

Grand Test Physiology 2014

NAHEED MEDICAL COLLEGE LAHORE

2ND YEAR MBBS 2013-14

(Physiology)

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GRAND TEST

DATE: 16-06-14

INSTRUCTIONS

1. All subjective part is to be submitted within 2 HOURS, no extra time will be given.
2. Neat handwriting, use of margins will increase the outlook/presentation of your paper.

SUBJECTIVE PART (SEQs)

TOTAL MARKS: 45

ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.

- A) What is counter-current exchanger, give its function. (2)
- ✓ B) Describe micturition reflex and its pathway. (3)
- A) Name the nervous plexuses of GIT and their corresponding functions. (3)
- B) Explain defecation reflex with the help of a diagram. (2)
- A) A 44-year-old woman, known diabetic presented with backache & a six month history of swellings on bony areas of the body, tightening of rings, more recent headache & decreased vision. She complains of pain in joints. *Acromegaly*
1. Give the diagnosis. (1)
 - ii. Impact of the responsible hormone on the metabolism of carbohydrates & proteins. (2)
- B) Compare the dwarfism due to hypopituitarism with that due to cretinism. (2)
- A) Give the hypothalamic-pituitary-testicular axis in adult male stressing upon the hormones involved. (2)
- B) Draw & label the phases of menstrual cycle. (3)
- A) Draw the visual pathway till visual cortex. ✓ (3)
- B) Give visual disorders, from which the person will suffer, if there is lesion in right optic nerve, optic chiasma, right optic tract, right sided optic radiations. ✗ (2)
- A) Define speech. Give the important speech areas and mechanism of speech. (3)
- B) Discuss the disorders of speech with examples. (2)
- A) Name the tracts and corresponding sensations carried by Antrolateral system. (3)
- B) Define synapse. Give its types. Give properties of synapse. (2)
- A) Compare the features of upper motor neuron and lower motor neuron lesions. (3)
- B) Draw a stretch reflex. (2)
- A) A 50-year-old patient came to an outdoor of a hospital with a complaint of involuntary movements of hands at rest & feeling of stiffness in legs. He also feels difficulty in starting a movement.
1. Give your diagnosis *Parkinson disease* (0.5)
 - ii. Explain pathophysiology of disease (1)
 - iii. How you will treat such patient *L-Dopa* (0.5)
- B) List the features of cerebellum disease. (3)

(B)

(Physiology)

(SS) ✓

DATED: 23-07-15

GRAND TEST 2015

INSTRUCTIONS

- 1-All subjective part is to be submitted within 2 hours 10 minutes, no extra time will be given.
- 2-Neat handwriting, use of margins will increase the outlook /presentation of your paper.

SUBJECTIVE PART (SEQs)

TOTAL MARKS: 50

TIME: 2 HOURS 10 MINUTES

ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.
 DRAW THE NECESSARY DIAGRAMS WHERE REQUIRED.

- A) What is countercurrent multiplier system in kidney? Explain its mechanism and function in detail. (3.5)

B) Describe micturition reflex and its pathway. (1.5)
- Define GFR. List the determinants of GFR and outline their mechanism of regulation of GFR. (1+2+2)
- A) List all the ascending tracts. *dorsal column medial lemniscus, anterolateral spinothalamic tract* (1)

B) List the sensations carried by dorsal column medial lemniscus system. *573 Cr.* (1.5)

C) Draw a sensory homunculus and give its properties. (1.5)
- A) Explain with the help of diagram the functional division of cerebellum and corresponding function of each part. (3)

B) A 55-year-old lady came in emergency with sudden onset of right-sided weakness of body & loss of voluntary movements. She is a known hypertensive. On examination, she is unconscious and Babinski's Sign was found to be positive on right side.

(i) What is the most probable diagnosis? *Hemiplegia* (1)

(ii) What other features related to this disease do you expect in this patient? (1)
- A) Define Speech. Give the important speech areas and mechanism of speech. (3)

B) List the functions of hypothalamus. *Waleans TB* (2)
- A) Name the nervous plexus of GIT & their corresponding functions. *→* (3)

B) Describe the sequence of events occurring in pharyngeal phase of swallowing reflex. *734* (2)
- A) Give in a tabulated form, the effect of parasympathetic nerve stimulation in heart, GIT, pupil of eye and urinary bladder. *contract* (2)

B) Compare the dwarfism due to hypopituitarism with that due to cretinism. *↓ stress, ↓ cont, ↓ sat, ↓ cont* (3)
- A) Give the hypothalamic-pituitary-testicular axis in adult male with emphasis on the hormones involved. (2)

B) List the hormones produced by placenta & outline the function of each hormone. *Reproductive* (3)
- A) Enumerate the hormones included in blood sugar level regulation. *Enelo* (2)

B) Discuss the role of insulin in carbohydrate and protein metabolisms. (3)
- A) Define Accomodation reflex. Give in detail the reactions for near response. Draw the pathway for this reflex. (3)

B) Draw and label the auditory pathway till auditory cortex. (2)

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INSTRUCTIONS
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ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.

TOTAL MARKS = 45

DATED: 25-8-2016

TIME = 2 hours 10 min

- Q1. A) Name dorsal column tracts, list the sensations carried by these. (2.5)
 B) Draw dorsal column-medial lemniscal system pathway till the primary sensory cortex. (2.5)
- Q2. A) A 50-year-old patient came to an outdoor of a hospital with a complaint of involuntary movements of hands at rest & feeling of stiffness in legs. He also feels difficulty in starting a movement. His face is mask like with no change of expression.
- Give your diagnosis (0.5)
 - Explain pathophysiology of disease (1)
 - What other symptoms and signs the patient will show (0.5)
- B) List the physiological divisions of cerebellum and their functions 164F (3)
- Q3. A) Draw & label the Dual pain pathway. (2)
 B) Give the causes of visceral pain & explain the mechanism of referred pain (3)
- Q4. A) Define Speech. Give the important speech areas and mechanism of speech. (3)
 B) Discuss the disorders of speech with examples. (2)
- Q5. A) Define GFR. (1)
 B) List the DETERMINANTS of GFR and outline their impact on GFR. (4)
- Q6. A) Define accommodation reflex. Give in detail the reactions for near response & its nervous pathway. (2.5)
 B) Give an account of functions of middle ear with special emphasis on impedance matching. (2.5)
- Q7. A) Give chemical classification of hormones. (3)
 B) A lady presents to the outdoor with complaints of unexplained obesity, severe muscular weakness and bruises on the body. On examination, she is found to have a moon face appearance, unequal fat distribution and stria. She is also found to be suffering from hyperglycemia.
- Diagnose the disease. *Cushing Syndrome* (1)
 - What is the underlying pathology? (1)
- Q8. A) Discuss the role of Hypothalamus in regulating body temperature. 199F (2.5)
 B) What is mechanism of sweating and the impact of acclimatization on it? 197+198F (1.5)
 C) Discuss the effect of clothing on conductive heat loss. (1)
- Q9. A) Enumerate the functions of TESTOSTERONE. (3)
 B) Give a brief account of SPERMATOGENESIS 257F (2)

Uwal Javed Leghari
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Grand Test
MBBS Second Year 2016-17
(Physiology-Subjective)

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INSTRUCTIONS
1-All subjective part is to be submitted within 130 minutes, no extra time will be given.
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grand Test Physio-2017

ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.

TOTAL MARKS = 45
TIME = 2 hours 10 min

DATED: 24-8-2017

- Q1. A) Draw Dorsal column medial lemniscus system. (2.5)
B) Compare & contrast the dorsal column medial lemniscus system with that of anterolateral system (2.5)
- Q2. A) A 50-year-old patient came to an outdoor of a hospital with a complaint of involuntary movements of hands at rest & feeling of stiffness in legs. He also feels difficulty in starting a movement. His face is mask like with no expression.
- i. Give your diagnosis (1)
 - ii. Explain pathophysiology of disease (1)
 - iii. What other symptoms and signs the patient will show (1)
- B) List the physiological divisions of cerebellum and their functions (2)
- Q3. A) Draw & label the Dual pain pathway. (2)
B) Give the causes of visceral pain & explain the mechanism of referred pain (3)
- Q4. A) Define Speech. Write down the important speech areas and their functions. (2.5)
B) Draw the taste pathway. (2.5)
- Q5. A) Define GFR. Calculate Net filtration pressure. (2)
B) Enlist all the factors increasing or decreasing the GFR (3)
- Q6. A) What changes occur in the Eye, when focused on near object? (1.5)
B) Explain the nervous mechanism involved. (3.5)
- Q7. A) List the functions of parathyroid hormone. (2)
B) A young man came to OPD with complaint of frequent bone fracture. On X-ray examination he was found to be having cystic punched out areas in the bones. On investigations alkaline phosphates level was increased.
- i) What is most probable diagnosis? (2)
 - ii) What is pathophysiology of disease? (1)
- Q8. A) Discuss the role of Hypothalamus in regulating body temperature. (2)
B) Classify the Cholinergic & adrenergic receptors. (1.5)
C) Discuss the role of clothing on conductive heat loss. (1.5)
- Q9. A) Enumerate the functions of testosterone before birth & after puberty (2)
B) Give a brief account of spermatogenesis (3)

INSTRUCTIONS

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ATTEMPT ALL QUESTIONS; ALL QUESTIONS CARRY EQUAL MARKS.

TOTAL MARKS = 50
TIME = 2 hours 10 min

DATED: 16-8-18

- Q1. A) Draw the muscle spindle showing its innervation. (2.5)
 B) Compare the stretch reflex with that of inverse stretch reflex. (2.5)

- Q2. A) Compare & contrast the features of Upper motor neurons & Lower motor neuron Lesion. (2)
 B) A 60 years old man came to Hospital and told that he had weakness of right side of body. He was unable to comb the hairs, he told that he had D;M for the last 20 years.
 i) What is most probable diagnosis? (2)
 ii) What are others features of this disease. (1)

- Q3. A) Draw & Explain the "Micturition Reflex". (4)
 B) Describe the Atonic bladder. (1)

- Q4. A) List the functions of parathyroid hormone. (1.5)
 B) A young man came to OPD with complaint of frequent bone fracture. On X-ray examination he was found to be having cystic punched out areas in the bones. On investigations alkaline phosphates level was increased.
 i) What is most probable diagnosis? (2)
 ii) What is pathophysiology of disease? (3)

- Q5. A) Enlist the components & functions of Limbic system? (3)
 B) Write down the Functions of Hypothalamus along with nuclei. (2)

- Q6. A) Describe the mechanism of production of receptor potential in stereocilia of hair cells. (3)
 B) A bomb blast occurred in the vicinity of house, woman present in home started feeling that her hearing is slightly affected, but complete examination revealed no auditory damage, what is the mechanism which protect the ear from damage to loud sound? (2)

- Q7. A) Define Accomodation. Describe "Accomodation reflex". (3.5)
 B) Discuss what do you know about reduced Eye. (1.5)

- Q8. A) Draw Taste bud. Give its location on the tongue & describe mechanism Of stimulation of taste bud. (3)
 B) Trace the Taste pathway. (2)

- Q9. A) Write down the steps of Spermatogenesis. (2.5)
 B) Enlist the hormones which stimulate spermatogenesis. (1.5)
 C) Define Cryptorchidism & give its cause. (1)

- Q10. A) Discuss the role of Hypothalamus in regulating body temperature. (2.5)
 B) What is mechanism of sweating and the impact of acclimatization on it? (1.5)
 C) Discuss the effect of clothing on conductive heat loss. (1)