



ER-4003

First Year M. B. B. S. Examination

January - 2017

Physiology : Paper-I

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 50

Instruction :

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.		Seat No. :
Name of the Examination : F. Y. M. B. B. S.		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Name of the Subject : PHYSIOLOGY : PAPER-I		Student's Signature
Subject Code No. : 4 0 0 3 Section No. (1, 2,...): 1&2		

SECTION - I

- 1 Define Cardiac cycle. Depict the events of Cardiac cycle. 8
- 2 Any 3 out of 4 : 12
 - (1) Composition & function of pancreatic juice.
 - (2) Vomiting.
 - (3) HCl synthesis in Stomach.
 - (4) Function of Saliva.
- 3 Answer in short : (any 5 out of 6) 5
 - (1) Significance of P wave in ECG.
 - (2) Define Stroke Volume. Give its normal value in healthy.
 - (3) Functions of Mitochondria.
 - (4) Define Cotransport.
 - (5) Function of Gallbladder.
 - (6) Enumerate Myoproteins.

ER-4003]

1

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SECTION - II

- 4 Answer briefly : (Any 4 out of 5) 8
- (1) Function of RBCs
 - (2) Function of JGA
 - (3) Function of Loop of Henle of Nephron
 - (4) Erythro poetin
 - (5) Macrocytic Anemia.
- 5 Short notes on : (any 3 out of 4) 12
- (1) Surfactant
 - (2) O₂ dissociation curve
 - (3) Define & classify Hypoxia. Explain causes of hypoxia.
 - (4) Vital capacity.
- 6 Answer in 1-2 sentences : (any 5 out of 6) 5
- Write normal values of
- (1) Normal respiratory rate
 - (2) Platelet count
 - (3) GFR value
 - (4) Tidal volume
 - (5) Daily urine output
 - (6) Physiological dead space.



ER-4004

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Physiology : Paper - II

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Name of the Examination : FIRST YEAR M. B. B. S.		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Name of the Subject : PHYSIOLOGY : PAPER - 2		Student's Signature
Subject Code No. : 4 0 0 4 Section No. (1, 2,.....) : 1&2		

SECTION - I

- 1 Give details on Composition, Synthesis and Functions of CSF. 8
- 2 Write notes on : (any **three** out of **four**) 12
 - (a) Synthesis of Thyroid hormone
 - (b) Testosterone
 - (c) Sympathetic nervous system
 - (d) Safe period.
- 3 Answer briefly : (any **five** out of **six**) 5
 - (a) What is Ovulation ?
 - (b) Dwarfism.
 - (c) Function of Parathormone.
 - (d) Photoreceptors.
 - (e) Role of mineralocorticoids.
 - (f) Name any two motor pathways.

SECTION - II

- 4 Answer in short : (any **four** out of **five**) 8
- (a) Corpus luteum
 - (b) Negative feedback mechanism.
 - (c) What is menopause ?
 - (d) What is spermatogenesis ?
 - (e) Define synapse. Write physiological classification of Synapses.
- 5 Short notes on : (any **three** out of **four**) 12
- (a) Functions of middle ear
 - (b) Taste receptor
 - (c) Layers of retina
 - (d) Semicircular canals.
- 6 Answer in 1-2 sentences : (any **five** out of **six**) 5
- (a) What is REM sleep ?
 - (b) Name of speech areas.
 - (c) Function of frontal cortex.
 - (d) Write any two functions of hypothalamus.
 - (e) Cause of parkinsonism.
 - (f) Name any two sensory receptors.



B-4003

First Year M. B. B. S. Examination

May / June - 2017

Physiology : Paper - I

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 50

Instruction :

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.	Seat No. : <table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>						
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Name of the Subject : PHYSIOLOGY : PAPER - 1							
Subject Code No. : <table border="1"><tr><td>4</td><td>0</td><td>0</td><td>3</td></tr></table> Section No. (1, 2,.....) : <table border="1"><tr><td>1&2</td></tr></table>	4	0	0	3	1&2		
4	0	0	3				
1&2							

SECTION - I

- 1 Define cardiac output. Describe the regulation of cardiac output. 8
- 2 Write notes on: (any three out of four) 12
 - (a) Functions of bile.
 - (b) Deglutition
 - (c) Mass reflex
 - (d) Gastric secretions.
- 3 Answer in short : (any five out of six) 5
 - (a) Define Osmosis.
 - (b) Write cause of Myaesthesia Gravis.
 - (c) Define Blood pressure. Give the value of mean arterial blood pressure.
 - (d) Enumerate functions of cell membrane.
 - (e) Write phases of action potential.
 - (f) Define secondary active transport. Give its example.

SECTION - II

- 4 Answer in short : (any four out of five) 8
- (a) Functions of Haemoglobin.
 - (b) Functions of Juxta - medullary nephron.
 - (c) Peculiarities of Renal circulation.
 - (d) What is Intrinsic factor? Write its significance.
 - (e) Blood picture of Iron deficiency anaemia.
- 5 Write notes on : (any three out of four) 12
- (a) Humoral Immunity
 - (b) Transport of carbon dioxide
 - (c) Timed vital capacity
 - (d) Decompression sickness.
- 6 Answer in 1 - 2 sentences : (any five out of six) 5
- (a) Define diuretics. Write normal value of Urinary output.
 - (b) Enumerate types and functions of T-cells.
 - (c) Define filtration fraction.
 - (d) Differentiate between Counter-current multiplier and exchange mechanisms.
 - (e) Normal value of limiting pH of urine.
 - (f) Define diffusion capacity.



B-4004

First Year M. B. B. S. Examination

May / June - 2017

Physiology : Paper - II

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 50

Instruction :

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Name of the Examination : FIRST YEAR M. B. B. S.		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Name of the Subject : PHYSIOLOGY : PAPER - 2		Student's Signature
Subject Code No. : 4 0 0 4 Section No. (1, 2,.....) : 1&2		

SECTION - I

- 1 Describe structure, functions and abnormalities of Basal ganglia. 8
- 2 Write notes on : (any three out of four) 12
 - (a) Parathormone
 - (b) Actions of Insulin
 - (c) Hypothyroidism
 - (d) IUCD.
- 3 Answer in short : (any five out of six) 5
 - (a) Define spermiogenesis.
 - (b) Cause and features of Acromegaly.
 - (c) Functions of Calcitonin.
 - (d) Enumerate layers of Retina.
 - (e) Features of Cushing's Syndrome.
 - (f) Define Puberty.

SECTION - II

- 4 Answer in short : (any four out of five) 8
- (a) Corpus albicans.
 - (b) Differentiate between Spermatogenesis and Spermiogenesis.
 - (c) Describe Mass Reflex.
 - (d) Functions of Sertoli cells.
 - (e) Secretory Phase of menstrual cycle.
- 5 Write notes on : (any three out of four) 12
- (a) Olfaction
 - (b) Mechanism of hearing
 - (c) Visual reflexes
 - (d) Colour vision.
- 6 Answer in 1 - 2 sentences : (any five out of six) 5
- (a) Types of sleep.
 - (b) Define posture.
 - (c) Two functions of Thalamus.
 - (d) Define Aphasia.
 - (e) Give example of Conditioned reflex.
 - (f) Name two Sensory pathways.



BA-3702

First Year M. B. B. S. Examination

November/December - 2017

Physiology : Paper - I

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 50

Instruction :

<p>નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.</p>		Seat No. :
<p>Name of the Examination :</p> <p>First Year M. B. B. S.</p>		<div style="border: 1px solid black; height: 60px; width: 100%;"></div> <p>Student's Signature</p>
<p>Name of the Subject :</p> <p>Physiology : Paper - I</p>		
<p>Subject Code No. :</p> <p>3 7 0 2</p>	<p>Section No. (1, 2,.....) :</p> <p>1&2</p>	

SECTION - I

- 1 What are various modes of transport across cell membrane ? Explain with examples. 1×8=8
- 2 Write notes on : (any **three** out of four) 3×4=12
 - (a) ABO blood group system
 - (b) Movements of small intestine
 - (c) Cross bridge cycle
 - (d) Cardiovascular changes in moderate exercise
- 3 Answer in short : (any **five** out of six) 5×1=5
 - (a) What are 'Intercalated discs' ?
 - (b) What is protective function of saliva ?
 - (c) Define 'Cardiac index'. What is its normal value ?
 - (d) Name the Vit K dependent coagulation factors.
 - (e) What is aplastic anemia ?
 - (f) What is Tubuloglomerular feedback ?

BA-3702]

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SECTION - II

- 4 Answer in short : (any **four** out of five) **4×2=8**
- (a) Enumerate factors maintaining gastroduodenal 'mucosal barrier'.
 - (b) Draw and label 'Oxygen-Hb dissociation curve'.
 - (c) What are functions of Gastrin ?
 - (d) Functions of Juxtaglomerular apparatus.
 - (e) What is AV nodal delay ?
- 5 Write notes on : (any **three** out of four) **3×4=12**
- (a) ECG
 - (b) Artificial respiration
 - (c) Characteristics of coronary circulation
 - (d) Nervous regulation of respiration
- 6 Answer in 1-2 sentences : (any **five** out of six) **5×1=5**
- (a) What is Anatomical 'Dead space' ? Give its normal value.
 - (b) Enumerate types of antibodies.
 - (c) Define renal clearance.
 - (d) What is 'Angina pectoris' ?
 - (e) What is normal value of platelet count ?
 - (f) Define 'Circulatory shock'.



BA-3703

First M. B. B. S. Examination

November/December - 2017

Physiology : Paper - II

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 50

Instruction :

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Name of the Examination : First M. B. B. S.		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Name of the Subject : Physiology : Paper - II		<div style="border: 1px solid black; height: 50px; width: 100%;"></div> Student's Signature
Subject Code No. : 3 7 0 3 Section No. (1, 2,.....) : 1&2		

SECTION - I

- 1 Describe the connections and functions of hypothalamus. 1×8=8
- 2 Write notes on : (any **three** out of four) 3×4=12
 - (a) Errors of refraction
 - (b) Applied Physiology of cerebellum
 - (c) Compare and contrast between REM and NREM sleep.
 - (d) Synthesis of Thyroid hormones.
- 3 Answer in short : (any **five** out of six) 5×1=5
 - (a) What is cause of Addison's disease ?
 - (b) Name any two extra-pyramidal tracts in CNS.
 - (c) What are the types of deafness ?
 - (d) What is cretinism ?
 - (e) What is effect of sympathetic system stimulation on eyes ?
 - (f) What is dark adaptation ?

BA-3703]

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[Contd....

SECTION - II

- 4 Answer in short : (any **four** out of five) **4×2=8**
- (a) What is 'hypocalcemic tetany' ?
 - (b) What is 'referred pain' ?
 - (c) What is 'subliminal fringe' property of synapse ?
 - (d) Compare and contrast between rods and cones.
 - (e) What is 'attenuation reflex' ?
- 5 Write notes on : (any **three** out of four) **3×4=12**
- (a) Physiological Actions of Oxytocin.
 - (b) Brown Squared Syndrome.
 - (c) Functions of middle ear
 - (d) Functions of placenta
- 6 Answer in 1-2 sentences : (any **five** out of six) **5×1=5**
- (a) What is 'safe period' method of contraception ?
 - (b) What is function of Eustachian tube ?
 - (c) Mainly which hormonal levels in blood increases prior to ovulation ?
 - (d) Name any two sensations carried by Anterolateral spinothalamic tracts.
 - (e) What is 'Ageusia' ?
 - (f) According to Erlanger-Gasser classification of nerve fibers, which are the fastest conducting nerve fibers ?