

**B.SC. MLT, RADIOGRAPHY, ANAESTHESIA, CARDIAC CARE, NEUROSCIENCE,
PERFUSION, RENAL DIALYSIS TECHNOLOGY, OPTOMETRY, ENDOSCOPY,
EMERGENCY MEDICINE AND CRITICAL CARE TECHNOLOGY-I SEMESTER-
FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 60

HUMAN ANATOMY

Q.P. Code:1901

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Name the parts of brain. Describe the medical surface of cerebrum under the following headings. a) Sulci and gyri b) functional areas
2. Describe the larynx under the following headings:
a) Skeletal framework b) Muscles c) Nerve supply
3. Describe the blood supply of heart. Add a note on its applied anatomy.

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. Bronchopulmonary segments.
5. Blood supply of long bone.
6. Write a note on synovial joints.
7. Blood supply & nerve supply of lateral wall of nose.
8. Interior of right atrium.
9. External features of spinal cord.
10. Name the bones and cartilages of nasal septum.

SHORT ANSWER QUESTIONS (All are compulsory):

5 X 3 = 15

11. Name the ventricular of brain.
12. Name the parts of pleura.
13. Name the parts of brainstem.
14. Name the paranasal air sinuses.
15. Name the parts of long bone.

B.SC. IN CARDIAC CARE TECHNOLOGY -V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

ELECTROCARDIOGRAPHY-II

Q.P. Code:1990/A

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Classify cardiac arrhythmias. Write in detail about the ECG diagnosis and management aspect of Bradyarrhythmias (drugs and procedures used).
2. Cardiac monitoring-definition, purpose of cardiac monitoring, how to set it up in and intensive coronary care unit and its usefulness.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. ECG in Hypokalaemia and Hyperkalaemia.
4. Myocardial perfusion scans.
5. Management of cardiac arrest.
6. ECG diagnosis of Tachyarrhythmia's.
7. Interpretation of TMT report.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. ECG changes in Hypocalcemia.
9. Contraindications of TMT.
10. Indications of Defibrillator.
11. Uses of Holter monitoring.
12. ECG diagnosis of complete heart block.

B.SC. IN RADIOGRAPHY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

RADIOGRAPHIC TECHNIQUE-II

Q.P. Code:1985/A

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Explain indications, contraindications, preparation procedure and filming of single contrast barium enema.
2. Explain the anatomy of cerebral blood supply. Describe the cerebral angiography procedure in detail.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Explain procedure and filming of sialography.
4. Hypotonic duodenography.
5. Draw the anatomy of nasolacrimal system. Explain Dacrocystography.
6. Differentiate between BMFT and Enterolysis procedure.
7. List out indication, contraindication, preparation and requirements for HSG.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. Negative contrast media and its uses.
9. Filming techniques for MCU.
10. Characteristics of Ioeal contrast media.
11. Radiation protection-10 day rule.
12. High dose urography.

B.SC. IN OPTOMETRY V SEMESTER – FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

CONTACTS LENS SQUINT AND BINOCULAR VISION

Q.P. Code:0133

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any TWO):	2 X 10 = 20
1. Enumerate the various measurements in measure amblyoscope.	
2. Enumerate the indication and contra indications of contact lens uses.	
3. Explain the fundamental laws of ocular motility.	
SHORT ESSAY QUESTIONS (Answer any FIVE):	5 X 5 = 25
4. Explain binocular cues.	
5. Therapeutic use of contact lenses.	
6. Hirschberg test.	
7. Write a note on cover test.	
8. Follow up of contact lens fitting.	
9. Grades of binocular vision.	
SHORT ANSWER QUESTIONS (All are compulsory):	5 X 3 = 15
10. Enumerate the deposit on soft contact lens.	
11. Disadvantages of PMMA lenses.	
12. Advantages of contact lens fitting over spectacles.	
13. Enumerate the synergistic muscles.	
14. Pannum's space.	

B.S.C. RENAL DIALYSIS TECHNOLOGY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

BASICS OF NEPHROLOGY

Q.P. Code:0122

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Write in detail renal changes in pregnancy.
2. What are all hereditary and congenital disease of the kidney? Write in detail about ADPKD.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Write about non pharmacological treatment of hypertension.
4. What is Diabetic Nephropathy and write about its complications.
5. What are renal diseases in cancer patients?
6. How pregnancy affects pre-existing kidney disease?
7. What all are pharmacological treatment of hypertension.

SHORT ANSWER QUESTIONS (Answer any THREE):

3 X 5 = 15

8. What you mean by renovascular hypertension.
9. What are renal complications in normal pregnancy?
10. How do you prevent development of diabetic nephropathy?
11. What is renal parenchymal disease and how do you diagnose it?
12. What is ADPKD?

B.SC. IN MEDICAL LABORATORY TECHNOLOGY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

CLINICAL BIOCHEMISTRY-II

Q.P. Code:1982

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any TWO):	2 X 10 = 20
1. Discuss Enzyme Linked immunosorbent assay under following headings. A) Principle B) Steps of analysis C) Applications	(2+3+5)
2. Discuss various functions of thyroid gland. List the thyroid function tests. Add a note of Radio Iodine uptake test.	(3+3+4)
3. Describe pH meter under following headings a) Principle b) Instrumentation c) Analysis. Mention the applications of pH meter.	(6+4)
SHORT ESSAY QUESTIONS (Answer any FIVE):	5 X 5 = 25
4. Describe the composition of gastric juice. Add a note on fractional test meal.	
5. Discuss the factors affecting formation of renal calculi. Add a note on features and test for calcium oxalate calculus.	
6. Discuss the principle and application of radio immunoassay (RIA).	
7. Enumerate the Serum enzymes that are elevated in liver dysfunction and briefly discuss how they can be used to differentiate Hepatic and Post hepatic jaundice.	(2+3)
8. Describe the homeostasis of calcium in the body. List two methods used for estimation of serum calcium.	(3+2)
9. Discuss the advantages and disadvantages of genetic engineering.	
SHORT ANSWER QUESTIONS (All are compulsory):	5 X 3 = 15
10. List the three applications of blotting techniques.	
11. Write the normal range for the following analytes. i) Fasting blood Glucose. ii) Blood Urea. iii) Serum Creatinine	
12. List three diseases in which gene therapy has been useful.	
13. Enumerate three causes for uraemia.	
14. Mention the enzymes elevated pancreatic diseases.	

B.SC. IN RADIOGRAPHY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

IMAGING TECHNIQUE-USG

Q.P. Code:1985

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Discuss in detail Doppler effect, continuous Doppler, and pulsed Doppler, color Doppler and power Doppler.
2. Write in detail about the ultrasound artifacts.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Transducer design.
4. Piezoelectric effect.
5. Interaction of ultrasound with medium.
6. Types of array in ultrasound transducers.
7. Ultrasound image quality.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. F- form.
9. Fresnel and fraunhofer zones.
10. Block diagram of ultrasound equipment.
11. Ultrasound transducer design.
12. Name the ultrasound guided procedures.

B.S.C. IN ANESTHESIA TECHNOLOGY -V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED ANAESTHESIA TECHNOLOGY-I

Q.P. Code:1987

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Discuss about preparation of the anaesthesia trolley for laproscopic appendectomy.
2. Write in detail about position in anaesthesia. Discuss care taken while positioning Geriatric patient.
3. Write in detail about preparation of difficult airway cart for patient with neck contractor due to burns.

SHORT ESSAY QUESTIONS (Answer any FIVE)

5 X 5 = 25

4. Discuss in detail Monitored Anaesthesia Care (MAC).
5. What are the various drugs used to decrease blood pressure intra operatively.
6. Preparation of blood transfusion list indications and complications of blood transfusion.
7. Write a note on post anaesthesia care unit.
8. Mention in detail about fluid management in burns patient.
9. Arrangement of OP for central venous catheterization and arterial line.

SHORT ANSWER QUESTIONS (All are compulsory):

5 X 3 = 15

10. Mallampathi grading.
11. Airway assessment in obese patient. Write in detail about RAMP position.
12. Write a note in Initial assessment of Trauma patient.
13. Dosage, indication and adverse effect of Nitro-glycerine.
14. Endotracheal tube.

B.SC. IN CARDIAC CARE TECHNOLOGY -V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

ELECTROCARDIOGRAPHY-II

Q.P. Code:1990

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. ACLS Pulseless arrest Algorithm.
2. Discuss ECG in Bradyarrhythmia. Add a note on pacemaker implantation.
3. Discuss approach to a patient with narrow complex tachycardia.

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. Discuss Acute management of Ventricular tachycardia.
5. Describe indications & Role of cardiac monitoring.
6. Discuss how to set up an Intensive coronary care unit.
7. Discuss complications that can occur while conducting a TMT.
8. Discuss Role of Cardiac Defibrillator.
9. Discuss Myocardial perfusion scan.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

10. ECG in Complete heart block.
11. ECG in Ventricular premature complex.
12. Contraindications for TMT.
13. ECG in Ventricular fibrillation.
14. Drugs used during cardiac resuscitation.

B.SC. IN PERFUSION TECHNOLOGY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

ADVANCED PERFUSION TECHNOLOGY-I

Q.P. Code:1992

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Write in details about advantages of pulsatile perfusion over non pulsatile perfusion.
2. Write in details about different aortic cannulae and their merits and demerits over each other.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. What are the different direct ostial cardioplegia cannulae available and how are they used.
4. How will you manage blood transfusion reactions?
5. How will you monitor adequate anticoagulation on CPB?
6. What do you understand by heparin resistance and how will you manage it?
7. Controlled reperfusion.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. Assisted venous drainage.
9. Complications of cardioplegia solution.
10. Heparin less bypass.
11. Heparin alternatives.
12. Metabolic splanchnic response to CPB.

B.SC. IN NEUROSCIENCE TECHNOLOGY - V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED NEUROLOGY-I

Q.P. Code:1995

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Describe the classification of generalized epilepsies.
2. Discuss the causes, clinical features of cerebral haemorrhage.
3. Describe the clinical features and investigations for tubercular meningitis.

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. Clinical features of myasthenia gravis.
5. Viral encephalitis.
6. Amyotrophic lateral sclerosis.
7. Briefly discuss coma.
8. Absence epilepsy.
9. Name sleep disorders.

SHORT ANSWER QUESTIONS (All are compulsory):

5 X 3 = 15

10. Insomnia.
11. Neostigmine.
12. Phenobarbitone.
13. Sodium valproate.
14. Occipital lobe epilepsies.

**FIRST SEMESTER - B.Sc. NUTRITION AND DIETETICS
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

INTRODUCTION TO FOOD SCIENCE

Q.P. Code: 0136

Answers should be specific to the Questions asked.
Draw neat & labeled diagrams wherever necessary.
All the questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Discuss cooking methods both dry and moist heat cooking.
2. Name **five** micronutrients. What is micronutrients deficiency? Explain the effects of micronutrient deficiencies on health.
3. What is pasteurization? Add a note on its effect on nutritive value and flavor.

SHORT ESSAY QUESTIONS (Answer any EIGHT):

8 X 5 = 40

4. Write a note on nutritive value of eggs. Add a note on role of eggs in Indian cooking.
5. Define crystallization and factors affecting crystallization.
6. What are the factors affecting cooking of pulses?
7. Mention food groups and functions of food.
8. Explain role of nuts and oil seeds.
9. What is melting cereals?
10. Write a note on changes occurring during ripening of fruits.
11. Write a note on nutritive value of meat.
12. What are the harmful effects of spices consumed in excess?

SHORT ANSWER QUESTIONS (All are compulsory):

10 X 2 = 20

13. What are the flavor compounds present in fruits.
14. Compare the nutritive value of groundnut and cashew nut.
15. Write a note on cuts of meat.
16. Define plasticity.
17. Name the whey proteins. What is its importance?
18. Define meal and menu.
19. Define cottage cheese.
20. What are probiotics?
21. What is colostrum?
22. Define appetite.

**FIRST SEMESTER – BACHELOR OF PUBLIC HEALTH
BACHELOR OF PUBLIC HEALTH (HONS)
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

**BASIC SCIENCES-I
(Anatomy and Physiology)**

Q.P. Code:1851

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number	Marks
LONG ESSAY QUESTIONS:	2 X 10 = 20
1. Draw a neat labelled diagram of the heart and explain the gross anatomy of the heart.	
2. Draw a labeled diagram of a cell and enumerate its functions. Write in brief function of Golgi apparatus and Mitochondria with a diagram.	
SHORT ESSAY QUESTIONS:	8 X 5 = 40
3. Write in brief regarding six levels of organization of human body.	
4. Explain in brief valves of the heart.	
5. What is cell membrane? Write about functions of the cell membrane in detail.	
6. Differentiate between pulmonary v/s systemic circulation.	
7. Discuss functions of the respiratory system.	
8. Write about deglutition and its significance.	
9. Write in detail about the functions of kidneys.	
10. Enumerate organs of female reproductive system and write in detail about uterus.	
SHORT ANSWER QUESTIONS:	10 X 2 = 20
11. Mention any four parts of the central nervous system.	
12. List the different types of muscle fibers.	
13. What are the parts of the respiratory system?	
14. Enumerate the two zones of the cytoplasm.	
15. Enumerate functions of Hemoglobin.	
16. Give names of any four organ systems.	
17. List properties of cardiac muscles.	
18. Describe pharynx with a labeled diagram.	
19. State two components of the nephron.	
20. What is a sperm? List its parts.	

**FIRST SEMESTER – BACHELOR OF PUBLIC HEALTH
BACHELOR OF PUBLIC HEALTH (HONS)
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

HUMAN BIOLOGY

Q.P. Code:1851/A

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number	Marks
LONG ESSAY QUESTIONS:	2 X 10 = 20
1. Draw a neat labelled diagram of the heart and explain the gross anatomy of the heart.	
2. Draw a labeled diagram of a cell and enumerate its functions. Write in brief function of Golgi apparatus and Mitochondria with a diagram.	
SHORT ESSAY QUESTIONS:	8 X 5 = 40
3. Write in brief regarding six levels of organization of human body.	
4. Explain in brief valves of the heart.	
5. What is cell membrane? Write about functions of the cell membrane in detail.	
6. Differentiate between pulmonary v/s systemic circulation.	
7. Discuss functions of the respiratory system.	
8. Write about deglutition and its significance.	
9. Write in detail about the functions of kidneys.	
10. Enumerate organs of female reproductive system and write in detail about uterus.	
SHORT ANSWER QUESTIONS:	10 X 2 = 20
11. Mention any four parts of the central nervous system.	
12. List the different types of muscle fibers.	
13. What are the parts of the respiratory system?	
14. Enumerate the two zones of the cytoplasm.	
15. Enumerate functions of Hemoglobin.	
16. Give names of any four organ systems.	
17. List properties of cardiac muscles.	
18. Describe pharynx with a labeled diagram.	
19. State two components of the nephron.	
20. What is a sperm? List its parts.	

**FIFTH SEMESTER – BACHELOR OF PUBLIC HEALTH
BACHELOR OF PUBLIC HEALTH (HONS)
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

NATIONAL HEALTH PROGRAMS AND HEALTH LAWS

Q.P. Code:1865

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number	Marks
LONG ESSAY QUESTION:	2 X 10 = 20
1. Describe in detail the health strategies, notable elements and specific goals of national health policy 2002 of India.	
2. Enumerate the various national health programmes in India. Write in detail about any one of them.	
SHORT ESSAY QUESTIONS:	8 X 5 = 40
3. The environment protection act 1986.	
4. Discuss on preventive measures for HIV.	
5. What are the functions of food inspector and food analyst?	
6. Describe the components of RCH programme.	
7. The dowry prohibition act 1961.	
8. National blindness control programme.	
9. Essential new born care.	
10. Census act 1948 with amendments.	
SHORT ANSWER QUESTIONS:	10 X 2 = 20
11. Write any two key interventions in Tribal Malaria Action Plan (TMAP).	
12. Write any two components of National Leprosy Eradication Programme (NLEP).	
13. Designated Microscopy Centre (DMC).	
14. Write any two antilarval measures in integrated vector management.	
15. What is ICTC under NACO?	
16. Enlist any four diseases under national vector borne disease control programme.	
17. NIKSHAY.	
18. Write any two beneficiaries under ICDS scheme.	
19. Enlist any four diseases included in universal immunization programme.	
20. Write any two objectives under Iodine deficiency disorder programme (IDDP).	

**SIXTH SEMESTER B.SC. IN HOTEL MANAGEMENT & CATERING
TECHNOLOGY DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 70

ADVANCE CULINARY MANAGEMENT-II

Q.P. CODE: 1837

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number	Marks
1. A) Explain the term sous-vide include process and reason.	(5)
B) Is molecular gastronomy safe? Discuss.	(5)
C) Explain the term Spherification with example.	(5)
2. A) What are the care and precautions taken while preparing a sandwich? How should a sandwich be stored?	(5)
B) Explain different types of casings used in the preparation of sausages. What are the advantages and disadvantages of each one of them?	(5)
C) Explain the various sections in larder?	(5)
3. A) Explain HACCP standard in cruise kitchen.	(5)
B) Write the emergency handling procedures in cruise lines.	(5)
C) Expand FSSAI and write down the importance of FSSAI.	(5)
4. A) Explain the role of food journalist in the current era.	(5)
B) Write the difference between blog and vlog with two examples each.	(5)
C) Explain the process to become a food blogger.	(5)
5. A) What are the disadvantages of slow food? Any five .	(5)
B) Expand and explain the term AGMARK .	(5)

**B.SC. MLT, RADIOGRAPHY, ANAESTHESIA, CARDIAC CARE, NEUROSCIENCE,
PERFUSION, RENAL DIALYSIS TECHNOLOGY, OPTOMETRY, ENDOSCOPY,
EMERGENCY MEDICINE AND CRITICAL CARE TECHNOLOGY
I SEMESTER-FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 60

HUMAN PHYSIOLOGY-I AND BIOCHEMISTRY

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

Use separate answer books for Section A and Section B

SECTION A : HUMAN PHYSIOLOGY-I Q.P. CODE : 1902 [30 Marks]

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any ONE):	1 X 10 = 10
1. Draw a neat labeled diagram of cell. Explain functions of any four organelles.	(4+6)
2. Draw a neat labeled diagram of Neuromuscular junction. Describe the events of neuromuscular transmission.	(4+6)
SHORT ESSAY QUESTIONS (Answer any TWO):	2 X 5 = 10
3. Explain composition and functions of blood.	
4. Define synapse with classification of synapse.	
5. Name all the refractive errors of eye. Explain any two of them in detail.	
SHORT ANSWER QUESTIONS (All are compulsory):	5 X 2 = 10
6. Define primary active transport with example.	
7. Write the functions of rods and cones.	
8. Define and classify jaundice.	
9. Write functions of spinal cord.	
10. Classify body fluid compartments with normal values.	

SECTION B : BASICS OF BIOCHEMISTRY...Q.P. CODE : 1903 [30 Marks]

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any ONE):	1 X 10 = 10
1. Define First Aid. Enumerate the composition and the measures to be followed in First Aid.	(1+9)
2. Classify Proteins with suitable examples. Add a note on the biochemical importance of Proteins.	(7+3)
SHORT ESSAY QUESTIONS (Answer any TWO):	2 X 5 = 10
3. Define Monosaccharides. Classify Monosaccharides with suitable examples. Tabulate the biochemical importance of each monosaccharide	(1+2+2)
4. Discuss the tertiary structure of tRNA with a neat labeled Diagram. Add a note on its functions.	(3+2)
5. Define, Classify and tabulate the biochemical importance of various Phospholipids.	
SHORT ANSWER QUESTIONS (All are compulsory):	5 X 2 = 10
6. Define Nucleotides and Nucleosides with one example each.	
7. Define pH and Buffer.	
8. Define denaturation of proteins. Enumerate two properties of Denatured Proteins.	
9. Discuss the various types of chemical balance.	
10. Define the various levels of Organization of Proteins.	

B.SC. IN CARDIAC CARE TECHNOLOGY -V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

ECHOCARDIOGRAPHY

Q.P. Code:1991/B

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Describe echocardiographic features in various types of cardiomyopathies.
2. Write in detail about the echocardiographic features of Aortic stenosis and Aortic regurgitation.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Echo in constrictive pericarditis.
4. Echo in RHD-mitral regurgitation.
5. Echo features in ventricular septal defect.
6. Assessment of cardiac diastolic dysfunction.
7. Echo features in Ischaemic heart disease.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. Echo in mitral value prolapse.
9. Indications of trans-oesophageal echo.
10. Uses of contrast echocardiography.
11. Peripheral Doppler procedure.
12. Left atrial clot.

B.SC. IN RADIOGRAPHY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

IMAGING TECHNIQUE

Q.P. Code:1986/B

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Principles and functions of PET/CT fusion technology.
2. Write briefly about magnets, shim coils in MRI scanning.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Larmor frequency.
4. Discuss briefly about gamma camera.
5. Explain briefly T1 and T2 sequences.
6. Explain about various transducers used in USG with diagrams.
7. MRI artifacts.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. Ultrasound artifacts.
9. Window level and window width (CT).
10. CT number.
11. Peripheral lower limb venography.
12. Triplex Doppler.

B.SC. IN OPTOMETRY V SEMESTER – FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

OCULAR DISEASES + EYE AND SYSTEMIC DISEASES

Q.P. Code:0134

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Classify conjunctivitis. Discuss the clinical features and management of trachoma.
2. Explain etiopathogenesis of chalazion. Mention the clinical features and management.
3. Enumerate the complications of perforated corneal ulcer.

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. Enumerate the various causes of vitreous haemorrhage add a note on its management.
5. Enumerate the clinical features of Iridocyclitis.
6. Describe the clinical features of subconjunctival haemorrhage. Add a note on its management.
7. Explain swinging flash test.
8. Enumerate the clinical signs of ectopia-lentis.
9. Enumerate the ocular features of vitamin A deficiency.

SHORT ANSWER QUESTIONS (All are compulsory):

5 X 3 = 15

10. Enumerate the clinical features of coloboma eye.
11. Enumerate the clinical features of Proptosis.
12. Jones dye test.
13. Clinical features of Rosette cataract.
14. Draw a neat diagram of normal fundus and label the parts.

B.SC. RENAL DIALYSIS TECHNOLOGY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED DIALYSIS TECHNOLOGY-I

Q.P. Code:0123

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. What is anticoagulation during haemodialysis? What are the drugs used its complication and how to prevent?
2. What are the complications during dialysis? How to prevent them?

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. How do you assess adequacy of haemodialysis?
4. How do you assess adequacy of peritoneal dialysis?
5. What are the vascular accesses for haemodialysis?
6. Write about theory of haemodialysis.
7. What are the vascular access complications?

SHORT ANSWER QUESTIONS (Answer any THREE):

3 X 5 = 15

8. What are indications for haemodialysis?
9. Mention types of dialysis.
10. What are long term complications of haemodialysis?
11. What is protamine sulphate and how to use it?
12. What is exit site infection and how to treat it?

B.Sc. IN MEDICAL LABORATORY TECHNOLOGY–V SEMESTER
FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

CYTOLOGY & CYTOGENETICS

Q.P. Code:1983

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any TWO):	
	2 X 10 = 20
1. Discuss the procedure of collection and preparation of sample for cervical malignancy. Write the characteristics of normal and malignant cells on cervical smears with diagram.	(5+5)
2. Classify cytological fixatives. Discuss the cytoplasmic fixatives.	(5+5)
3. Discuss method of collection and routine examination of CSF.	(3+7)
SHORT ESSAY QUESTIONS (Answer any FIVE):	
	5 X 5 = 25
4. Discuss principle and preparation of Papanicolaou stain.	
5. Discuss procedure and applications of Cytospin.	
6. Discuss principle and applications of flow cytometry.	
7. Discuss the advantages and disadvantages of fine needle aspiration cytology.	
8. Write a note on mountants used in cytology.	
9. Discuss cytology of normal breast with a diagram.	
SHORT ANSWER QUESTIONS (All are compulsory):	
	5 X 3 = 15
10. Preparation of May-Grunwald Giemsa stain.	
11. Maturation index.	
12. Enumerate the contaminants found in cervical smears.	
13. Write a note on regressive staining using example.	
14. Write the procedure of Rapid H&E and mention its advantages.	

B.SC. IN RADIOGRAPHY-V SEMESTER FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

IMAGING TECHNIQUE-CT

Q.P. Code:1986

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Write briefly on computed tomography principle, data acquisition, pixel and voxel.
2. Instrumentation of computed tomography.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Write a note on CT angiography.
4. Describe various image reconstruction techniques in CT.
5. Write a note on CT fluoroscopy.
6. Write a note on helical and multislice computed tomography.
7. Describe the procedure of CT urography.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. CT detectors.
9. Hounsfield units.
10. Window level.
11. Window width
12. CT artifacts.

B.S.C. IN ANESTHESIA TECHNOLOGY-V SEMESTER
FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED ANAESTHESIA TECHNOLOGY-II

Q.P. Code:1988

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any TWO):	2 X 10 = 20
1. Write in detail about setting up a day care unit. Explain fast tracking.	
2. Anaesthetic preparation of patient posted for tonsillectomy.	
3. Classify local anaesthesia. Mechanism of action and treatment of LAST.	
SHORT ESSAY QUESTIONS (Answer any FIVE):	5 X 5 = 25
4. MRI and anaesthesia.	
5. Oxygen therapy in recovery.	
6. Post-operative epidural analgesia and preparation of OT.	
7. Preparation, loading of emergency drug and infusion.	
8. List drug used for general anaesthesia with their dosage.	
9. With a neat and label diagram explain endotracheal tube.	
SHORT ANSWER QUESTIONS (All are compulsory):	5 X 3 = 15
10. Occulo cardiac reflex.	
11. Peri-operative fluid used.	
12. Complication seen in recovery room.	
13. NSAID.	
14. PEEP and list physiological effects.	

B.S.C. IN CARDIAC CARE TECHNOLOGY -V SEMESTER
FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

ECHOCARDIOGRAPHY

Q.P. Code:1991

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Discuss echocardiographic features of myocardial infarction/ Ischemic heart disease.
2. Discuss echocardiogenic features of infective endocarditis.
3. Describe the echo features in mitral stenosis & mitral regurgitation.

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. Echo assessment of prosthetic heart valves.
5. Echo in HOCM.
6. Tissue Doppler imaging and its clinical applications.
7. Echo in Pulmonary hypertension.
8. Echo features in TOF.
9. Echo in Dextrocardia.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

10. Echo in PDA.
11. Echo in COA.
12. Mention contraindications of TEE.
13. Basic principle of stress echo.
14. Mention complications of TAVR.

B.S.C. IN PERFUSION TECHNOLOGY -V SEMESTER
FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

ADVANCED PERFUSION TECHNOLOGY-II

Q.P. Code:1993

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Write an essay on intra-aortic balloon pump.
2. How will you manage oxygen and carbon dioxide on ECMO?

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Complications of ECMO.
4. How perfusion techniques in paediatric cardiac surgery differ from an adult?
5. Cannulation strategy in minimal invasive cardiac surgery.
6. Ventilation strategy in ECMO.
7. Assessment and management of blood products on ECMO.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. Arterial cannulation in VA ECMO.
9. Endoaortic cross clamp.
10. Venting in minimal invasive cardiac surgery.
11. Aortic cross clamping: modifications in minimal invasive cardiac surgery.
12. Experimental perfusion.

B.SC. IN NEUROSCIENCE TECHNOLOGY –V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED TECHNOLOGY-V ELECTROENCEPHALOGRAPHY

Q.P. Code:1996

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Describe the EEG findings during spontaneous sleep.
2. Describe the benign physiological variants in EEG.
3. Describe the EEG findings in metabolic diseases.

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. EEG changes in encephalitis.
5. EEG in temporal lobe epilepsies.
6. Brain mapping.
7. EEG findings in brain death.
8. EEG during Non-rapid eye movement (NREM) sleep.
9. EEG findings in acute stroke.

SHORT ANSWER QUESTIONS (All are compulsory):

5 X 3 = 15

10. Triphasic waves.
11. Polysomnography.
12. EEG findings in absence epilepsy.
13. Beta activity.
14. Theta activity.

**FIRST SEMESTER - B.Sc. NUTRITION AND DIETETICS
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

PRINCIPLES OF HUMAN NUTRITION

Q.P. Code: 0137

Answers should be specific to the Questions asked.
Draw neat & labeled diagrams wherever necessary.
All the questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Define RDA. Explain factors affecting RDA.
2. Explain different types of physical activity level with example.
3. Write a note on geographical distribution of food grains in India.

SHORT ESSAY QUESTIONS (Answer any EIGHT):

8 X 5 = 40

4. Write a note on global food history.
5. Write a note on sources of lipids, proteins and carbohydrates.
6. Classify proteins and discuss functions of proteins.
7. Write a note on IDD.
8. Write a note on sources of Folic acid and cobelmine.
9. Write a note on RDA and sources of water soluble vitamins.
10. Define carbohydrates. Classify carbohydrates with example.
11. Write a note on polysaccharides.
12. Write a note on Megaloblastic pernicious anemia.

SHORT ANSWER QUESTIONS (All are compulsory):

10 X 2 = 20

13. Define Mesolithic age.
14. Define energy metabolism.
15. Write components of energy expenditure.
16. Name any **four** essential amino acids.
17. What is hypertonic contraction and expansion of ECF?
18. Define malnutrition.
19. Define dieting fiber. Write any **two** uses.
20. Explain functions of calcium and zinc.
21. Write sources and functions of pyridoxine.
22. Define man reference.

**FIRST SEMESTER – BACHELOR OF PUBLIC HEALTH
BACHELOR OF PUBLIC HEALTH (HONS)
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

INTRODUCTION TO HEALTH DISEASES

Q.P. Code:1852

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Define health. Explain dimensions of health.
2. Define epidemiological. Explain its scope and uses.

SHORT ESSAY QUESTIONS:

8 X 5 = 40

3. Discuss the natural history of disease with suitable examples.
4. What are the indicators of health? Briefly explain all of these.
5. Describe the different levels of preventions.
6. Describe the general measures for control of communicable diseases.
7. Describe briefly modes of transmission of diseases.
8. Write in detail about Physical Quality of Life Index. (PQLI).
9. Explain reservoir of infection with example.
10. Discuss the scope of public health.

SHORT ANSWER QUESTIONS:

10 X 2 = 20

11. Define health.
12. List any **four** determinants of health.
13. Expand DALY and QALY.
14. Give two examples of primordial prevention.
15. Define rate and ratio.
16. Define incidence.
17. Define prevalence.
18. Define droplet infection.
19. What is vocational rehabilitation?
20. What is crude death rate?

**FIFTH SEMESTER – BACHELOR OF PUBLIC HEALTH
BACHELOR OF PUBLIC HEALTH (HONS)
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

**INTRODUCTION TO ORGANIZATIONAL DEVELOPMENT, MEDICAL
ENTOMOLOGY AND OCCUPATIONAL HEALTH**

Q.P. Code:1866

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTION:

2 X 10 = 20

1. Diagrammatic representation of life cycle of Culex mosquito and write about control and prevention measures.
2. Write on ESI act?

SHORT ESSAY QUESTIONS:

8 X 5 = 40

3. National Vector borne diseases control program.
4. Diagrammatic representation of life cycle of ticks.
5. Write about principles of occupational health and safety.
6. Explain in detail about stress.
7. Diagrammatic representation of life cycle of cockroach and its control and prevention measures.
8. Write principles of control measure of arthropod.
9. Diagrammatic representation of housefly and its control and prevention measures.
10. Define Ergonomics? Write about principles of ergonomics.

SHORT ANSWER QUESTIONS:

10 X 2 = 20

11. Larvicides.
12. Taxonomy of mosquito.
13. General flea index and specific flea index.
14. House index and container index.
15. Write on morphological difference between hard and soft tick.
16. Write **four** differences between head and body louse.
17. Define insecticides and write the classification of insecticides.
18. Disease transmitted through cockroaches.
19. Diseases transmitted through ticks.
20. Define DDT.

**SIXTH SEMESTER B.SC. IN HOTEL MANAGEMENT & CATERING
TECHNOLOGY DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 70

ADVANCE FOOD AND BEVERAGE MANAGEMENT-II

Q.P. CODE: 1838

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number		Marks
1.	A) In a hotel hierarchy who is Maitre d hotel? Explain the role and responsibility.	(5)
	B) Explain the duties and responsibilities of a a) Carver b) Sommelier.	(5)
	C) What are the objectives of food and beverage control operations?	(5)
2.	A) Draw and explain four box analyses.	(5)
	B) What are the different methods of food control?	(5)
	C) Explain the importance of aesthetics of a restaurant.	(5)
3.	A) Explain the role of online food aggregators, dine out in restaurant business.	(5)
	B) Expand FSSAI and AGMARK and write their importance?	(5)
	C) How do social media help in advertising food and beverage?	(5)
4.	A) Expand SWOT and explain the importance in menu engineering.	(5)
	B) Describe the importance of meal experience in a hotel.	(5)
	C) Explain the attributes of food and beverage service personnel.	(5)
5.	A) How could you prevent pilferage & fraud?	(5)
	B) Draw a duty roaster from July 1 st to 7 th for a 24 hour 300 cover coffee shop with proper staffing which should also mention M/S, A/S, N/S, B/S, N/H, CL, SL, OFF, C/O.	(5)

**B.SC. MLT, RADIOGRAPHY, ANAESTHESIA, CARDIAC CARE, NEUROSCIENCE,
PERFUSION, RENAL DIALYSIS TECHNOLOGY, OPTOMETRY, ENDOSCOPY,
EMERGENCY MEDICINE AND CRITICAL CARE TECHNOLOGY-I
SEMESTER FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 60

HEMATOLOGY & CLINICAL PATHOLOGY AND MICROBIOLOGY-I

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

Use separate answer books for Section A and Section B

SECTION A : PATHOLOGY- BASIC HAEMATOLOGY Q.P. CODE : 1904 [30 Marks]

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any ONE):	1 X 10 = 10
1. Discuss the principle, composition partum of staining reagents and procedure of Romanowsky stain.	(1+2+2+5)
2. Define ESR give normal values and give the different methods of estimation. Describe any one method in detail.	(2+3+5)
SHORT ESSAY QUESTIONS (Answer any TWO):	2 X 5 = 10
3. Discuss methods of blood grouping.	
4. Cyanmeth haemoglobinometry-advantages and disadvantages.	
5. Reticulocyte count-normal values and methods of estimation.	
SHORT ANSWER QUESTIONS (All are compulsory):	5 X 2 = 10
6. Methods of preparation of blood films.	
7. Platelet count.	
8. Techniques of collection of blood-describe.	
9. Red cell indices-discuss	
10. Absolute Eosinophil count.	

SECTION B : MICROBIOLOGY-I...Q.P. CODE : 1905 [30 Marks]

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any ONE):	1 X 10 = 10
1. Describe the nutritional requirements of bacteria. Discuss bacterial growth curve. Add a note on culture media used for growing bacteria.	(3+5+2)
2. Describe bacterial cell with help of a neat labeled diagram. Explain the structure and functions of bacterial cell wall in detail.	(4+6)
SHORT ESSAY QUESTIONS (Answer any TWO):	2 X 5 = 10
3. Explain bacterial growth curve.	
4. Explain the principle and uses of autoclave in the health care settings.	
5. Explain the mechanisms of drug resistance among bacteria.	
SHORT ANSWER QUESTIONS (All are compulsory):	5 X 2 = 10
6. List four mechanisms of gene transfer in bacteria.	
7. Write two uses of dark ground microscope.	
8. Classify bacteria and give one example in each group.	
9. What is antiseptic? Give two examples.	
10. Define sterilization. Name two methods of dry heat sterilization.	

B.SC. IN OPTOMETRY V SEMESTER – FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

OCULAR PATHOLOGY AND OCULAR MICROBIOLOGY

Q.P. Code:0135

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Enumerate the signs and symptoms of retinoblastoma.
2. Enumerate the signs and symptoms of toxoplasmosis. Enumerate etiopathogenesis.
3. Enumerate the various signs of viral ulcer. Add a note on staining of viral ulcer.

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. Enumerate the various routes of spread of malignant tumours.
5. Explain tumour differentiation.
6. Explain the signs of ocular mucromycosis. Add a note on histopathology.
7. Enumerate the various plates used in ophthalmology.
8. Gram staining. Explain its uses.
9. Explain the etiopathogenesis of conjunctivitis.

SHORT ANSWER QUESTIONS (All are compulsory):

5 X 3 = 15

10. KOH mount.
11. Explain chemical disinfectant.
12. ELISA test.
13. Immunoglobulin M.
14. Red blood cells in iron deficiency anemia.

B.SC. RENAL DIALYSIS TECHNOLOGY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED DIALYSIS TECHNOLOGY-II

Q.P. Code:0124

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Write about dialyser reuse, its advantages and disadvantages methods.
2. What you mean by SLED dialysis? Which condition it is used, its advantages and disadvantages.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. What are the problems are anticipated in haemodialysis with children and infants?
4. What are different modalities of peritoneal dialysis?
5. What are precautions you likely to take when you consider dialysis for HIV, HBsAg and HCV patients?
6. What is the role of haemodialysis in poisoning and what all poisoning cases it are used?
7. How do you carry out haemodialysis in pregnant patients?

SHORT ANSWER QUESTIONS (Answer any THREE):

3 X 5 = 15

8. What is MARS?
9. What you mean by Haemodiafiltration and its uses.
10. Write what are different modalities of continuous haemodialysis (CRRT).
11. What is haemoperfusion where it is used?
12. What are difficulties faced in patient of CCR taken for haemodialysis?

B.Sc. IN MEDICAL LABORATORY TECHNOLOGY–V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

PARASITOLOGY & MYCOLOGY

Q.P. Code:1984

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

10 X 2 = 20

1. Describe the morphology, life cycle and laboratory diagnosis of Hook worms. (2+3+5)
2. Enumerate the infections caused by candida species. Write a note on their laboratory diagnosis with special reference to antifungal susceptibility tests. (2+5+3)
3. Describe the morphology life cycle and laboratory diagnosis of Filariasis. (2+4+4)

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. Describe the morphology, pathogenesis and life cycle of Leishmaura species.
5. Explain the laboratory diagnosis of cryptococcal meningitis.
6. Describe the morphology, life cycle and pathogenesis of Toxoplasma gondii.
7. Discuss the laboratory diagnosis of Malaria.
8. Explain the morphology and pathogenesis of mucorales.
9. Describe stool concentration techniques.

SHORT ANSWER QUESTIONS (All are compulsory):

5 X 3 = 15

10. List three Dermatophytes and the clinical conditions caused by them.
11. Name three fungi causing deep mycosis along with the clinical condition caused by them.
12. Classify fungi.
13. Draw a neat labelled diagram of Giardia lamblia.
14. Name three stains used studying the fungi with examples.

B.S.C. IN RADIOGRAPHY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

IMAGING TECHNIQUE-MRI

Q.P. Code:1111

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Write the instrumentation for MRI.
2. Discuss in detail the imaging sequence in MRI.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Explain RF coils, shim coils and gradient coils.
4. Explain T1 and T2 relaxation times, and make a comparison between them
5. Write about MRI image quality and artifacts.
6. Write briefly principle and larmor frequency in MRI.
7. Write briefly on magnets of MRI.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. T1 and T2 weighted image.
9. Inversion recovery.
10. Limitations in MRI.
11. MR contrast agent.
12. Signal to noise ratio.

B.SC. IN ANESTHESIA TECHNOLOGY -V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED ANAESTHESIA TECHNOLOGY-III

Q.P. Code:1989

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any TWO):	2 X 10 = 20
1. Write in detail about setting difficult airway cart and fibrotic bronchoscope.	
2. Anaesthetic management of patient with COPD.	
3. Classification of LMA. Indication and contraindication of LMA.	
SHORT ESSAY QUESTIONS (Answer any FIVE):	5 X 5 = 25
4. Role of regional anaesthesia in patient with IHD.	
5. Precaution taken before and during blood transfusion.	
6. Explain OT preparation of 2 year old patient posted for cystoscopy.	
7. Smoking and anaesthesia.	
8. TAP block.	
9. Preoperative evaluation and pre-partum of patient with liver disease.	
SHORT ANSWER QUESTIONS (All are compulsory):	5 X 3 = 15
10. Mallapathi grading.	
11. Dosage, indication and adverse effect of NTG.	
12. Numerical rating scale.	
13. Aspiration pneumonia.	
14. LMA.	

B.SC. IN CARDIAC CARE TECHNOLOGY -V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

INTERVENTIONAL CARDIOLOGY

Q.P. Code:1112

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (Answer any TWO):

2 X 10 = 20

1. Describe indications & contraindications, procedure, materials used and complications for PDA device closure.
2. Describe indications & contraindications, procedure, materials used and complications for coronary angioplasty.
3. Describe indications & contraindications, procedure, materials used and complications for Balloon aortic valvuloplasty.

SHORT ESSAY QUESTIONS (Answer any FIVE):

5 X 5 = 25

4. Discuss indications, contraindications & interpretation of Cardiac CT scan.
5. Discuss materials used in Cath lab.
6. Describe procedure of PDA coil closure.
7. Interpretation of views & angles in coronary angiogram.
8. Discuss Coronary stents.
9. Discuss BMV in pregnancy

SHORT ANSWER QUESTIONS:

5 X 3 = 15

10. Mention indications for OCT.
11. Indications & contraindications of TAVR.
12. Interpretation of OCT.
13. Indications & contraindications of FFR.
14. Mention indications & contraindications of cardiac MRI.

B.SC. IN PERFUSION TECHNOLOGY -V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

MEDICINE RELEVANT TO PERFUSION TECHNOLOGY

Q.P. Code:1994

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Morphology of atherosclerosis its risk factors and significance.
2. Compare cyanotic and acyanotic congenital heart diseases.

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Mitral stenosis and its complications.
4. Clinical manifestations of renal diseases.
5. Pulmonary edema.
6. Host response to biomaterials.
7. Causes of hemolytic anemia and its prevention during CPB.

SHORT ANSWER QUESTIONS:

5 X 3 = 15

8. Complications of myocardial ischaemic diseases.
9. What are the effects of aortic regurgitation on heart?
10. Write a short note on pericardial effusion.
11. Iron deficiency anemia.
12. Causes of pleural effusion.

B.SC. IN NEUROSCIENCE TECHNOLOGY –V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED TECHNOLOGY-VI ELECTRONEUROMYOGRAPHY

Q.P. Code:1113

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS (answer any TWO):

2 X 10 = 20

1. Describe the nerve conduction studies in carpal tunnel syndrome.
2. Discuss the physiological variable affecting nerve conduction studies.
3. Describe the repetitive nerve stimulation technique.

SHORT ESSAY QUESTIONS (answer any FIVE):

5 X 5 = 25

4. Role of F-response recording.
5. Nerve conduction findings in cervical radiculopathies.
6. Magnetic stimulation of peripheral nerves.
7. Event related potential.
8. Decremental response.
9. Uses of electroneuromyography.

SHORT ANSWER QUESTIONS (All are compulsory):

5 X 3 = 15

10. Medical cutaneous nerve of forearm conduction.
11. Temporal dispersion of CMAP.
12. Electroneuromyography.
13. H-reflex.
14. Radial sensory nerve conduction.

**FIRST SEMESTER - B.Sc. NUTRITION AND DIETETICS
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

NUTRITIONAL BIOCHEMISTRY-I

Q.P. Code: 0138

Answers should be specific to the Questions asked.
Draw neat & labeled diagrams wherever necessary.
All the questions are compulsory.

Question Number	Marks
LONG ESSAY QUESTIONS (Answer any TWO):	2 X 10 = 20
1. Name the Ketone bodies. How are they formed in the body? Describe the role of ketone bodies in starvation and in severe uncontrolled diabetes mellitus.	(1+6+3)
2. Explain the factors affecting enzyme activity with the help of graphical representation.	
3. Describe how glucose is metabolized to pyruvate in the body. Discuss the fate pyruvate in erythrocytes.	(8+2)
SHORT ESSAY QUESTIONS (Answer any EIGHT):	8 X 5 = 40
4. Explain with diagram competitive inhibition of enzymes. Give one example.	
5. Enumerate the different transport mechanisms across the cell membrane with suitable examples.	
6. Explain in detail the digestion and absorption of lipids.	
7. Explain Anaplerotic reactions Krebs's cycle.	
8. List the cell organelles with their functions.	
9. What is suicide inhibition of enzymes? Give one example.	
10. Write the modified Bloor's classification of lipids with examples.	
11. Explain the role of enzymes in blood glucose homeostasis.	
12. What are lipoproteins? Classify them and explain their functions.	(1+2+2)
SHORT ANSWER QUESTIONS (All are compulsory):	10 X 2 = 20
13. Describe lactose intolerance.	
14. List the different isoenzymes forms of creatine kinase with their tissue of origin.	
15. What are aquaporin's, mention there location.	
16. Describe the glycosidic linkage and composition of any two disaccharides.	
17. What are essential fatty acids? Give examples.	
18. Mention two examples of oxidoreductares group of enzymes.	
19. List four cell organelles with their functions.	
20. Mention the normal range of blood glucose levels: a) Fasting b) Random c) Post Prandial.	
21. Mention two functions of phospholipids.	
22. Name two derivatives of cholesterol.	

**FIRST SEMESTER – BACHELOR OF PUBLIC HEALTH
BACHELOR OF PUBLIC HEALTH (HONS)
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

SOCIAL SCIENCE

Q.P. Code:1853

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Define demography and write about demographic cycle.
2. Family in health and disease.

SHORT ESSAY QUESTIONS:

8 X 5 = 40

3. Sample registration system.
4. Social survey. Field study.
5. Explain about family life cycle stages.
6. Write note on importance of demography in public health.
7. Define motivation and write its types.
8. Define learning and write its types.
9. Functions of family.
10. Define population pyramid and explain about types of population pyramid.

SHORT ANSWER QUESTIONS:

10 X 2 = 20

11. Literacy rate.
12. Define society and community.
13. Fertility.
14. Write **four** differences between joint and unclear family.
15. Write any **four** comparison of population pyramid between developing and developed countries.
16. Define bias and write its types.
17. Socio economic status.
18. Sex ratio.
19. Eligible couple.
20. Dependency ratio.

**FIFTH SEMESTER – BACHELOR OF PUBLIC HEALTH
BACHELOR OF PUBLIC HEALTH (HONS)
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

BASICS OF HEALTH PLANNING AND MANAGEMENT

Q.P. Code:1867

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTION:

2 X 10 = 20

1. Define health planning. Write in detail the three approaches in planning.
2. Elaborate on interventions of organization development.

SHORT ESSAY QUESTIONS:

8 X 5 = 40

3. Explain the Panchayati Raj system in India.
4. Discuss Maslow's hierarchy of needs with a diagram.
5. Write about the phases of organizational development.
6. Discuss in detail regarding the conflict process.
7. Explain the sub systems of human resource development.
8. Write in detail the methods of management based on behavioral sciences.
9. Explain the methods of time management.
10. What is HRD? Write about the roles of HRD professionals.

SHORT ANSWER QUESTIONS:

10 X 2 = 20

11. Draw a diagrammatic representation of a planning cycle.
12. What is a programme?
13. Mention any **two** importance of planning cycle.
14. What is pre planning?
15. Give **two** recommendations of mudliar committee.
16. Who is a village level worker?
17. Explain health needs and demands.
18. What are the **five** stages of team building?
19. Write **two** uses of Maslow's theory of motivation.
20. Define leadership.

**SIXTH SEMESTER B.SC. IN HOTEL MANAGEMENT & CATERING
TECHNOLOGY DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 70

FRONT OFFICE MANAGEMENT-II

Q.P. CODE: 1839

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number	Marks
1. A) Expand GOPPAR and explain why it is considered better revenue metric to assess the performance of a hotel than RevPAR. How is it calculated?	(5)
B) Describe the following revenue management tactics and identify if they are high demand tactics or low demand tactics. i. Apply minimum length of stay restrictions. ii. Offer stay-sensitive price incentives.	(5)
C) What is the role of front office in yield management?	(5)
2. A) A 450 room hotel has an occupancy of 78% has 3000 rooms and 3 COMP rooms and House use rooms on a particular day. If the ADR for the day was Rs. 7648/- revenue from F & B and other POS was Rs. 14,76,872/- and the house count was 600 of which, 466 were Indians, calculate: i. Multiple occupancy percentage ii. RevPAR iii. TRR	(5)
B) A 450 room hotel has an occupancy of 78% has 3000 rooms and 3 COMP rooms and House use rooms on a particular day. If the ADR for the day was Rs. 7648/- revenue from F & B and other POS was Rs. 14,76,872/- and the house count was 600 of which, 466 were Indians, calculate: i. ARG (Average Rate per Guest) ii. REVPAC iii. Foreign Occupancy percentage iv. Bed occupancy percentage	(5)
C) Differentiate between i. Floating and rotating timeshare ownership ii. Booking pace and booking lead time.	(5)
3. A) Write short notes: a) Achievement factor b) Displacement c) Identical yield d) Referral hotels	(5)
B) Hotel Royal Inn has 300 single and 500 double rooms. The rack rate is as follows: single room on single occupancy: 4000/-, single room on double occupancy: 6000/-, double room on single occupancy: 7000/-, double room on double occupancy: 9000/-, rooms on multiple occupancy are 600/-, average occupancy= 90% and ARR=5000/- calculate a) PAR b) Yield.	(5)
C) Define Timeshare. Describe the various types of timeshare options.	(5)
4. A) Describe some of the potential high and low demand tactics used by a transit/airport hotel.	(5)
B) Throw light on the Government's role towards enhancing the timeshare business in India.	(5)
C) Discuss the reports generated by the revenue management software.	(5)
5. A) Give formula for the following: a) Rate Spread b) Potential average rate	(5)
B) What are the various methods of a guest account settlement?	(5)

B.SC. RENAL DIALYSIS TECHNOLOGY-V SEMESTER

FEBRUARY 2023

Time: 3 Hours

Max. Marks: 60

APPLIED DIALYSIS TECHNOLOGY-3

Q.P. Code:0125

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. What is renal anemia in chronic dialysis patient? How do you investigate and treat?
2. What are the infections in haemodialysis patients and how to overcome?

SHORT ESSAY QUESTIONS:

5 X 5 = 25

3. Write about online dialysis.
4. Aluminium toxicity in haemodialysis its problems and how to avoid?
5. Write in brief about water treatment system in haemodialysis.
6. What is the role of Telemedicine in dialysis programme?
7. What is plasmapheresis? Indications and complications.

SHORT ANSWER QUESTIONS (Answer any THREE):

3 X 5 = 15

8. What is Nocturnal dialysis? Its advantages and disadvantages.
9. Write about bone disease in dialysis how to treat?
10. How do you treat hypertensive emergency during haemodialysis.
11. How do you deal with psychological issue in patient with dialysis?
12. What all problems anticipate in patient considered for haemodialysis?

**FIRST SEMESTER – BACHELOR OF PUBLIC HEALTH
BACHELOR OF PUBLIC HEALTH (HONS)
DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 80

INTRODUCTION TO HEALTH CARE DELIVERY SYSTEM

Q.P. Code: 1854

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number

Marks

LONG ESSAY QUESTIONS:

2 X 10 = 20

1. Write briefly about founders of modern public health.
2. India was able to achieve millennium development goals. Justify.

SHORT ESSAY QUESTIONS:

8 X 5 = 40

3. What are the roles and responsibilities of ASHA?
4. Who can be an Anganwadi worker and what her role in ICDS is.
5. What are the services provided by UNICEF?
6. Write the differences between public health care and medical care.
7. Explain in detail about comprehensive health care.
8. Write in detail about functions and staffing pattern at subcentre.
9. Write about brief about Greek medicine.
10. What are the duties of medical officer?

SHORT ANSWER QUESTIONS:

10 X 2 = 20

11. Define health.
12. Mention any **four** functions of health worker male.
13. What principles of primary health care?
14. How many regional head officers are under WHO and name them?
15. Principles of ayurvedic medicine.
16. What is population covered under CHC.
17. How many ASHAs will be required for 5000 population?
18. Mention any **two** functions of red cross society.
19. Mention **two** principles of Chinese medicine.
20. Define primary health care.

**SIXTH SEMESTER B.Sc. IN HOTEL MANAGEMENT & CATERING
TECHNOLOGY DEGREE EXAMINATION – FEBRUARY 2023**

Time: 3 Hours

Max. Marks: 70

ACCOMMODATION MANAGEMENT-II

Q.P. CODE: 1840

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number		Marks
1.	A) What are the five basic fire safety practices?	(5)
	B) What is the most important thing for security in a hotel?	(5)
	C) What are the preventive measures to control the crime?	(5)
2.	A) What are the three basic categories of window treatments?	(5)
	B) What is the importance of accessories in guest room?	(5)
	C) Explain the importance of design in a restaurant.	(5)
3.	A) How does refurbishing and redecoration is done in rooms?	(5)
	B) What is the importance of design in hospitality facilities planning?	(5)
	C) What is the importance of space allocation in the hospitality industry?	(5)
4.	A) What are the different records maintained in the housekeeping department?	(5)
	B) What is ABC in fire extinguishers?	(5)
	C) What are the types of fire extinguishers?	(5)
5.	A) Why is there a need to have different colors for different areas of a hotel?	(5)
	B) What are the major design considerations in designing hotel?	(5)
