

**SECOND SEMESTER - M.Sc. IN PSYCHOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PSYCHOLOGICAL STATISTICS**

**Q.P. Code: 1936**

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

<b>Question Number</b>		<b>Marks</b>
<b>LONG ESSAY QUESTIONS</b>		
1.	a. Elucidate the purpose of statistics with special reference to tabulation of data. Or b. What are the measures of central tendencies.	15
2.	a. Explain standard deviation with an example. Or b. Describe the steps involved in ANOVA.	15
3.	a. When do you use 't' test and how do you interpret 't' test result? Or b. Define correlation. Discuss the steps involved in the computation of product – moment correlation.	15
4.	a. What are the non-parametric statistics? Or b. Explain the procedure of factor analysis.	15
<b>Write short notes on any FOUR of the following</b>		<b>4 X 5 = 20</b>
5.	Histograms	
6.	Range	
7.	Levels of significance.	
8.	Rank order correlation.	
9.	Test of normality.	
10.	SPSS.	

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**FOURTH SEMESTER - M.Sc. IN PSYCHOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**HEALTH PSYCHOLOGY**

**Q.P. Code: 1945**

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

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS</b>	
1. a. Elucidate the nature and scope of health psychology. Or b. Discuss any two health psychology models.	15
2. a. Discuss changing health habits. Or b. Explain cognitive-behavioural approach to understand health behaviour.	15
3. a. Explain the etiology and management of coronary heart disease. Or b. Delineate enhancing behaviors.	15
4. a. Elucidate the physical and behavioral symptoms of stress. Or b. Define pain. Discuss the elusive nature of pain.	15
<b>Write short notes on any FOUR of the following</b>	<b>4 X 5 = 20</b>
5. Body-mind dualism.	
6. Changing patterns of illness.	
7. Modifying health behaviour.	
8. HIV/AIDS.	
9. Relationship between SES and stress.	
10. Significance of pain.	

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**SECOND SEMESTER – M.Sc. IN BIOTECHNOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**BIOENGINEERING AND BIOINFORMATICS**

**Q.P. Code: 1544**

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 15 = 30**

1. Explain bacterial artificial chromosomes (BAC) and yeast artificial chromosomes (YACs).
2. Briefly explain plasmids, cosmids and tiplosmid.
3. Describe rDNA technology usage in agriculture with suitable examples.

**SHORT ESSAY QUESTIONS (Answer any FIVE):**

**5 X 10 = 50**

4. Explain PCR its design and optimization.
5. Explain briefly about transgenic plants.
6. Briefly explain human genome project.
7. Describe search engines with suitable examples.
8. Explain use of PCR in molecular biology
9. Write a note on enzymes used in genetic engineering.
10. Describe RAPD.

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**KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.**

(Declared as Deemed-to-be-University u/s 3 of the UGC Act, 1956)

Accredited A<sup>+</sup> Grade by NAAC (3<sup>rd</sup> Cycle)

Placed in 'A' Category by MHRD (GoI)

**SECOND SEMESTER - MASTER OF HOSPITAL ADMINISTRATION  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER – I: PREVENTIVE & SOCIAL MEDICINE**

**Q.P. Code: 1704**

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

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS (All are compulsory):**

**4 X 15 = 60**

1. What is India's Maternal mortality rate (MMR)? How many women died in childbirth last year in India? .
2. Discuss case control and Cohort studies in detail with examples.
3. Discuss classification of diseases and notifiable diseases in detail.
4. What are India's birth rate, death rate and total fertility rate (TFR)? How many births and deaths take place in India every year? What is replacement level TFR? When will India reach replacement level of TFR.

**SHORT ESSAY QUESTIONS (Answer any TWO):**

**2 X 10 = 20**

5. Role of WHO in health.
6. Discuss the principles of occupational health environmental health in detail.
7. Medico Social Work.
8. Discuss the principles and dynamics of disease transmission in detail.

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**FOURTH SEMESTER - MASTER OF HOSPITAL ADMINISTRATION  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER –I : HOSPITAL PLANNING AND PROJECT MANAGEMENT**

**Q.P. Code: 1710**

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

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS (All are compulsory):**

**4 X 15 = 60**

1. Discuss the various ratios used for infrastructure, space, manpower and cost when planning a hospital.
2. Discuss the various factors that determine the size and type of hospital
3. Discuss the AERB guidelines for the radiology department with suitable examples.
4. Discuss the role and function of the hospital in a community.

**SHORT ESSAY QUESTIONS (Answer any TWO):**

**2 X 10 = 20**

5. What is an architect's brief?
6. Discuss the planning of blood bank in a hospital.
7. Discuss domiciliary care and home care visits.
8. Discuss the planning of laboratory services in a hospital.

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**SECOND SEMESTER - M.Sc. NUTRITION AND DIETETICS  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**NUTRITIONAL BIOCHEMISTRY - II**

**Q.P. Code: 1955**

Answers should be specific to the Questions asked.

Draw neat & labeled diagrams wherever necessary.

All the questions are compulsory.

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 15 = 30</b>
1. Discuss in detail about the various factors affecting enzyme activity. Add a note on coenzymes and cofactors.	10+2.5+2.5
2. What is $\beta$ -oxidation? Discuss the pathway in detail the steps of $\beta$ -oxidation. Add a note on its regulation	1+10+4
<b>SHORT ESSAY QUESTIONS:</b>	<b>5 X 10 = 50</b>
3. Discuss vitamin D under the following headings. a) Sources b) RDA c) Formation d) Biochemical functions	1+2+3+4
4. Discuss in detail about citric acid cycle along with its energetics, regulation and significance.	6+1+2+1
5. Describe the causes, biochemical abnormalities, clinical manifestations and laboratory diagnosis of Phenylketonuria.	2+2+3+3
6. Describe the sources, daily requirement, absorption, biochemical functions and deficiency manifestations of iron.	1+1+2+3+3
7. Define free radicals. Outline the processes leading to generation of free radicals. Explain the free radical scavenger enzyme systems.	

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**FOURTH SEMESTER - M.Sc. NUTRITION AND DIETETICS  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**THERAPEUTIC NUTRITION-II**

**Q.P. Code: 1961**

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:**

**2 X 15 = 30**

1. Discuss pathophysiology and medical nutrition therapy of cirrhosis of liver.
2. Explain Parkinson's disease and its medical nutrition theory.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. What is Diabetes Mellitus? Name the diagnostic tests. Discuss types and symptoms of DM.
4. Write a short note on carbohydrate loading.
5. Briefly discuss medical nutrition therapy in a patient myocardial infection.
6. Comment on artificial sweeteners.
7. Define Bulimia nervosa, its diagnostic criteria and medical nutrition therapy.

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**SECOND SEMESTER - M.Sc. MEDICAL DEGREE EXAMINATION**

**JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER I: ANATOMY**

**Q.P. Code: 1404**

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:**

**2 X 10 = 20**

1. Describe the Right Kidney under following heads.  
a) Location                      b) Parts and Relations  
c) Blood supply                d) Applied anatomy
2. Describe the superolateral surface of cerebrum under the following headings  
a) Sulci & Gyri                b) Functional areas  
d) Blood supply

**SHORT ESSAY QUESTIONS:**

**9 X 5 = 45**

3. Relations of stomach.
4. History of ovary.
5. Supportes of uterus.
6. Types of Neuron.
7. Gross features of spinal cord.
8. Blood supply of Heart.
9. Bronchopulmonary segments of left lung.
10. History of Duodenum.
11. Microscopic structure of lung.

**SHORT ANSWER QUESTIONS:**

**5 X 3 = 15**

12. Structures at Root of right lung.
13. Enumerate the contents of Posterior mediastinum.
14. Bile duct.
15. Types of parital pleura.
16. Name the chambers of Heart.

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**FOURTH SEMESTER - M.Sc. MEDICAL IN BIOCHEMISTRY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 100

**PAPER I: BIOCHEMISTRY  
(Metabolism -I)**

**Q.P. Code: 1419**

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

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS:</b>	<b>20 X 2 = 40</b>
1. a) What is gluconeogenesis. Mention key enzymes of gluconeogenesis. Write the steps of gluconeogenesis starting from glucogenic amino acids. b) Write the steps of HMP-shunt pathway and add a note on its disorders. c) Write a note on glycogen storage disorders.	(10+6+4)
2. a) Describe the metabolism of tyrosine and add a note on phenylketonuria. b) Enumerate the important products synthesized from glycine. c) Write a note on maple-syrup urine disease.	(10+6+4)
<b>SHORT ESSAY QUESTIONS:</b>	<b>6 X 10 = 60</b>
3. Galactosemia	
4. What is normal blood urea level and write the steps of urea cycle with its regulation.	
5. What is oxidative phosphorylation? Explain the chemi-osmotic theory with diagram.	
6. Write a note on one-carbon metabolism.	
7. Define glycolysis. Enumerate the steps of glycolysis in anaerobic condition with its energetics.	
8. What is lactose intolerance? Mention the types causes, pathophysiology, clinical features and its treatment.	

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**FOURTH SEMESTER - M.Sc. MEDICAL IN MICROBIOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 100

**PAPER I: MICROBIOLOGY**

**Q.P. Code: 1421**

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:**

**2 X 20 = 40**

1. Discuss the morphology, pathogenesis and laboratory diagnosis of infection caused by *N-gonorrhoeae*. Add a note on mechanism of penicillin resistance among gonococci and methods for its detection. (3+3+8+6)
2. Enumerate the bacteria causing patch in the throat. Describe the morphology, pathogenesis and laboratory diagnosis of diphtheria in detail. (2+4+4+10)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. What are atypical mycobacteria? Write their classification. Discuss their laboratory diagnosis.
4. Describe the laboratory diagnosis of pulmonary tuberculosis with special emphasis on recent diagnostic modalities.
5. Enumerate the infectious caused by staphylococci. Describe the virulence markers of *S.aureus*.
6. Describe the pathogenesis of infectious caused by group – *B. streptococci*. Describe their laboratory diagnosis.
7. Discuss the morphology, pathogenesis and laboratory diagnosis of infections caused by *B.anthraxis*.
8. Explain post streptococcal segnelae. Discuss the laboratory diagnosis of Rheumatic fever

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**SIXTH SEMESTER - M.Sc. MEDICAL IN BIOCHEMISTRY**  
**DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 100

**PAPER I: BIOCHEMISTRY**

**Q.P. Code: 1435**

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:**

**2 X 20 = 40**

1. What is the normal pH of blood? Explain the role of plasma buffers and renal mechanism in the maintenance of acid base balance of the body. 2+8+10
2. Explain the functions of liver. Describe the tests based on the metabolic capacity and synthetic function of liver. Add a note on Jaundice. 5+5+5+5

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Explain the pentagastrin stimulation test. What is Zollinger-Ellison syndrome. 5+5
4. What is the normal serum level of sodium and potassium? Explain the clinical applications of sodium and potassium with their disorders. 2+5+3
5. What is AFP and HCG? Explain the investigations used to diagnose metabolic disorders in prenatal analysis. 2+8
6. Give an account of water distribution and its balance in the body. Mention the functions of water. 2+4+4
7. What is the diagnostic importance of lipoproteins? Mention the Frederickson's classification. 4+6
8. What is amniotic fluid? What are the functions of amniotic fluid. Explain the diagnostic importance of amniotic fluid. 2+2+6

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**SIXTH SEMESTER - M. Sc. MEDICAL IN MICROBIOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 100

**PAPER I: MICROBIOLOGY  
(Protozoology)**

**Q.P. Code: 1437**

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:**

**2 X 20 = 40**

1. Describe the morphology, life cycle, pathogenesis and laboratory diagnosis of *E.hystolytica*. (3+5+4+8)
2. Discuss in detail, the biomedical waste segregation and disposal. Add a note on universal safety precautions. (14+6)

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Discuss in detail about water testing for biological contents including coliform count estimation.
4. Enumerate pathogenic free living amoebae. Discuss in detail the etiopathogenesis and laboratory diagnosis of acanthamoeba keratitis.
5. Enumerate the protozoa causing chronic diarrhea in immuno compromised individuals. Add a note on cryptosporidiosis.
6. Describe the laboratory diagnosis of Malaria. Add a note on malaria vaccines.
7. Describe the morphology, pathogenesis and laboratory diagnosis of Giardiasis.
8. Discuss the principle and applications of MALDI-TOF test in medical Microbiology.

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**M.Sc. PERFUSION TECHNOLOGY  
EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**PAPER – I  
BASICS OF PERFUSION TECHNOLOGY**

**Q.P. Code: 1158**

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 15 = 30**

1. Write the long essay on an ideal blood pump.
2. Classify steroids; write short notes on mechanism of action and adverse effects of steroids.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Write the short essay on priming solutions.
4. Write the short notes on diuretics, site of action of diuretics and their side effects.
5. Write short essay on zoning concept in operation room, ICV.
6. Compare between pulsatile and non-pulsatile flows.
7. Write short notes on
  - a) Poiseuille's law.
  - b) Azygous Flaw principle.

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**SECOND SEMESTER M.Sc. ECHOCARDIOGRAPHY**  
**EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**BASICS OF CLINICAL CARDIOLOGY**

**Q.P. Code: 1305**

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 15 = 30**

1. Mention about various visceral presentations (Situs) and cardiac positions and Malpositions
2. Describe normal ECG and its changes in various congenital heart diseases.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Ischemic cascade.
4. Write in brief about atrial appendages and how do you classify LA appendage clot.
5. Cardiac arrest.
6. Describe about echo features of various cardiomyopathies of 2D echo and M mode features
7. M mode echo of pulmonary valve in health and disease.

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**M.Sc. PERFUSION TECHNOLOGY  
II SEMESTER EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**PAPER – I  
MEDICINE RELEVANT TO TECHNOLOGY**

**Q.P. Code: 1307**

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 15 = 30**

- 1 Define atherosclerosis: What are the risk factors & clinical manifestations of it.
- 2 Write the long essay on valvular heart disease & its complications.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

- 3 Aneurysm : Classification and complications.
- 4 Pulmonary edema.
- 5 Pathophysiology of ischemic heart disease.
- 6 Write the short essay on
  - a) Stroke
  - b) Cerebral edema
- 7 c) Effects of hypertension.

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**SECOND SEMESTER - M.Sc. BIostatistics  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**REGRESSION ANALYSIS AND DEMOGRAPHY**

**Q.P. Code: 1605**

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

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS (Answer any TWO):</b>	<b>2 X 20 = 40</b>
1. a) Define correlation and correlation coefficient. Explain types of correlation. b) Explain Karl Pearson's product-moment correlation with a suitable example.	
2. Explain the principle of the least square method and fit a second-degree polynomial.	
3. Explain multiple linear regression with three variables and its significance.	
<b>SHORT ESSAY QUESTIONS (Answer any FIVE):</b>	<b>5 X 8 = 40</b>
4. Scatter diagram and its interpretations.	
5. Spearman's rank correlation coefficient.	
6. Coefficient of determination and non-determination.	
7. Concept of error in regression.	
8. Partial and multiple correlations.	
9. Fitting of exponential curves by least square method.	
10. Meaning of Kendall's measures.	

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**FOURTH SEMESTER - M.Sc. BIOSTATISTICS**  
**DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**STATISTICAL SOFTWARES**

**Q.P. Code: 1612**

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

**LONG ESSAY QUESTIONS (Answer any TWO):**

**2 X 20 = 40**

1. Describe normal distribution and its properties. How to apply goodness fit for normal distribution in MS Excel software.
2. Describe about statistical software's MS-Excel and IBM SPSS along with limitations.
3. Describe Pie diagram and different types of bar graph made by MS-Excel software with merits and demerits.

**SHORT ESSAY QUESTIONS (Answer any FIVE):**

**5 X 8 = 40**

4. Write a short note on negative binomial distribution.
5. Write a short note on poisson distribution.
6. Describe in brief inverse of a matrix solution.
7. Write MS Excel software syntax for measure of central tendency and standard deviation.
8. Describe multiple linear regression using excel software
9. Write MS Excel software syntax of correlation, intercept and regression coefficient.
10. Write a short note on product moment correlation coefficient.

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**M.Sc. ECHOCARDIOGRAPHY  
EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**PAPER – I  
BASICS OF ECHOCARDIOGRAM**

**Q.P. Code: 1161**

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 15 = 30**

1. Mention pressures in various cardiac chambers. Describe the various methods of assessing pulmonary artery pressure.
2. Discuss development of interventricular septum and note on locations of various types of VSD.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. M Mode Echo of pulmonary valve in health and disease.
4. Discuss Restrictive cardiomyopathy.
5. Describe ECG and Echocardiographic finding in atrial fibrillation.
6. What is hypertension? What are the things an Echo cardiographer should look while doing echo?
7. Discuss difference between continuous wave and pressure wave Doppler.

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**SECOND SEMESTER - MASTER OF PUBLIC HEALTH (RS2)**

**MASTER OF PUBLIC HEALTH IN EPIDEMIOLOGY**

**MASTER OF PUBLIC HEALTH IN HEALTH ECONOMICS & OUTCOME RESEARCH**

**DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**EPIDEMIOLOGY (PART I & PART II)**

**Q.P. Code:1804**

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 15 = 30**

1. Define Epidemiology. Discuss in detail about application of principles of epidemiology in evaluation of health services and policy. 3+12
2. Define mortality and morbidity. Explain in detail types of mortality with example. 3+12

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Discuss in brief about investigation of an epidemic of vehicle borne diseases.
4. Write in detail about using epidemiology in identifying the cause of diseases.
5. Define screening. Describe how the quality of screening tests is assessed.
6. Describe the principles and uses of epidemiology
7. Write in detail about planning, designing and conducting of surveys in the community.

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**FOURTH SEMESTER - MASTER OF PUBLIC HEALTH (RS 2)**

**MASTER OF PUBLIC HEALTH IN EPIDEMIOLOGY**

**MASTER OF PUBLIC HEALTH IN HEALTH ECONOMICS & OUTCOME RESEARCH**

**DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**MATERNAL & CHILD HEALTH NUTRITION (PART I & II)**

**Q.P. Code: 1810**

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:**

**2 X 15 = 30**

1. Write in detail about health problems of women across the life span.
2. What are the causes of low birth weight babies in India? Explain strategies to prevent low birth weight babies.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Write a note on Iodine deficiency disorders.
4. Health problems of the school child.
5. Identification of at risk infants.
6. Write about methods for establishing, the casual role of nutritional factors on health and disease status
7. Write a note on food fortification and its need to meet today's nutritional deficiencies in Indian children.

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**SECOND SEMESTER - M.Sc. IN PSYCHOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**COUNSELING AND GUIDANCE**

**Q.P. Code: 1937**

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**

- |    |   |    |
|----|---|----|
| 1. | a. Discuss the basic concepts related to guidance and counseling.<br>Or | 15 |
|    | b. Define guidance and counseling. Differentiate between them.          |    |
| 2. | a. Describe social cognitive career theory.<br>Or                       | 15 |
|    | b. Bring out the Skinner's view on counseling.                          |    |
| 3. | a. Discuss the professional qualities of a counselor.<br>Or             | 15 |
|    | b. Discuss the moral and ethical considerations in counseling.          |    |
| 4. | a. Delineate the procedure involved in counseling.<br>Or                | 15 |
|    | b. Discuss the need for counseling in the vocational setting.           |    |

**Write short notes on any FOUR of the following**

**4 X 5 = 20**

5. Scope of guidance.
6. Theory of work-adjustment.
7. Client centered counseling.
8. Directive counseling.
9. Personal qualities of a counselor.
10. Guidance in the school setting.

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**FOURTH SEMESTER - M.Sc. IN PSYCHOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**SOCIAL & COMMUNITY PSYCHOLOGY**

**Q.P. Code: 1946**

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**

- |    |  |    |
|----|--|----|
| 1. | a. What is community psychology? Elucidate principles of community psychology.               | 15 |
|    | Or   |    |
|    | b. Explain the role of institutions in reinforcing societal values.                          |    |
| 2. | a. What is aggression? Describe psychological interventions for aggression and violence      | 15 |
|    | Or   |    |
|    | b. What is crime? Discuss theories of criminal behaviour.                                    |    |
| 3. | a. What is Alcoholism explain its treatment, prevention and rehabilitation.                  | 15 |
|    | Or   |    |
|    | b. Explain emerging challenges with special reference to trans-gender and same-sex marriage. |    |
| 4. | a. Define poverty. Discuss types and causes of poverty.                                      | 15 |
|    | Or   |    |
|    | b. Define social change. Explain mob and community behavior in response to social problems.  |    |

**Write short notes on any FOUR of the following**

**4 X 5 = 20**

5. Nature and scope of social psychology.
6. Categories of violence.
7. Juvenile delinquents.
8. Prevention of crime.
9. Prostitution.
10. Effects of unemployment.

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**SECOND SEMESTER – M.Sc. IN BIOTECHNOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**CELL BIOLOGY**

**Q.P. Code: 1545**

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 15 = 30**

1. Write in brief about control of cell division and cell growth
2. Explain the molecular mechanisms involved in the activation of the extrinsic pathway of apoptosis
3. Discuss the role of caspases in executing the intrinsic pathway of apoptosis.

**SHORT ESSAY QUESTIONS (Answer any FIVE):**

**5 X 10 = 50**

4. What is cell communication/ signaling? Mention its general principles
5. With suitable example explain the functioning of Ion-channel-gated receptors
6. What is apoptosis? Explain the different steps involved in the apoptotic pathway
7. What are the proteins involved in the intrinsic pathways of apoptosis
8. Briefly explain nuclear transport mechanism
9. Explain biogenesis of ribosome
10. Explain the general principles of cell communication/ signaling.

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**SECOND SEMESTER - MASTER OF HOSPITAL ADMINISTRATION  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER – II: HEALTH FINANCE & HEALTH ECONOMICS**

**Q.P. Code: 1705**

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

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS (All are compulsory):**

**4 X 15 = 60**

1. With regard to imperfect competition, discuss monopoly, duopoly and monopolistic competition.
2. With regard to advanced microeconomics, discuss consumer and producer's theory, principles of equilibrium-uncertainty and rational expectative equilibrium.
3. Discuss : Evolution of Insurance; IRDAI; and TPA in detail.
4. Discuss in detail the different modes of health financing.

**SHORT ESSAY QUESTIONS (Answer any TWO):**

**2 X 10 = 20**

5. Theory of distribution
6. Discuss elasticity of demand and elasticity of supply in detail.
7. What is catastrophic health expenditure? Discuss with examples.
8. National and global economic impact of the Covid 19 pandemic.

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**FOURTH SEMESTER - MASTER OF HOSPITAL ADMINISTRATION  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER – II : HOSPITAL MANAGEMENT**

**Q.P. Code: 1711/2**

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

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS (All are compulsory):**

**4 X 15 = 60**

1. Discuss the term Health Management Information System (HMIS). Enumerate the salient features of HMIS with suitable examples. Explain its role and function in a tertiary care hospital. 2+6+7
2. Discuss the term Marketing. Enumerate various components of marketing with suitable examples. Explain pricing of service in managing a tertiary care hospital. 2+7+6
3. Discuss the term Leadership. Enumerate various theories of leadership. Explain the role and function of leadership in managing a tertiary care hospital. 2+5+8
4. Discuss the term Competition. Enumerate the salient features monopoly, duopoly and monopolistic competition with suitable examples. Explain the role and function of price fixation in managing a tertiary care hospital. 2+8+5

**SHORT ESSAY QUESTIONS (Answer any TWO):**

**2 X 10 = 20**

5. Health maintenance organization.
6. Indigenous systems of medicine.
7. Patient satisfaction survey.
8. Inventory management.

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**SECOND SEMESTER - M.Sc. NUTRITION AND DIETETICS  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PRINCIPLES OF FOOD SCIENCE**

**Q.P. Code: 1956**

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:**

**2 X 15 = 30**

1. What are the functions of simple sugars and polysaccharides? Explain their role in food industry. (8+7)
2. Enumerate the different methods of food processing, how does food processing effect consumer market. (8+7)

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Rancidity and antioxidants.
4. Industrial application of Vitamins.
5. Properties of food and consumer appeal.
6. Nutritional and functional role of minerals.
7. Protein concentrates, hydrolysates and isolates.

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**FOURTH SEMESTER - M.Sc. NUTRITION AND DIETETICS  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**NUTRACEUTICALS AND FUNCTIONAL FOOD**

**Q.P. Code: 1962**

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:**

**2 X 15 = 30**

1. What are Phytosterols? Mention types and sources. Explain their effects on health.
2. What are dietary fibers? Classify them and discuss their role in the management of TZDM & CVD.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Define functional foods. Classify them according to organ and organ system with examples.
4. Give examples of nutraceuticals & functional foods that can be used for T<sub>2</sub>DM.
5. Discuss the anti-inflammatory role of spices with a few examples.
6. Discuss the metabolism and bioavailability of omega – 3 fatty acids.
7. Elaborate the role of probiotic and prebiotics in dairy foods. Give examples and write the recipe for Kanji.

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**SECOND SEMESTER - M.Sc. MEDICAL DEGREE EXAMINATION  
JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER II: PHYSIOLOGY**

**Q.P. Code: 1405**

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. Name the hormones secreted from anterior pituitary. Explain the actions of growth hormone. Add a note on acromegaly.
2. Define GFR with normal value. Describe the mechanism of formation and factors affecting GFR.

**SHORT ESSAY QUESTIONS:**

**9 X 5 = 45**

3. Explain the functions of liver and gallbladder.
4. Describe actions of estrogen and progesterone.
5. Define and classify sensory receptors with examples.
6. Explain accommodation reflex.
7. Explain actions of parathyroid hormone.
8. Draw neat labeled diagram of organ of Corti.
9. Describe chemical transmission across synapse.
10. Describe the micturition reflex.
11. Describe composition of semen.

**SHORT ANSWER QUESTIONS:**

**5 X 3 = 15**

12. List the functions of CSF.
13. List the differences between UMN and LMN lesions.
14. List the functions of aqueous Humor.
15. List the hormones secreted from adrenal gland.
16. List the functions of Sertoli and Leydig cells.

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**FOURTH SEMESTER - M.Sc. MEDICAL IN BIOCHEMISTRY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 100

**PAPER II: BIOCHEMISTRY  
(Metabolism-II)**

**Q.P. Code: 1420**

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

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 20 = 40</b>
1. How Cholesterol is formed in the body? List the derivatives of cholesterol. Describe the biomedical importance of three derivatives of cholesterol.	(10+4+6)
2. Mention the origin of carbon and nitrogen atoms in purine ring. Describe catabolism of purines. Add a note on disorders of purine metabolism.	(5+10+5)
<b>SHORT ESSAY QUESTIONS:</b>	<b>6 X 10 = 60</b>
3. Fatty liver and lipotropic factors.	
4. Prostaglandins and compound lipids.	
5. Give an account of synthesis, transport and functions of HDL, LDL and chylomicrons.	
6. Discuss the regulation of pyrimidine synthesis. Add a note on Orotic Aciduria.	
7. Explain in detail the metabolic changes that takes place during starvation.	
8. Define biotransformation. Explain in detail the mechanism of biotransformation	

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**FOURTH SEMESTER - M.Sc. MEDICAL IN MICROBIOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 100

**PAPER II: MICROBIOLOGY**

**Q.P. Code: 1422**

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:**

**2 X 20 = 40**

1. Define and classify enterobacteriaceae. Describe their characteristics. (2+3+3+12)  
Discuss the laboratory diagnosis of bacillary dysentery.
2. Define hospital acquired infection. Enumerate the pathogens causing HAI. (2+3+10+5)  
Discuss in detail the pathogenesis and laboratory diagnosis infections caused by Pseudomonas SPP. Add a note on antimicrobial resistance acquired by pseudomonas SPP.

**SHORT ESSAY QUESTIONS:**

**6 X 10 = 60**

3. Explain various types of E.coli along with their pathogenicity.
4. Describe the morphology, pathogenesis and laboratory diagnosis of infections caused by Hemophilus SPP.
5. Discuss the pathogenesis and laboratory diagnosis of infections caused by bacteroides SPP.
6. Enumerate the bacteria causing PUO. Describe the serological tests used for diagnosis of Brucellosis.
7. Describe the differences between classical and El-tor vibrios. Write the laboratory tests to differentiate between the two.
8. Discuss the laboratory diagnosis of a suspected case of typhoid fever in a patient presenting to hospital in II week of illness.

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**SIXTH SEMESTER - M.Sc. MEDICAL IN BIOCHEMISTRY**  
**DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 100

**PAPER II: BIOCHEMISTRY**

**Q.P. Code: 1436**

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

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 20 = 40</b>
1. What is environmental pollution? Explain in detail the air and water pollution.	2+9+9
2. What is principle of dry chemistry? Explain the advantages and disadvantages of dry chemistry with its application.	4+10+6
<b>SHORT ESSAY QUESTIONS:</b>	<b>6 X 10 = 60</b>
3. Explain in detail the principle, procedure and applications of flame photometer.	2+5+3
4. What is validation of reagents? Discuss kit validation in detail.	5+5
5. Differentiate between RIA and ELISA technique	5+5
6. Explain in detail polyacrylamide gel electrophoresis with its application.	6+4
7. Describe the different modes of decay of radioisotopes.	5+5
8. Explain the preanalytical, analytical and post analytical variables in quality control.	4+3+3

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**SIXTH SEMESTER - M.Sc. MEDICAL IN MICROBIOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 100

**PAPER II: MICROBIOLOGY  
(Helminthology)**

**Q.P. Code: 1438**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All the questions are compulsory.

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS:</b>	<b>2 X 20 = 40</b>
1. Describe the morphology, pathogenesis and life cycle of T. Sordium. Add a note on its laboratory diagnosis	(3+3+7+7)
2. Discuss the life cycle and pathogenesis of hook worm infection. Add a note on its laboratory diagnosis.	(7+5+8)
<b>SHORT ESSAY QUESTIONS:</b>	<b>6 X 10 = 60</b>
3. Describe the life cycle and laboratory diagnosis of Ascaris lumbricoides.	
4. Enumerate the infections caused by trematodes. Write in detail about morphology and life cycle of F. hepatica.	
5. Discuss the life cycle and laboratory diagnosis of W. bancrofti.	
6. Describe the life cycle and laboratory diagnosis of Guinea worm disease.	
7. Discuss the infections caused by paragon Imus westermani. Add a note its laboratory diagnosis.	
8. Describe the etiopathogenesis and laboratory diagnosis of Hydatid disease.	

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**M.Sc. PERFUSION TECHNOLOGY  
EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**PAPER – II  
PERFUSION TECHNOLOGY FOR COMMON CONDITIONS**

**Q.P. Code: 1159**

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 15 = 30**

1. Write the long essay on inflammatory response to CPB & its clinical effects.
2. Write the long essay on blood cell trauma during CPB.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Heparin less bypass.
4. Auto transfusion.
5. Non cardioplegic cardio protective methods during cardiac surgery.
6. Pulsatile perfusion benefits.
7. Write short essay on "Vents".

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**SECOND SEMESTER M.Sc. ECHOCARDIOGRAPHY**  
**EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**ECHO IN COMMON PRACTICE**

**Q.P. Code: 1306**

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 15 = 30**

1. Discuss echo assessment of mitral stenosis. Add a note on 3D echo of the same and mention 3D scoring of mitral stenosis.
2. Discuss the role of Echo in cardiomyopathies.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Echo assessment of prosthetic heart valves.
4. Discuss standardized myocardial segmentation and nomenclature for tomographic imaging of the heart with respect to ischemic heart disease.
5. Discuss echo assessment of Aortic stenosis.
6. Discuss role of echo in infective endocarditis
7. Discuss echo in dilated cardiomyopathy.

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**M.Sc. PERFUSION TECHNOLOGY**  
**II SEMESTER EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**PAPER – II**  
**BIOMATERIALS**

**Q.P. Code: 1308**

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 15 = 30**

1. Write the long essay on synthetic polymers used.
2. How safely will you conduct & terminate CPB.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Heparin less bypass.
4. Management of coagulopathies occurring during CPB.
5. Auto transfusion as Blood conservation.
6. Advantages & disadvantages of warm heart surgery.
7. Write short essay on 'Vents' used in cardiac surgery.

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**SECOND SEMESTER - M.Sc. BIostatistics  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**MULTIVARIATE ANALYSIS**

**Q.P. Code: 1606**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

All the questions are compulsory.

**LONG ESSAY QUESTIONS (Answer any TWO):**

**2 X 20 = 40**

1. Define survival analysis and types of censoring with suitable examples.
2. Describe factor loading, factor analysis and its types with suitable examples.
3. Explain the multiple linear regression along with its assumption.

**SHORT ESSAY QUESTIONS (Answer any FIVE):**

**5 X 8 = 40**

4. Explain path analysis and its assumption.
5. Explain discriminant analysis with a suitable example.
6. Describe the method of Kaplan-Meier estimation of survival times.
7. Explain how an odds ratio is obtained from logistic regression by giving example.
8. Explain the utility of factor analysis in the medical field
9. What is multicollinearity? Explain it with a suitable example.
10. Define Cox regression analysis with a suitable example.

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**FOURTH SEMESTER - M.Sc. BIOSTATISTICS  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**HOSPITAL DATA MANAGEMENT AND POPULATION GENETICS**

**Q.P. Code: 1613**

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 20 = 40**

1. Describe average bed occupancy, average daily census and average length of stay.
2. Discuss details about X & Y sex linked genes.
3. Describe the international classification of diseases and its uses in Health.

**SHORT ESSAY QUESTIONS (Answer any FIVE):**

**5 X 8 = 40**

4. What do you mean of hospital statistics?
5. What are different types of blood?
6. Mention the ICD purposes and uses.
7. Certification and reporting of causes of death.
8. Brief phenotypes and genotype of the ABO blood group.
9. What is the difference between a hospital bed and sanctioned bed?
10. What are the things required for birth and death certificates?

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**M.Sc. ECHOCARDIOGRAPHY  
EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**PAPER – II  
ECHO IN COMMON PRACTICE**

**Q.P. Code:1162**

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 15 = 30**

1. Describe the echocardiography finding in anterior wall myocardial infraction. Add a note on wall motion score index?
2. Discuss echo assessment of severity of mitral stenosis and write a note on assessing suitability for PTMC? Role of echo technician in cath lab?

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Determination of stages of diastolic dysfunction by echocardiography?
4. Echo assessment of pulmonary hypertension?
5. Discuss assessment of severity of Aortic stenosis by echocardiography. Discuss low flow-low gradient Aortic stenosis?
6. Echo features of Hypertrophic Obstructive cardiomyopathy?
7. Discuss echocardiographic features of Ebstein's anomaly?

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**SECOND SEMESTER - MASTER OF PUBLIC HEALTH (RS2)**

**MASTER OF PUBLIC HEALTH IN EPIDEMIOLOGY**

**MASTER OF PUBLIC HEALTH IN HEALTH ECONOMICS & OUTCOME RESEARCH**

**DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**BIostatISTICS (PART I & II)**

**Q.P. Code: 1805**

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 15 = 30**

1. Describe the standard normal distribution. Discuss the use of normal distribution in public health practice with appropriate example.
2. Write a note on non-probability distribution.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Illustrate use of logistic regression in public health practice with example.
4. Discuss the advantages and disadvantages of non-parametric tests. Illustrate with example.
5. Write a note on standard errors of difference between two means.
6. Types of correlation.
7. Types of data and measures scales.

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**FOURTH SEMESTER - MASTER OF PUBLIC HEALTH (RS 2)**  
**MASTER OF PUBLIC HEALTH IN EPIDEMIOLOGY**  
**MASTER OF PUBLIC HEALTH IN HEALTH ECONOMICS & OUTCOME RESEARCH**  
**DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**DEMOGRAPHY AND FAMILY PLANNING**

**Q.P. Code: 1811**

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:**

**2 X 15 = 30**

1. Classify the contraceptive methods. Write in detail the hormonal contraceptives. (9+6)
2. Discuss causes and implications of social inequality.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Write a note on National Family welfare programme.
4. Write a note on Demographic transition.
5. Write a note on birth and death rates.
6. Briefly state factors influencing fertility.
7. Explain Family planning services at primary health center level.

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**SECOND SEMESTER - M.Sc. IN PSYCHOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**CHILD PSYCHOPATHOLOGY**

**Q.P. Code: 1938**

Answers should be specific to the Questions asked.

Draw neat & labeled diagrams wherever necessary.

All the questions are compulsory.

<b>Question Number</b>	<b>Marks</b>
<b>LONG ESSAY QUESTIONS</b>	
1. a. Delineate the diagnosis and treatment strategies of child psychopathology. Or b. Bring out the current research findings on child psychopathology	15
2. a. Elucidate types and etiology of mental retardation. Or b. Explain the nature and etiology of expressive language disorder.	15
3. a. Give the clinical picture of Autism. Or b. Describe the behavior of a child with oppositional deviant disorder.	15
4. a. Explain elimination disorders in infancy. Or b. Elaborate on causes and prevention of suicide in adolescence.	15
<b>Write short notes on any FOUR of the following</b>	<b>4 X 5 = 20</b>
5. Development of child psychopathology.	
6. Learning disorder in childhood.	
7. Rett's disorder.	
8. Conduct disorder.	
9. Vocal Tic disorder.	
10. Identity problem during adolescence.	

\*\*\*\*\*

**FOURTH SEMESTER - M.Sc. IN PSYCHOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**REHABILITATION PSYCHOLOGY**

**Q.P. Code: 1947**

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**

- |    |    |   |    |
|----|----|---|----|
| 1. | a. | Define rehabilitation psychology. Explain its nature and historical perspective.                                |    |
|    |    | Or  |    |
|    | b. | Discuss the psychological and educational aspects of rehabilitation.  | 15 |
| 2. | a. | Discuss the classification of disabilities.   |    |
|    |    | Or  |    |
|    | b. | Elucidate on learning and speech impairment with special reference to psychological factors and rehabilitation. | 15 |
| 3. | a. | Write an essay on Autism and its rehabilitation.  |    |
|    |    | Or  |    |
|    | b. | Write an essay on screening assessment procedures for people with disabilities.                                 | 15 |
| 4. | a. | Discuss psychological interventions for disabled individuals.   |    |
|    |    | Or  |    |
|    | b. | Discuss capacity building of NGO's.   | 15 |

**Write short notes on any FOUR of the following**

**4 X 5 = 20**

5. Scope of rehabilitation psychology.
6. Biological approach to rehabilitation.
7. Learning disabilities.
8. Strategies for early intervention.
9. Training programme for health professionals.
10. Psychoanalytical approach to intervention for the disabled.

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**SECOND SEMESTER – M.Sc. IN BIOTECHNOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**RESEARCH METHODOLOGY AND BIostatISTICS**

**Q.P. Code: 1546**

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 15 = 30**

1. Chi-square test and its significance in epidemiology science.
2. Explain the designing and validation of questionnaire.
3. Explain the role of statistics in biology.

**SHORT ESSAY QUESTIONS (Answer any FIVE):**

**5 X 10 = 50**

4. Write in brief note on review of literature.
5. What is self-citation? Explain.
6. Explain quantitative research in brief.
7. What are parametric and non-parametric tests.
8. Explain qualitative research with examples.
9. Explain the various sampling techniques.
10. What are measures of central tendency.

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**SECOND SEMESTER - MASTER OF HOSPITAL ADMINISTRATION  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER – III:  
HEALTH/HOSPITAL MANAGEMENT ORGANIZATION  
AND MEDICAL ETHICS**

**Q.P. Code: 1706**

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

**LONG ESSAY QUESTIONS (All are compulsory):**

**4 X 15 = 60**

1. Discuss the merits and demerits of privatization of healthcare.
2. Discuss medical malpractice and medical negligence in detail with examples.
3. Discuss the importance of medical ethics in detail. Add a note on institutional ethics committee.
4. Discuss in detail the development of productivity standards, work standards, utilization standards and indices in hospitals.

**SHORT ESSAY QUESTIONS (Answer any TWO):**

**2 X 10 = 20**

5. Transplantation of human organs Act 1994.
6. Care of terminally ill and euthanasia.
7. Prenatal Diagnostic techniques, regulations and prevention of misuse Act 1994 (PNDT Act)
8. Patient confidentiality and professional secrecy.

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**FOURTH SEMESTER - MASTER OF HOSPITAL ADMINISTRATION  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER – III: SOCIAL MARKETING MANAGEMENT & QUALITY  
MANAGEMENT FOR HOSPIALS**

**Q.P. Code: 1712**

Answers should be specific to the Questions asked.

Draw neat, labeled diagrams wherever necessary.

**Question Number**

**Marks**

**LONG ESSAY QUESTIONS (All are compulsory):**

**4 X 15 = 60**

1. Discuss patient satisfaction survey in detail. Add a note on value and retention.
2. Discuss mortality review in detail in a tertiary care hospital. Add a note on medicine legal care.
3. Discuss the theoretical basic concepts of marketing management. Add a note on internal & external marketing.
4. Discuss service marketing, patient care and communication. Add a note on grape-vine communication.

**SHORT ESSAY QUESTIONS (Answer any TWO):**

**2 X 10 = 20**

5. Quality circles as a quality technique.
6. Discuss the implementation of total quality management in a hospital.
7. Discuss NABL in accreditation of hospital.
8. Discuss the components of a marketing program.

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Placed in 'A' Category by MHRD (GoI)

**SECOND SEMESTER - M.Sc. NUTRITION AND DIETETICS  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**FOOD MICROBIOLOGY AND SAFETY**

**Q.P. Code: 1957**

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:**

**2 X 15 = 30**

1. Explain the scope of microbiology in food industry. Write in detail about different fermented foods. (7+8)
2. Enumerate the factors responsible for food spoilage. How does spoilage effect consumer acceptance of milk products and cereal products. (7+8)

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Safety aspects of water and beverages.
4. Describe Mycotoxins.
5. Harmful effects of food adulterants.
6. Write a note on food contaminants.
7. Briefly describe Lathyrism and Ergotism.

\*\*\*\*\*

**SECOND SEMESTER - M.Sc. MEDICAL DEGREE EXAMINATION  
JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PAPER III: BIOCHEMISTRY**

**Q.P. Code: 1406**

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. What are ketone bodies? Give an account of Ketogenesis & ketolysis. Add a note on ketosis.
2. Give an account of digestion & absorption of carbohydrates.

**SHORT ESSAY QUESTIONS:**

**9 X 5 = 45**

3. Discuss transamination & its significance.
4. Describe metabolic changes during Diabetes Mellitus.
5. List the disorders of Iodine metabolism.
6. Explain disposal of ammonia.
7. Functions and deficiency manifestations of calcium.
8. List the calorific and Nutritional importance of lipids.
9. List the factors affecting BMR.
10. Schematic representation & energetics of citric acid cycle.
11. Discuss hormonal regulation of Blood Glucose level.

**SHORT ANSWER QUESTIONS:**

**5 X 3 = 15**

12. Mention the significance of cori's cycle.
13. List the causes and complications of iron toxicity.
14. Mention the significance of Dietary fibers.
15. List the complications of Hyperammonemia.
16. Describe the procedure and significance of Rothera test.

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**M.Sc. PERFUSION TECHNOLOGY  
EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**PAPER – III  
PERFUSION TECHNOLOGY SPECIAL SITUATION AND  
RECENT ADVANCES**

**Q.P. Code: 1160**

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 15 = 30**

1. Write the long essay on priming & crisis management of ECMO.
2. Role of perfusionist in non-cardiac surgeries.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Complications of IABP and contraindications of IABP.
4. How will you manage electrical failure on CPB.
5. Venting in minimal invasive cardiac surgery.
6. Experimental perfusion.
7. Complications of endoaortic cross clamp.

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**SECOND SEMESTER - M.Sc. BIostatistics  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**DEMOGRAPHY-I**

**Q.P. Code: 1607**

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

**LONG ESSAY QUESTIONS (Answer any TWO):**

**2 X 20 = 40**

1. Describe the age-sex structure of the population and briefly explain the population census of India.
2. What is life expectancy? Describe different types of life expectancy.
3. Explain the difference between deaths and mortality. Define infant mortality rate, neonatal mortality rate and maternal mortality ratio.

**SHORT ESSAY QUESTIONS (Answer any FIVE):**

**5 X 8 = 40**

4. Describe the meaning of the age-sex pyramid.
5. Explain the differences between complete life table and abridged life table.
6. Explain birth order, parity and gravidity by giving example.
7. Briefly define the different measures of reproduction.
8. Explain demographic transition phases.
9. Explain the relationship between total fertility rate and gross reproduction rate.
10. Define standard notations/ functions of life table.

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**M.Sc. ECHOCARDIOGRAPHY  
EXAMINATION – JULY 2023**

**Time: 3 Hours**

**Max. Marks: 80**

**PAPER – III  
ECHO IN SPECIAL SITUATIONS AND RECENT ADVANCES**

**Q.P. Code: 1163**

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 15 = 30**

1. Discuss the standard imaging planes of Transeophageal echocardiography.
2. Discuss evaluation of severe aortic stenosis patient who is candidate for TAVR?

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Intracardiac echocardiography.
4. Discuss the role of preoperative and perioperative echo in cardiac surgery?
5. Discuss role of echo in post PTMC assessment of results and complications?
6. Stain rate imaging.
7. Discuss about precautions taken while performing echo in COVID-19 Positive patient?

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**SECOND SEMESTER - MASTER OF PUBLIC HEALTH (RS 2)**

**MASTER OF PUBLIC HEALTH IN EPIDEMIOLOGY**

**MASTER OF PUBLIC HEALTH IN HEALTH ECONOMICS & OUTCOME RESEARCH**

**DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**EPIDEMIOLOGY OF INFECTIOUS & NON-COMMUNICABLE DISEASES**

**Q.P. Code: 1806**

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 15 = 30**

1. Government of Karnataka has commissioned you to manage the increasing incidence of cardiovascular diseases in the state. Design cost effective programme to reduce the incidence of CVD.
2. On school health screening majority of children were infested with Ascariasis and hook worm infestation. Write in detail the epidemiological features, preventive and control measure of ascariasis and hook worm infestation.

**SHORT ESSAY QUESTIONS:**

**5 X 10 = 50**

3. Discuss pre exposure prophylaxis and post exposure prophylaxis for HIV in detail.
4. Discuss the aetiology, clinical features, complication, control and prevention measure for enteric fever.
5. List four most common cancers of men and women in India. Discuss in detail the top most cancer among men and women in India.
6. Write a note on COVID 19 pandemic and its implications on mental health.
7. Compare and contrast dengue and chikungunia fever.

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**SECOND SEMESTER - M.Sc. BIostatistics  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**DEMOGRAPHY-II**

**Q.P. Code: 1608**

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

**LONG ESSAY QUESTIONS (Answer any TWO):**

**2 X 20 = 40**

1. Explain stages of urbanization. Why do people move to urban areas?
2. Explain Esther Boserup's theory and Malthus's theories of population.
3. Define marriage, types of marriage in India and their impact on the population

**SHORT ESSAY QUESTIONS (Answer any FIVE):**

**5 X 8 = 40**

4. Explain Malthus' theories of population.
5. Explain education and its challenges in the present education system.
6. Describe the brain drain migration with suitable examples.
7. Explain the push-pull theory of migration by giving example.
8. Why do people move to urban areas?
9. Explain the rate in the exponential method of population projection.
10. Briefly define the types of migration with suitable examples.

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**SECOND SEMESTER - M.Sc. IN PSYCHOLOGY  
DEGREE EXAMINATION – JULY 2023**

Time: 3 Hours

Max. Marks: 80

**PERSONALITY PSYCHOLOGY**

**Q.P. Code: 1939**

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**

- |    |  |    |
|----|--|----|
| 1. | a. Define Personality. Discuss the trait approach to personality<br>Or                       |    |
|    | b. Discuss various methods of personality assessment   | 15 |
| 2. | a. Delineate the impact of culture on the formation and functioning of<br>personality.<br>Or | 15 |
|    | b. Elaborate on storied construction of personality.   |    |
| 3. | a. Early school environment moulds child's personality: Discuss.<br>Or                       | 15 |
|    | b. Write an essay on personality development of students.                                    |    |
| 4. | a. Examine the personality correlates of Job performance.<br>Or                              | 15 |
|    | b. Discuss the role of personality in criminal behavior.                                     |    |

**Write short notes on any FOUR of the following**

**4 X 5 = 20**

5. Projective tests.
6. Personality & Politics.
7. Social pain & hurt feelings.
8. Type A personality and stress.
9. Five factor model.
10. Test anxiety.

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