

END TERM THEORY EXAMINATIONS; JULY-2019

Programme:	M.Sc. (Medical-Anatomy/ Physiology/ Biochemistry/ Microbiology)	Year/Semester:	1st Year
Course/Subject:	Basics of Anatomy	Duration:	03:00 Hrs.
Subject Code:	0102101/ 0103101/ 0104101/ 0106101	Maximum Marks:	100
Roll No.:			

Instructions:-

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided correct question paper. Complaint(s) in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. The Question paper consists of Two Parts: **Part-I and Part-II having 50 Max. Marks for each. Use separate answer books for Part-I and Part-II.** Any mistake in this regard, will be responsibility of the examinee and no complaint(s) will be entertained after the examinations.
4. Attempt the question as per instruction mentioned with each question. Marks are indicated against each question.
5. Illustrate your answer with diagram wherever required.

PART-I

Q. 1 Describe in short:- (4x5=20)

- a) Sesamoid bone.
- b) Classification of synovial joints.
- c) Hormones of pituitary gland.
- d) Difference between sympathetic and parasympathetic nervous system.

Q. 2 Draw only labeled diagram to show:- (4x5=20)

- a) Typical spinal nerve.
- b) Histology of skeletal muscle.
- c) Structure of spermatazoa
- d) Lobes of cerebral hemisphere.

Q. 3 Write short notes on:- (3+4+3=10)

- a) Anatomical planes.
- b) Biceps brachii muscle.
- c) Neuroglial cells

PART-II

Q. 4 Write in brief about:- (4x5=20)

- a) Boundaries and contents of popliteal fossa.
- b) Right atrium of heart.
- c) Circulation of cerebrospinal fluid.
- d) Gross anatomy of stomach.

Q. 5 Enumerate only:- (5x2=10)

- a) Branches of posterior cord of brachial plexus.
- b) Support of uterus (any four).
- c) Muscles supplied by superior gluteal nerve.
- d) Branches of facial nerve in face (any four).
- e) Branches of external carotid artery (any four)

Q. 6 Write in brief:- (4x5=20)

- a) Duodenum.
- b) Pleura.
- c) Gross anatomy of urinary bladder
- d) Extrahepatic biliary apparatus.

END TERM THEORY EXAMINATIONS; JULY-2019

Programme:	M.Sc. (Medical-Anatomy/ Physiology/ Biochemistry/ Microbiology)	Year/Semester:	1st Year
Course/Subject:	Basics of Physiology	Duration:	03:00 Hrs.
Subject Code:	0102102/ 0103102/ 0104102/ 0106102	Maximum Marks:	100
Roll No.:			

Instructions:-

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided correct question paper. Complaint(s) in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. The Question paper consists of Two Parts: **Part-I and Part-II having 50 Max. Marks for each. Use separate answer books for Part-I and Part-II.** Any mistake in this regard, will be responsibility of the examinee and no complaint(s) will be entertained after the examinations.
4. Attempt the question as per instruction mentioned with each question. Marks are indicated against each question.
5. Illustrate your answer with diagram wherever required.

PART-I

Q. 1 Describe the following:-

- a) Stages of Erythropoiesis & factors affecting it. (8)
- b) Gastric emptying and factors affecting it. (7)

Q. 2 Describe the following:-

- a) Role of medullary & pontine centres in respiratory regulation. Add a note on Hering-breuer reflex. (8)
- b) Major processes that brings about the transport of substances across the cell membrane. (7)

Q. 3 Describe the following:-

- a) Phases of Action Potential recorded from a nerve fiber with the help of a diagram. Explain its ionic basis. Differentiate between relative and absolute refractory period. (10)
- b) Production and clinical significance of normal cardiogram waves. What is the mean electrical axis of heart? (10)

PART-II

Q. 4 Describe the following:-

- a) Enumerate diabetogenic hormones. What are the functions of growth Hormone? Differentiate between Acromegaly & Ginantism. (8)
- b) What are monosynaptic and polysynaptic reflexes? Give an example of each. (7)

Q. 5 Describe briefly:-

- a) Role of different buffer systems in regulation of acid base balance. (7)
- b) Errors of Refraction. (7)
- c) Cerebellar function tests. (7)

Q. 6 Write short notes on:-

- a) Sympathetic vasodilator system. (5)
- b) Tests for Hearing. (5)
- c) Indicators of Ovulation. (4)

END TERM THEORY EXAMINATIONS; JULY-2019

Programme:	M.Sc. (Medical-Anatomy/ Physiology/ Biochemistry/ Microbiology)	Year/Semester:	1st Year
Course/Subject:	Basics of Biochemistry	Duration:	03:00 Hrs.
Subject Code:	0102103/ 0103103/ 0104103/ 0106103	Maximum Marks:	100
Roll No.:			

Instructions:-

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided correct question paper. Complaint(s) in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. The Question paper consists of Two Parts: **Part-I and Part-II having 50 Max. Marks for each. Use separate answer books for Part-I and Part-II.** Any mistake in this regard, will be responsibility of the examinee and no complaint(s) will be entertained after the examinations.
4. Attempt all questions, Parts of a question should be in sequel order. Marks are indicated against each question.
5. Illustrate your answer with diagram wherever required.

PART-I

- Q. 1** Define gluconeogenesis. Explain in detail the reciprocal regulation of glycolysis and gluconeogenesis. **(10)**
- Q. 2** Explain the different types of enzyme inhibition with the help of suitable diagrams. Add a note on any 4 clinical applications of enzyme inhibitions. **(10)**
- Q. 3 Write short notes on:-** **(5x6=30)**
- a) Phospholipids and their biochemical importance.
 - b) Isomerism of glucose.
 - c) Inhibitors of respiratory chain.
 - d) Factors affecting hemoglobin oxygen dissociation curve.
 - e) Secondary structure of proteins.

PART-II

- Q. 4** Explain in detail the steps involved in conventional Polymerase Chain Reaction (PCR). Enumerate any 4 applications of PCR in medicine. **(10)**
- Q. 5** Explain the structure of immunoglobulin with the help of suitable diagram. Classify immunoglobulins and add a note on their biological functions. **(10)**
- Q. 6 Write short notes on:-** **(5x6=30)**
- a) Biological importance of dietary fibre.
 - b) Biological role of Vitamin D.
 - c) Phase II reaction of xenobiotic metabolism.
 - d) Antioxidant enzymes.
 - e) Liver function test.

END TERM THEORY EXAMINATIONS; JULY-2019

Programme:	M.Sc. (Medical-Anatomy/ Physiology/ Biochemistry/ Microbiology)	Year/Semester:	1st Year
Course/Subject:	Bio-Statistics & Research Methodology	Duration:	03:00 Hrs.
Subject Code:	0102104/ 0103104/ 0104104/ 0106104	Maximum Marks:	80
Roll No.:			

Instructions:-

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided correct question paper. Complaint(s) in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. The Question paper consists of Two Parts: **Part-I and Part-II having 50 Max. Marks for each. Use separate answer books for Part-I and Part-II.** Any mistake in this regard, will be responsibility of the examinee and no complaint(s) will be entertained after the examinations.
4. Attempt FIVE questions in all, Q.5 is Compulsory. There are internal choice in Q.1 to Q.4. Marks are indicated against each question.
5. Illustrate your answer with diagram wherever required.

Q. 1 Enumerate various research designs used for scientific research studies. Describe briefly the steps involved in a Randomized Controlled Trial Research study. (15)

OR

What do you understand by hypothesis? How will you proceed to formulate a research problem and test a hypothesis? (15)

Q. 2 Describe the ethical & legal issues involved in research studies. Describe briefly the contents of informed consent. (15)

OR

Describe the outlines of research report/thesis by a researcher. Describe briefly the methods of presentation of your research paper during scientific conference. (15)

Q. 3 Enumerate various types of data used for scientific research studies. Describe briefly methods of summarization & graphic presentation of data. (15)

OR

What do you understand by dispersion? Describe various measures of dispersion giving examples. (15)

Q. 4 What do you understand by probability? Describe the normal distribution (Bell) curve and its significance in research. (15)

OR

Why does a researcher require sampling in a study? Describe the multistage random sampling design and cluster sampling design. (15)

Q. 5 Write briefly about the following:- (10x2=20)

- a) Missing data & Outliers.
- b) Blinding in research.
- c) Bias in research.
- d) Bibliography & References.
- e) Pie diagram.
- f) Skewness & Kurtosis
- g) Validity & Reliability
- h) Pilot study
- i) Ordinal scale
- j) Likert scale
