - I

MARKS 06

- . Different types & uses of laboratory apparatus
- . Care & use of instruments
- . Units of measurements
- . Uses, preparation & storage of solutions
- . Acid base balance
- . Fundamental chemistry

4 PATHOLOGY

MARKS 06

- . Role of laboratory in health care delivery system
- . Laboratory instruments
- . Collection, Transport & preservation of various clinical specimens

5 HEMATOLOGY

MARKS 06

- . Collection of blood sample

- . Hemopoiesis.
- . Special Hematological tests
- . Coagulation
- . ABO blood group
- . Blood transfusion

6 MICROBIOLOGY

MARKS 06

- . Multiplication of bacteria
- . Principles & use of equipments of sterilization
- . Immunity & vaccine
- . Infection
- . Bacteriology
- . Parasitology
- . Virology
- . Mycology

7. BIOCHEMISTRY II

MARKS 10

- . Measurements in clinical laboratory
- . Chemistry of macronutrients
- . Enzymes
- . Water soluble vitamins
- . Specimen collection technique

8 MICROBIOLOGY II

MARKS 10

- . Systematic bacteriology
- . Gram positive & gram negative bacteria
- . Parasitology
- . Protozoology
- . Helminthology

9. PATHOLOGY II

MARKS 07

- . Instrumentation
- . Staining & mounting techniques

10 BIOCHEMISTRY III

MARKS 15

- . Laboratory management
- . Clinical Enzymology
- . Plasma proteins
- . Fat soluble vitamin
- . Metabolism of macronutrient
- . Tumour markers
- . Thyroid & pancreatic functioning test
- . Nutrition

11 IMMUNOLOGY, VIROLOGY & MYCOLOGY

MARKS 10

- . Infection
- . Immune response
- . Antigens & Antibody
- . Autoimmunity
- . immunodeficiency disease
- . Virus
- . Lab diagnosis of fungal infections
- . Mycosis
- . Mycotoxins & antifungal agents

12. PATHOLOGY III

MARKS 10

- . Cytology
- . Genital tract
- . GIT Tract & respiratory tract
- . CSF & EFFUSION
- . Tissue culture
- . Glands

**Syllabus for Common Entrance Test to be conducted by the Board for
M.Sc Technology Courses having basic qualifications as B.Sc. in**

RENAL DIALYSIS / RENAL THERAPY/DIALYSIS TECH./DIALYSIS THERAPY/DIALYSIS THERAPY TECH.

1. ANATOMY & PHYSIOLOGY MARKS 10

- . Layers of heart
- . Structure of GIT system
- . Parts of respiratory system
- . Histology of kidney
- . Structure of brain
- . Skin histology
- . Spermatogenesis & oogenesis
- . Erythropoiesis
- . Blood bank
- . Physiology of heart
- . Function of GIT system
- . Physiology of respiration
- . Vision
- . Function of nervous system
- . Urine formation

2. BIOCHEMISTRY MARKS 05

- . Measuring cylinders & reagent dispensers
- . Instruments use & care
- . Units & measurements
- . Fundamental Chemistry
- . Uses, preparation & storage of solutions
- . Acid, base & salt indicators

3. PATHOLOGY MARKS 05

- . Human health & disease
- . Principle, care & types of microscope
- . Clinical pathology

4. HEMATOLOGY

MARKS 05

. **Structure of** Red cell membrane

. Blood group system

. Viruses

. Blood transfusion

5. MICROBIOLOGY

MARKS 05

. **Nutrition,** growth & multiplication of bacteria

. principles & use of equipment sterilization

. Biomedical waste management

. Immunization schedule

. Systematic bacteriology

. Lab diagnosis of parasitic infections

. Mycology

. Virology

6. APPLIED ANATOMY RELATED TO DIALYSIS TECHNOLOGY

MARKS 09

. Anatomy of urine system

. Anatomy of Peritonium

. Concept of Abdominal Hernias

. ANATOMY of Vasculat system

7. APPLIED PHYSIOLOGY RELATED TO DIALYSIS TECHNOLOGY

MARKS10

. Contents in urine

. Physiology of Renal circulation

. Physiological alterations in pregnancy

. Haemostasis

. Acid base balance

. Nutrition in Renal disease

8. PHARMACOLOGY RELATED TO HAEMO & PERITONEAL DIALYSIS

MARKS 11

. Iv fluids in renal disease

. Diuretics

. Dose & duration of admnistration drugs'

. Dialysable drugs

- . Vitamins & binders
- . Heparin & erythropoietin
- . Haemodialysis concentrates
- . Potassium exchange resins with special emphasis on mode of administration

9 . Concept of renal dialysis clinical manifestations MARKS 09

- . Acute & chronic renal failure
- . Nephrotic syndrome
- . Nephritic syndrome
- . UTI
- . Asymptomatic urinary abnormalities
- . Renal stone disease
- . Obstructive Uropathies

10.APPLIED ASPECTS OF PATHOLOGY & MICROBIOLOGY MARKS 11

- . Congenital vascular disorder
- . End stage renal disease cause & pathology
- . Diabetes Mellitus.
- . Human immunodeficiency virus
- . Microbiology OF UTI
- . Sampling methodologies for culture & sensitivity

11.BASICS OF DIALYSIS TECHNOLOGY MARKS 09

- . Concept of dialysis
- . hemo dialysis machines
- . Planning diets
- . Effect of heat on cooking of foods

12.APPLIED DIALYSIS TECHNOLOGY MARKS 11

- . Physiology of peritoneal dialysis
- . Dialysis machine's
- . Complication of dialysis
- . Adequacy Of dialysis
- . Anticoagulation
- . Withdrawal of dialysis criteria
- . Dialysis in special situations

- . Dialysis In infants & children
- . dialysis procedure
- . Plasmapheresis
- . Problems in patients with dialysis
- . Water treatment system

**Syllabus for Common Entrance Test to be conducted by the Board
for M.Sc Technology Courses having basic qualifications as B.Sc. in**

ANAESTHESIA TECHNOLOGY/ANAESTHESIA CRITICAL CARE AND OTT

1 ANATOMY

MARKS 08

- . Bones & joints
- . Structure of heart
- . Structure of stomach
- . Lungs
- . Nephron
- . Neuron

2 PHYSIOLOGY

MARKS 08

- . Composition & function of blood
- . Muscle nerve physiology
- . Physiology of Heart
- . Digestion & absorption process
- . Endocrine glands
- . Mechanism of vision, hearing

3 BIOCHEMISTRY

MARKS 10

- . Excretion of waste product & formation of urine
- . Metabolism & oxygen requirement
- . Fluid & electrolyte balance
- . Blood gas analysis

4 PATHOLOGY

MARKS 07

- . Laboratory instruments
- . Collection, Transport & preservation of various clinical specimens

5 HEMATOLOGY

MARKS 07

- . Blood & blood forming elements
- . Normal Haemogram & coagulation values
- . ABO blood group

6 MICROBIOLOGY

MARKS 10

- . Harmful effects of microorganisms
- . Standard methods of sterilization
- . Viruses

7 PHARMACOLOGY & ANAESTHESIA TECHNIQUE

MARKS 10

- . Manifold rooms
- . Dosage of anaesthetic Agent
- . Explosion
- . Patient safety
- . Scavenging of inhaled anaesthesia vapours
- . Dosage of local anaesthesia

8. PATHOLOGY

MARKS 10

- . Biomedical equipment
- . Surgical Diathermy
- . CPR
- . Handling , transportation & preservation of pathological specimen
- . Gross fixation of pathological specimen

9. BIOCHEMISTRY & PATHOLOGY (APPLICATION OF LAB TECHNIQUE)

MARKS 10

- . Biomedical investigation
- . Lung function test
- . Frozen section biopsy
- . Use of cryostat

10. MICROBIOLOGY , ANAESTHESIA TECHNIQUE & BIOMEDICAL EQUIPMENTS

MARKS 10

- . Operation theatre culture & sterilization
- . Medical gases
- . Types of cylinder & colour coding
- . Defibrillator

11. X-RAY TECHNIQUE & CPR

MARKS 10

- . Proper use of corparative radiography
- . Selection of MA
- . Hazards & prevention

**Syllabus for Common Entrance Test to be conducted by the Board for
M.Sc Technology Courses having basic qualifications as B.Sc. in**

RADIATION SCIENCE/RADIOTHERAPY/RADIATION ONCOLOGY

1. GENERAL PHYSICS

MARKS 05

- .units & measurements
- .heat & temperatures
- .electrostatics
- . current electricity
- .electro magnetic induction
- .transformers
- .rectification

2. BASIC ANATOMY

MARKS 05

- .surface & sectional anatomy of:
 - .Head & neck.
 - Thorax, abdomen
 - .Pelvis & limb

3. GENERAL PRINCIPLES & PRACTICES IN ONCOLOGY

MARKS 05

- .Cancer biology
- .Treatment used in oncology surgery
- .Radiotherapy & chemotherapy

4. IMAGING IN ONCOLOGY

MARKS 05

- .X-Ray
- . CT scan
- .MRI
- .PET scan & ultrasound

5. ATOMIC STRUCTURE & RADIOACTIVITY

MARKS 05

- .Structure of atom
- .Radioactive disintegration

.Electromagnetic radiation

.X-Ray spectrum

.Interaction of X Ray with matter

.Filters & filtration

.Units of radiation

6. PRINCIPLES OF RADIATION DETECTION & MEASUREMENTS

MARKS 05

.Effects due to energy absorbed by ionization of electrons

.calorimeter

.GM counters

.Pulse height analyzers

.Gamma ray spectrometer

.Contamination monitors

7. X-BASIC EQUIPMENT

MARKS 05

.Structure of matter

.X –Rays

.X–ray circuit

.Types of X ray machine

.Image intensifier system

.Cat scanner

.Safety aspect of X ray machine

.Operator safety aspect

.Trouble shooting X Ray machine

.Preventive maintenance of X Ray machine

8. PHYSICS OF MEDICAL DIAGNOSTIC IMAGING

MARKS 05

.X –films

.Fluorescence

.Scattered Radiation

.Exposure timers

.CCTV tomography

.Interlocking & safety devices

9. MAMMOGRAPHY

MARKS 05

.Equipment

.Portable X Ray machine

.Xerox radiography

.Automatic film processing

.Quality control of diagnostic X ray machine

10. ULTRASOUND

MARKS 05

.Production of ultrasound

.different scan modes

.Biological effects of ultrasound

11. COMPUTERISED TO MOGRAPHYS

.Scanning technique

.NMR

12. PRINCIPLES OF RADIO NUCLIDE IMAGING

MARKS 05

.Central nervous system

.liver & spleen

.thyroid, kidney & lungs

.Bones Imaging

.PET Imaging

13 RADIATION PROTECTION

MARKS 05

.Biological effects of radiation

.case amplifier

Trigger circuits

14 PHYSICS OF Radiotherapy

MARKS 10

.Tele, & internal therapy

.Cobalt 60 teletherapy units

.Linear accelerator

.Betatron

.Calibration of therapy unit's

.Back scatter factor

- .Mega voltage radiation
- .Percentage of depth dose
- .Tumor dose calculations
- .Brachy therapy sources
- .Radio isotope

15. PRINCIPLES OF RADIATION DETECTION & MEASUREMENTS MARKS 05

- .Radiation detection
- .Circuits components
- .Vacum tubes
- .chemical system

16. RADIATION DOSIMETRY MARKS 10

- .Radioactivity
- .Determination of dose in roentgens
- .Dosimetry of beta source
- .Neutron source
- .Dosimetry of internally administered Radiostops
- .Radiation measuring instrument
- .Meter
- .Photographic film dosimetry
- .Methods of measuring absolute activity
- .Statics of nuclear counting

17. PRINCIPLES OF RADIOLOGICAL HEALTH AND SAFETY I & II MARKS 10

- .Action of radiation in living cells
- .Somatic effects of radiation
- .Natural source of radiation
- .Basic concepts of maximum permissible levels of radiation
- .Evaluation of external rad hazard
- .Radiation protection measures in industrial establishment using X ray & gamma rays for radiography
- .Special safety features accelerator

.Transportation of radio active substance

.Disposal of radio active wastes

.Planning of medical X rays department & radioisotope laboratory

**Syllabus for Common Entrance Test to be conducted by the Board for
M.Sc Technology Courses having basic qualifications as B.Sc. in**

MEDICAL TECHNOLOGY

1.ANATOMY **MARKS 10**

- .Heart & circulatory system
- .Respiratory system
- .Anatomy of GIT system
- .Brain
- .Nephron
- .Muscoskeletal system

2.PHYSIOLOGY **MARKS 10**

- .Blood pressure
- .Physiology of gas exchange
- .Absorption & digestion mechanism
- .Endocrinology
- .Function of brain

3.APPLIED SCIENCE-I **MARKS 10**

- .Commons disease affecting heart
- .Common disease affecting GIT Tract
- .Common disease affecting endocrine
- .Common disease involves Nervous system

4.APPLIED SCIENCE-II **MARKS 10**

- .Renal disease
- .Common disease affecting Respiratory system
- .Common disease affecting kidney
- .Muscoskeletal system

5 APPLIED SCIENCE-III **MARKS 10**

- .Infections & spread of infections agents
- .Common microbial organisms

.Common parasitic infections & disease caused by them

6.APPLIED SCIENCE-IV

MARKS 10

.Common viral infections & disease caused by them

.Common disease affecting temperature

.Common disease affecting blood & Haemopoietic system

7 TECHNIQUES IN MEDICAL SCIENCE-I

MARKS 10

Nephrology & neurology

.Cardiology

.Gastroenterology

8 TECHNIQUES IN MEDICAL SCIENCE II-

MARKS 10

.Laboratory techniques

.Internal medicine

.Urology

9.RADIATION SCIENCE-I&II

MARKS 20

.Radiology

.Nuclear medicine

.Radiotherapy

.Radiology physics & Medical bio engineering

**Syllabus for Common Entrance Test to be conducted by the Board for
M.Sc Technology Courses having basic qualifications as B.Sc. in**

OPERATION THEATRE TECHNOLOGY

1 ANATOMY & PHYSIOLOGY

MARKS 13

- .Bones & joints
- .Structure of heart
- .Structure of stomach
- .Lungs
- .Nephron
- .Neuron
- .Composition & function of blood
- .Muscle nerve physiology
- .Physiology of Heart
- .Digestion & absorption process
- .Endocrine glands
- .Mechanism of vision, hearing

2.OPERATION THEATRE ASSISTANCE

MARKS 07

- .Scrubbing technique
- .Surgical gowning technique
- .Preparation of operation part
- .Antiseptic agents used for preparing the operation part
- .Operation trolley

3. MICROBIOLOGY

MARKS 10

- .Harmful effects of microorganisms
- .Standard methods of sterilization
- .Viruses
- .Ethylene oxygen sterilization

4. PATHOLOGY

MARKS 10

- .Biomedical equipment

.Surgical Diathermy

.CPR

.Handling, transportation & preservation of pathological specimen

.Gross fixation of pathological specimen

5. BIOMEDICAL EQUIPMENT

MARKS 10

.Non invasive method of measuring blood pressure

.Temperature monitoring equipment

.Methods of cooling & heating in operation theatre

.BP monitoring equipments

6. SURGICAL DIATHERMY

MARKS 10

.Cutting & coagulation

.Connection of electrode at proper sites

.Hazards of surgical diathermy

7. CPR

MARKS 05

.Introduction & History of CPR

.Phases & steps for CPR

8. BIO CHEMISTRY & PATHOLOGY (APPLICATION OF LAB TECHNIQUE)

MARKS 10

.Biomedical investigation

.Lung function test

.Frozen section biopsy

.Use of cryostat

9. PHARMACOLOGY OPERATION THEATRE ASSISTANCE

MARKS 15

.Dangerous drug's use in OT

.intravenous fluid therapy

.Common inhalation anaesthesia

.Boiling point.

Saturated Vapour pressure

.Surgical instruments used for various surgical procedure

.Technique of assistance to surgeon

.Suture material

.Preparation & storage of surgical instruments

10. X-RAY TECHNIQUE & CPR

MARKS 10

.Proper use of corparative radiography

.Selection of MA

.Hazards & prevention