

JUNE 1990

FIRST M.B., B.S. EXAMINATION, JUNE 1990

Semester II

PHYSIOLOGY—II

Time : Three hours

Maximum : 90 marks

- (i) Answer ALL the questions.
- (ii) Section A and Section B should be answered in separate answer books
- (iii) Section C must be answered separately on the answer sheet placed inside the question booklet as per the instructions given on the first page.

SECTION A

What is Marey's Law? Describe the reflexes on which it is based. (15 marks)

Describe the origin, course and termination of Corticospinal tract. Mention its functions and the effects of lesion in the internal capsule. (15 marks)

SECTION B

Write short notes on :

- (a) Photoreceptors.
- (b) Functions of thalamus.
- (c) Rinnee test and its significance
- (d) Asphyxia.
- (e) P.-R. Interval.
- (f) Astigmatism.

(6 × 5 = 30 marks)

FIRST M.B., B.S. EXAMINATION, DECEMBER 1990

Semester II

PHYSIOLOGY—II

Time : Three hours

Maximum : 90 marks

- (i) Answer ALL the questions.
- (ii) Sections A and B should be answered in separate answer-books.
- (iii) Section C must be answered separately on the answer-sheet placed inside the question paper booklet as per the instructions given on the first page.
- (iv) Draw diagrams wherever needed for answers in Sections A and B.

SECTION A

1. What is systolic, diastolic, pulse and mean arterial pressure? Describe the short-term regulation of Arterial Blood Pressure. (15 marks)
2. Give an account of secretion, circulation, absorption and functions of Cerebro Spinal Fluid (C.S.F.). How is its pressure determined? (15 marks)

SECTION B

Write short notes on :

- (a) Organ of Corti
- (b) Functions of Aqueous Humour
- (c) Brown sequard syndrome.
- (d) Stereognosis
- (e) Vagal Tone
- (f) Cyanosis. (6 × 5 = 30 marks)

NOVEMBER 1991.

FIRST M.B., B.S. EXAMINATION, NOVEMBER 1991.

Semester II

PHYSIOLOGY — Paper II

Time : Two and a half hours. Maximum : 60 marks.

Answer ALL the questions.

Sections A and B should be answered in separate answer books.

Draw diagram wherever necessary.

SECTION A

1. Describe the structure, connections, and functions of Reticular formation. (15 marks)
2. What is Vasomotor Center? What are its inputs, outputs, and functions? (15 marks)

SECTION B

3. Write short notes on :
 - (a) Lung Function Tests.
 - (b) Chemoreceptors.
 - (c) Projection of Sensation.
 - (d) Functions of Skin.
 - (e) Purkinje Shift.
 - (f) Taste Buds. (6 × 5 = 30 marks)
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APRIL 1992

FIRST M.B., B.S. DEGREE EXAMINATION, APRIL 1992.

First Year

Second Semester

Paper II — PHYSIOLOGY—II

Time : Three hours.

Maximum : 90 marks.

SECTION A

1. Trace the pathway of corticospinal tract. Mention in a tabular form the differences between upper motor neuron lesion and lower motor neuron lesion. (15 marks)
2. Name the respiratory centres. Describe in detail the chemical regulation of respiration. (15 marks)

SECTION B

3. Write briefly :
 - (a) Define synapse. Describe the mode of transmission at a synapse.
 - (b) Classify taste substances. Describe diagrammatically the taste pathways.
 - (c) Define Fick's principle. Using this principle how is cardiac output determined.
 - (d) Functions of rods and cones.
 - (e) Draw and describe a normal arterial pulse tracing.
 - (f) Organ of corti. (6 × 5 = 30 marks)
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[1005]

December-1992

FIRST M.B., B.S. DEGREE EXAMINATION, DECEMBER 1992

Second Semester

PHYSIOLOGY — II

Time : Three hours.

Maximum : 90 marks

- (1) Separate answer books must be used for Section A and B.
- (2) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instruction on the first page.
- (3) Answer ALL the questions.

SECTION A — (2 × 15 = 30 marks)

1. Draw a diagram of the various primary and Association areas of the cerebral cortex. Give in detail the connection and junction of the frontal lobe.
2. Describe the special features of coronary circulation. How is coronary blood flow measured in man? Give an account of regulation of coronary blood flow.

SECTION B — (6 × 5 = 30 marks)

Write short notes on :

- (a) Role of chemoreceptors in Cardio-Respiratory systems.
- (b) Bodily responses in man at high altitude.
- (c) Ciliary body and its importance.
- (d) Basal ganglia and its junction.
- (e) Synapse.
- (f) Phases of cardiac ventricular filling and its functional significance.

November-1993

[PR 105]

FIRST M.B., B.S. DEGREE EXAMINATION.

Second Semester

PHYSIOLOGY — II

Time : Three hours.

Maximum : 90 marks

- (1) Separate answer books must be used for Sections A and B.
- (2) Section C must be answered separately on the answer sheet placed inside the question paper booklet as per the instruction on the first page
- (3) Answer ALL the questions.
- (4) Draw diagrams wherever needed for answers in Sections A and B.

SECTION A — (2 × 15 = 30 marks)

1. Describe how CO_2 is transported in the blood. Draw the CO_2 dissociation curve for arterial and venous blood. What is Bohr's effect?
2. Define blood pressure. Describe how the blood pressure is regulated. How do you measure the blood pressure in man?

SECTION B — (6 × 5 = 30 marks)

3. Write short notes on :

- (a) Difference between the pyramidal tract and extra pyramidal tract.
- (b) Neural mechanism of respiration.
- (c) Transmission of nerve impulse at synapse.
- (d) Pathway for the taste sensation.
- (e) Errors of refraction.
- (f) Heart sounds.

November-1994

FIRST M.B.B.S. DEGREE EXAMINATION.

(New Regulation)

Part II

Paper II — PHYSIOLOGY — II

Three hours

Maximum : 100 marks

Separate answer books must be used for Section A and Section B.

Section C must be answered separately on the answer sheet placed inside the question paper booklet as per instructions given on the first page.

Answer ALL questions.

Draw diagrams wherever required.

SECTION A — (2 × 15 = 30 marks)

Describe the connections, functions and effect of Lesion of ellum.

Draw a normal Electrocardiogram of lead II. Describe its s waves.

SECTION B — (8 × 5 = 40 marks)

Write short notes on :

- a) Errors of refraction.
- b) Functions of middle ear.
- c) Saltatory conduction.

ND 510]

- (d) Chemical regulation of respiration.
 - (e) M.V.V.
 - (f) Functions of Hypothalamus.
 - (g) First heart sound.
 - (h) Effects of Ascent to High altitude.
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[MB 510]

FIRST M.B., B.S. DEGREE EXAMINATION.

(New Regulations)

Part II

Paper II — PHYSIOLOGY—II

Time : Three hours.

Maximum : 100 mark

- (1) Separate answer book must be used for Sections A and B.
- (2) Section C must be answered separately and the answer sheet placed inside the question paper booklet as per instructions on the first page.
- (3) Answer ALL the questions.
- (4) Draw diagrams wherever required.

SECTION A — (2 × 15 = 30 marks)

All questions carry equal marks.

1. Describe the various nuclei, connections and functions of thalamus.
2. Describe the pulmonary circulation, its regulation and special feature.

November - 1995

[MB 510]

SECTION B — (8 × 5 = 40 marks)

All questions carry equal marks.

Write short notes on :

- (a) Air way resistance.
- (b) Residual volume.
- (c) Blood brain barrier.
- (d) Transducer function of receptors.
- (e) Functions of middle ear.
- (f) Colour blindness.
- (g) Chloride shift.
- (h) Heart sounds.

October-1996

[PK 514]

Subject Code : 4014

FIRST M.B.B.S. DEGREE EXAMINATION.

(Revised Regulations)

Part II

Paper II — PHYSIOLOGY — II

Time : Three hours

Maximum : 100 marks

Separate answer books must be used for Section A and B.

Section C must be answered separately on the answer sheet provided, as per instruction on the first page.

Answer ALL the questions.

SECTION A — (35 marks)

1. Describe the fetal circulation and discuss its special features. Add a note on patent ductus arteriosus. (15)
2. Write short notes on : (4 × 5 = 20)
 - (a) Electrical activity of the SA node.
 - (b) Jugular venous pulse.
 - (c) Blind spot.
 - (d) Influence of Heart rate on cardiac output.

SECTION B — (35 marks)

3. What is sleep. Describe the stages of sleep. What will be the electrical activities recorded during the different stages of sleep. Add a note on sleep disorders. (15)
4. Write short notes on : (4 × 5 = 20)
 - (a) Tympanic reflex.
 - (b) Spinal animal.

[PK 514]

- (c) Role of Hypothalamus in regulating the body temperature.
 - (d) Saltatory conduction.
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MP 502]

April-1997

FIRST M.B.B.S. DEGREE EXAMINATION

(Old Regulations)

Part II

Paper II - PHYSIOLOGY -II

Time : Three hours

Maximum : 90 marks

Separate answer books must be used for Sec.A and B

**Section C must be answered separately on the answer sheet
provided as per instructions on the first page**

Draw diagrams wherever needed for answers in Sec. A and B

Answer ALL the questions

SECTION A - (30 marks)

1. Mention the different types of smooth muscles. Discuss their difference in structure, function and energetics when compared to that of a skeletal muscle (15)

2. Write briefly on: (3X5=15)

- (a) Facilitated diffusion**
- (b) Functions of Neutrophils**
- (c) Micturition reflex**

SECTION B - (30 marks)

3. Discuss the synthesis and functions of thyroxine. What would be the abnormalities seen during hyper and hyposecretion of the hormone. (15)

4. Write short notes on: (3X5=15)

- (a) IUCD**
- (b) Feed back mechanisms in the regulation of hormone**
- (c) Define FRC (Functional Residual Capacity), RV (Residual Volume) and minimal volume. What is their clinical significance.**

April-1997

[MP 514]

Sub. Code : 401.

FIRST M.B., B.S. DEGREE EXAMINATION.

(Revised Regulations)

Part II

Paper II — PHYSIOLOGY — II

Time : Three hours

Maximum : 100 mark

Two and a half hours

Sections A and B : 70 mark

for Sections A and B

Section C : 30 marks

Separate answer books must be used for Section A and B.

Section C must be answered separately on the answer sheet provided as per instruction on the first page.

Answer ALL the questions.

SECTION A — (35 marks)

1. Classify synapses and describe the mechanisms of transmission across the synapse. Mention the various properties of synapse. Add a note on central neuro transmitters. (15)

2. Write notes on : (4 × 5 = 20)

(a) Composition of CSF and their functions.

(b) Theories of hearing.

(c) Accomodation of near vision.

(d) Referred pain.

[MP 514]

SECTION B — (35 marks)

3. Define, giving normal values

(a) Arterial blood pressure.

(b) Pulse pressure.

(c) Mean arterial pressure.

(d) What is the difference between end arterial pressure and lateral pressure?

(e) Discuss the chief determinants of arterial blood pressure. (2 + 2 + 2 + 2 + 7)

4. Write notes on : (4 × 5 = 20)

(a) Special features of pulmonary circulation

(b) Draw a normal electro cardiogram and label their components.

(c) Isometric contraction phase of the ventricles.

(d) Effect of exercise on cardio vascular system.

NOVEMBER '98

SM 510]

Sub. Code : 4010

FIRST M.B.B.S. DEGREE EXAMINATION

(Old/New Regulations)

Part II - Paper I - PHYSIOLOGY - II

Time : Three hours

Maximum : 100 marks

**Two and a half hours
for Section A**

Section A : 70 marks

Section C : 30 marks

Separate answer books must be used for Sec.A and B

**Section C must be answered separately on the answer sheet
provided as per instructions on the first page**

Answer ALL the questions

SECTION A

1. Describe cardiac output. Mention one method of determination of cardiac output in man. Describe the factors regulating cardiac output. (15)

2. Write short answers on: (4 x 5 = 20)

- (a) Chloride shift**
- (b) Vasomotor tone**
- (c) Special features of coronary circulation**
- (d) Errors of refraction**

SECTION B

3. Describe the origin, termination and functions of corticospinal tract. What is hemiplegia? Mention the critical features. (15)

4. Write short answers on: (4 x 5 = 20)

- (a) Pathway for taste sensation**
- (b) Functions of C.S.F. and methods to get a sample of C.S.F.**
- (c) Properties of synapse**
- (d) Effects of lateral hemisection of spinal cord**

April-1998

SV 510]

Sub. Code : 4010

FIRST M.B.B.S. DEGREE EXAMINATION

(New Regulations)

Part II

Paper II - PHYSIOLOGY - II

Time : Three hours

Maximum : 100 marks

Two and a half hours
for Sections A and B

Sections A and B : 70 marks

Section C : 30 marks

Separate answer books must be used for Sec.A and B

Section C must be answered separately on the answer sheet
provided as per instructions on the first page.

Answer ALL the questions

SECTION A

1. Define blood pressure. What are its physiological Variations? Describe the short term regulation of blood pressure. (15)

2. Write briefly on: (4 x 5 = 20)

- (a) Jugular venous pulse
- (b) Heart sounds
- (c) Olfactory pathway
- (d) Oxygen dissociation curve

SECTION B

3. Describe the connections and functions of Basal Anglia. Add a note on Parkinsonism. (15)

4. Write short notes on: (4 x 5 = 20)

- (a) Decompression sickness
- (b) Dark adaptation
- (c) Intrapleural pressure
- (d) Composition and functions of cerebrospinal fluid

April-1998

SV 512]

Sub. Code : 4012

FIRST M.B.B.S. DEGREE EXAMINATION

(Revised Regulations)

Part II - Paper II - PHYSIOLOGY - II

Time : Three hours

Maximum : 100 marks

Separate answer books must be used for Sec.A and B

Section C must be answered separately on the answer sheet
provided as per instructions on the first page

Answer ALL the questions

SECTION A - (35 marks)

1. Describe the composition, functions and regulations of salivary secretion.
(15)

2. Write short notes on: (4 x 5 = 20)

- (a) Rh blood group
- (b) Immunity
- (c) "Counter-current system" in kidney
- (d) Role of calcium ions in skeletal muscle contraction

SECTION B - (35 marks)

3. Describe the actions of Insulation on (15)

- (a) Adipose tissue
- (b) Skeletal muscle
- (c) Liver
- (d) Add a note on regulation of insulin secretion

4. Write short notes on: (4 x 5 = 20)

- (a) Contraceptive methods in female
- (b) "Milk-ejection" reflex
- (c) Lung compliance
- (d) Disorders of growth hormone secretion

[SV 514]

Sub. Code : 4014

FIRST M.B.B.S. DEGREE EXAMINATION.

(Revised Regulations)

Part II

Paper II — PHYSIOLOGY — II

Time : Three hours

Maximum : 100 marks

Two and a half hours

Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B

Section C : 30 marks

Separate answer books must be used for Sections A and B.

Section C must be answered separately on the answer sheet provided as per the instructions on the first page.

Answer ALL questions.

SECTION A

1. Define blood pressure. What are its physiological variations? Describe the short term regulation of blood pressure. (15)

2. Write briefly on : (4 × 5 = 20)

- (a) Jugular venous pulse.
- (b) Heart sounds.
- (c) Olfactory pathway.
- (d) Mention features of Thalamic syndrome.

SECTION B

3. Describe the connections and functions of Basal ganglia. Add a note on Parkinsonism. (15)

4. Write briefly on :

(4 × 5 = 20)

- (a) Decompression sickness.
- (b) Dark adaptation.
- (c) Impedence matching.
- (d) Composition and functions of cerebrospinal fluid.

[SM 514]

Sub. Code : 4014

FIRST M.B.B.S. DEGREE EXAMINATION.

(Revised Regulations)

Part II

Paper II — PHYSIOLOGY — II

Time : Three hours

Maximum : 100 marks

Two and a half hours

Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B

Section C : 30 marks

Separate answer books must be used for Sections A and B.

Section C must be answered separately on the answer sheet provided as per the instructions on the first page.

Answer ALL questions.

SECTION A

1. Describe in detail with diagram left ventricular, left atrial and aortic pressure changes during a cardiac cycle. What is a second heart sound? (15)

2. Write briefly on : (4 × 5 = 20)

- (a) Hypovolemic shock.
- (b) Saltatory conduction.
- (c) Accommodation of vision.
- (d) Organ of corti.

SECTION B

Describe the pathway for pain sensation. What is the physiological basis of referred pain? Explain the role of dorsal horn in the inhibition of pain sensation. (15)

4. Write briefly on :

(4 × 5 = 20)

- (a) Parkinson's disease.
- (b) Rapid eye movement sleep.
- (c) Decompression sickness.
- (d) Regulation of coronary circulation.

[SG 514]

Sub. Code : 4014

FIRST M.B.B.S. DEGREE EXAMINATION.

(Revised Regulations)

Part II

Paper II — PHYSIOLOGY — II

Time : Three hours Maximum : 100 marks

Two and a half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B Section C : 30 marks

Separate answer books must be used for
Sections A and B.

Section C must be answered separately on the answer
sheet provided as per the instructions on the first page.

Answer ALL questions.

SECTION A

1. Describe a synapse and the mechanism of
transmission of impulses across a synapse. Discuss any
five important properties of synaptic transmission. (15)

2. Write short notes on : (4 × 5 = 20)

- (a) Parkinson's disease
- (b) Aphasias
- (c) Blood brain barrier
- (d) Auditory pathway.

SECTION B

3. Describe the mechanisms concerned in the
regulation of blood flow to the various organs of the
body. (15)

4. Write short notes on : (4 × 5 = 20)

- (a) Arterial pulse
- (b) QRS complex
- (c) Refractory period
- (d) Functions of the Iris.

[SG 510]

Sub. Code : 4010

FIRST M.B.B.S. DEGREE EXAMINATION.

(New Regulations)

Part II

Paper II — PHYSIOLOGY — II

Time : Three hours Maximum : 100 marks

Two and a half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B Section C : 30 marks

Separate answer books must be used for
Sections A and B.

Section C must be answered separately on the answer
sheet provided as per the instructions on the first page.

Answer ALL questions.

SECTION A

1. Describe with the help of a diagram electrical, mechanical and volume changes during one cardiac cycle. (15)

2. Write briefly on : (4 × 5 = 20)

(a) Jugular venous pulse.

(b) Lung compliance.

(c) Control of cerebral blood flow.

(d) Tests of hearing.

SECTION B

3. Discuss the role of cerebellum in control of muscle tone and posture. List the signs and symptoms of cerebellar lesion. (15)

4. Write short notes on : (4 × 5 = 20)

(a) Pathway for smell

(b) Spinal shock.

(c) Dark adaptation.

(d) Skeletal neuromuscular transmission.

April-2000

[KB 514]

Sub. Code : 4014

FIRST M.B.B.S. DEGREE EXAMINATION.

(Revised Regulations)

Part II

Paper II — PHYSIOLOGY — II

Time : Three hours

Maximum : 100 marks

Two and a half hours

Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B

Section C : 30 marks

Separate answer books must be used for Section A
and B

Section 'C' must be answered separately on the answer
sheet provided.

Answer ALL questions.

SECTION A

1. Describe the structure and functions of the
conductive system of the heart and compare the action
potential of the ventricular muscle and pace maker. (15)

2. Write short notes on : (4 × 5 = 20)

(a) Describe the arterial pulse and jugular venous
pulse

(b) neural organisation of the Retina

(c) Draw and describe a typical local vascular bed
(microcirculation). What are the factors regulating local
blood flow?

(d) Travelling wave theory of hearing.

SECTION B

3. Trace the origin, course and termination of the
cortico spinal tract. What is the effect of lesion at
various levels? Compare and contrast the pyramidal and
extra pyramidal systems. (15)

4. Write short answers on : (4 × 5 = 20)

(a) Monosynaptic reflex

(b) E.E.G. Rhythms.

(c) Describe the principal output of Basal
Ganglia. Enumerate the disorders encountered due to
diseases of the Basal Ganglia.

(d) Intra ocular fluids.

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Sub. Code : 4010

SECTION B

FIRST M.B.B.S. DEGREE EXAMINATION.

(Old/New Regulations)

Part II

Paper II — PHYSIOLOGY — II

Time : Three hours Maximum : 100 marks

Two and a half hours Sec. A & Sec. B : 70 marks

for Sec. A and Sec. B Section C : 30 marks

Answer ALL questions.

SECTION A

1. Describe the structure and function of the conductive system of the heart and compare the action potential of the ventricular muscle and pacemaker. (15)

2. Write short notes on : (4 × 5 = 20)

(a) Respiratory surfactants

(b) Neural organisation of retina

(c) Draw and describe a typical local vascular bed (micro circulation). What are the factors regulating local blood flow?

(d) Travelling Wave Theory of Learning.

3. Trace the origin, course and termination of cortico spinal tract. What is the effect of lesions at various levels? Compare and contrast the pyramidal and extra pyramidal system. (15)

4. Write short notes on : (4 × 5 = 20)

(a) Monosynaptic Reflex

(b) E.E.G. Rhythm

(c) Describe the principal output of basal ganglia. Enumerate the disorders encountered due to diseases of Basal ganglia.

(d) Intra ocular fluids.