

B.Sc. [Medical (Part-I)]

BF/2009/07

Anatomy

M.M. : 100

Time : 3 Hours

Note: Attempt all questions. Illustrate your answers with suitable diagrams.

1. **Describe the Stomach under the following headings:**
 - a. Parts & relations.
 - b. Blood supply.
 - c. Lymphatic drainage.

[3x4=12]
2. **Describe the Ankle joint under the following headings:**
 - a. Articular surfaces.
 - b. Ligaments.
 - c. Movements.
 - d. Applied anatomy.

[4x4=16]
3. **Describe the Ischiorectal fossa under the following headings:**
 - a. Position.
 - b. Boundaries.
 - c. Contents.
 - d. Applied anatomy.

[4x4=16]
4. Classify and describe the different types of Synovial joints in the body with examples of each.

[20]
5. **Write briefly on:**
 - a. Transitional epithelium.
 - b. Umbilicus.
 - c. Implantation.
 - d. Meckel's diverticulum.
 - e. Varicocele.

[5x4=20]
6. **Describe the Spleen under the following headings:**
 - a. Position.

[4]
 - b. Relations.

[4]
 - c. Blood supply.

[4]
 - d. Applied anatomy.

[4]

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Physiology

M.M. : 100

Time : 3 Hours

Note: *Attempt SIX questions in all, except the last **(Q.NO. 8)** which is **COMPULSORY**. Draw diagrams wherever necessary.*

1. What is Landsteiner's law. What is 'Rh' Blood group. What is Haemolytic disease of new born. How do you prevent it.
[16]
2. Write down structure and functions of Platelets.
[16]
3. Write down composition, functions and mechanism of secretion of Saliva.
[16]
4. What is the structure of Small intestine. Describe different types of Intestinal movements.
[16]
5. Write down in detail the structure of Nephron. Write down the difference in Cortical and Juxta-medullary nephrons.
[16]
6. Write down the structure and functions of Cell membrane.
[16]
7. **Write notes on:**
[16]
 - a. Na- K Pump.
 - b. Facilitated diffusion.
8. **Write short notes on:**
[20]
 - a. Heparin.
 - b. AIDS.

B.Sc. [Medical (Part-I)]

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Medical Statistics & Research Methodology

M.M. : 80

Time : 3 Hours

Note: Use of Simple Calculator is allowed.

SECTION-A

All questions are Compulsory. Each question carries Four marks. [5x4=20]

1. Explain the objectives of Sampling theory.
2. Define Simple and Composite hypotheses.
3. Explain properties of Arithmetic mean.
4. Define Random & Non-random sampling.
5. Give the importance of Standard error.

SECTION-B

Attempt any Four Questions. Each Question carries 15 marks.

- 1a. Discuss the simple random sampling and its methods. [7]
- 1b. **A Population of size 100 is divided into four strata whose sizes are:**
 $N_1=40, N_2=10, N_3=20, N_4=30$ and variances (S_i^2) are 2, 3, 4, 5 respectively.
How would you draw samples of size 20 according to two allocations[Proportional and Optimum]. [8]
- 2a. Discuss the criteria of selecting a sampling procedure. [7]
- 2b. **Find Mode and Median from the following data:**

Class Interval:	5-10	10-15	15-20	20-25	25-30	30-35
Frequency	2	9	29	54	11	6

 [8]
- 3a. Discuss the role of Interview method in data collection. [7]
- 3b. Find Mean & Standard deviation from the following data: [8]

Income between(Rs.):	100-200	100-300	100-400	100-500	100-600
No. of Persons	15	33	63	83	100
- 4a. Discuss the important steps in preparing the scientific reports. [7]
- 4b. Obtain the Regression equations from the following data:

X:	57	58	59	60	61	62	64
Y:	77	78	75	82	82	79	81

 [8]
- 5a. Discuss the problems in Representative sample. [7]
- 5b. The Arithmetic mean and Standard deviation of 20 observations were calculated by a student as 20 and 5 respectively. But while calculating them, an item 13 was misread as 30. Explain how will you find the correct Mean & Standard deviation. [8]
6. **Write short notes on:** [3x5=15]
 - a. Difference between Correlation and Regression.
 - b. Usefulness of Percentile in medical statistics.
 - c. Confidence limits.

B.Sc. [Medical (Part-III)]

BF/2009/07

Anatomy

M.M. : 100

Time : 3 Hours

*Note: Attempt any **FIVE** questions. Illustrate your answers with suitable diagrams.*

1. Describe origin, course, relations and branches of Facial nerve. [20]
2. **Describe briefly:** [4x5=20]
 - a. Dangerous area of face.
 - b. Vocal cord.
 - c. Nerve supply of Scalp.
 - d. Down's syndrome.
3. **Describe origin, insertion, nerve supply and actions of following muscles:**
 - a. Superior rectus.
 - b. Lateral pterygoid.
 - c. Digastric.
 - d. Stylopharyngeus. [4x5=20]
4. **Write short notes on the following:** [4x5=20]
 - a. Histology of Thyroid gland.
 - b. Optic chiasma.
 - c. Development of parathyroid gland.
 - d. Carotid sheath.
5. **Write short notes on the following:** [4x5=20]
 - a. Development of Tongue.
 - b. Medial wall of Middle ear.
 - c. Sphenoethmoidal recess.
 - d. Quadratus membrane.
6. **Enumerate the following(only names):** [4x5=20]
 - a. Cartilages of Larynx.
 - b. Fibres present in genu part of internal capsule.
 - c. Branches of external carotid artery.
 - d. Muscles of soft palate.
7. **Write short notes on the following:** [4x5=20]
 - a. Inferior horn of lateral ventricle.
 - b. Parotid capsule.
 - b. Histology of sublingual gland.
 - c. Dermatoglyphics.
8. **Describe briefly:** [4x5=20]
 - a. Tela choroidea.
 - b. Fasciculus cuneatus.
 - c. Straight sinus.
 - d. Blood supply of Cerebellum.

B.Sc. [Medical (Part-III)]

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Physiology

M.M. : 100

Time : 3 Hours

*Note: Attempt any **FIVE** questions. Draw suitable diagrams wherever necessary.*

1. Describe the functions of Hypothalamus.
[20]
 2. Describe synthesis and functions of Thyroid hormones.
[20]
 3. **Compare and contrast the following:**
 - a. Diabetes Mellitus and Diabetes insipidus.
[10]
 - b. Motor aphasia and Sensory aphasia.
[10]
 4. **Write action of the following:**
 - a. Testosterone.
[10]
 - b. Calcitonin.
[10]
 5. **Write notes on:**
 - a. Ovarian cycle.
[10]
 - b. Physiology of Hearing.
[10]
 6. **Write notes on:** [4x5=20]
 - a. Colour vision.
 - b. Withdrawl reflex.
 - c. REM sleep.
 - d. Milk ejection reflex.
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B.Sc. [Medical (Part-III)]

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Biochemistry

M.M. : 100

Time : 3 Hours

*Note: Attempt any **FIVE** questions.*

1. What is Replication? Describe the process of Replication.
[20]
2. Define Chromatography. Enumerate the main types of Chromatography. Give brief description and applications of each type.
[20]
3. What is the difference between Oxidative Phosphorylation and Substrate level phosphorylation? How ATPs are synthesized in E.T.C. [5+15=20]
4. How Haem is synthesized? Write a note on Porphyrins.
[10+10=20]
5. Which Plasma protein fraction gives immunity? Enumerate various types of immunoglobulins and describe their structure.
[20]
6. **Write short notes on:** [4x5=20]
 - a. Vander Bergh test.
 - b. Urea clearance test.
 - c. Plasmids.
 - d. DNA vaccine.

B.Sc. [Medical (Part-III)]

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Psychology & Education

(New Scheme)

M.M. : 80

Time : 3 Hours

*Note: Attempt any **FIVE** questions.*

1. Describe the Socio-psychological development of adolescent & young adults?
[16]
2. What do you know about Cognitive development among youth?
[16]
3. What problems Indian youth face in areas of home life, religion & health?
[16]
4. Describe the causes & treatment of Drug abuse?
[16]
5. Youth need Guidance & Counselling. Discuss?
[16]
6. Evaluation of knowledge is important part of education. Discuss?
[16]
7. Describe the role of Media in Education.
[16]
8. Describe the importance of Websites in education?
[16]

B.Sc. [Medical (Part-II)]

BF/2009/07

Anatomy

M.M. : 100

Time : 3 Hours

Note: Attempt all questions.

1. Classify Carpometacarpel joints. Describe first Carpometacarpel joint in detail.

[16]

2. **Enumerate:** [5x3=15]
a. Branches of posterior cord of brachial plexus.
b. Various openings in right atrium.
c. Branches of Right coronary artery.
d. Flexors of wrist joint.
e. Muscles supplied by posterior interosseous nerve.
3. **Draw labeled histological diagrams of:** [4x5=20]
a. Oesophagus.
b. Vas deferens.
c. Ureter.
d. Aorta.
4. **Write briefly:** [3x7=21]
a. Derivatives of mesonephric ducts in males.
b. Development of right atrium.
c. Development of anal canal.
5. **Write short notes on:** [2x7=14]
a. Erb's paralyses.
b. Mid palmar space.
6. **Write briefly on:** [2x7=14]
a. Azygos vein.
b. Bronchopulmonary segments and their applied aspect.
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B.Sc. [Medical (Part-II)]

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Physiology

M.M. : 100

Time : 3 Hours

*Note: Attempt any **FIVE** questions. Illustrate your answers with suitable diagrams.*

1. Define Hypoxia. Discuss various types of Hypoxia.
[20]
2. Discuss the events of Cardiac cycle.
[20]
3. **Draw labeled diagrams of the following:**
 - a. Lung volumes & capacities.
[10]
 - b. Neuromuscular junction.
[10]
4. **Write short notes on:**
 - a. CO₂ transport in blood. [7]
 - b. Saltatory conduction. [7]
 - c. Absorption of Fat. [6]
5. **Write in brief on:**
 - a. Normal ECG. [7]
 - b. Hering breuer reflex. [7]
 - c. Vitamin C. [6]
6. **Write briefly on:**
 - a. Protein Energy Malnutrition. [7]
 - b. Tetanus. [7]
 - c. Baroreceptors. [6]
7. **Write short notes on:**
 - a. Balanced diet. [7]
 - b. Myelinogenesis. [7]
 - c. Shock. [6]
8. Discuss the age related changes in human beings. Describe the factors which help to delay ageing.
[20]

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Time : 3 Hours

1. a. Describe Citric acid cycle(Kreb's cycle) in detail.
[10]
b. Give an account of uses/importance of HMP shunt or PPP pathway.[10]
2. a. Describe Ketone body metabolism.
[10]
b. Give an account of fatty acid synthesis.
[10]
3. a. **Write short notes on:**
i) Cushing's syndrome. [5]
ii) Acromegaly. [5]
b. Iron homeostasis.
[10]
4. a. **Write short notes on:**
i) Copper. [5]
ii) Glycine. [5]
b. Calcium homeostasis.
[10]
5. a. Describe Urea synthesis in detail.
[10]
b. Discuss Gout.
[10]
6. a. Discuss Adrenal cortex hormones.
[10]
b. Discuss Oxidative deamination and its importance.
[10]
