Reg. No.	
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# MANIPAL UNIVERSITY

## FIRST MBBS DEGREE EXAMINATION - SEPTEMBER 2016

SUBJECT: PHYSIOLOGY-PAPER I (ESSAY)

Tuesday, September 13, 2016

Time: 10:20 - 13:00 Hrs.

Maximum Marks: 80

### Answer ALL the questions.

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1. Describe the actions and regulation of secretion of hormones of posterior pituitary.

(10 marks)

2. Describe the synaptic transmission in detail. Compare it with the neuromuscular transmission.

(10 marks)

### 3. Short answer questions:

- 3A. Mention the cause and features of acromegaly. What is *Laron dwarfism*?
- 3B. Explain how thyroid stimulating hormone influences the thyroid function.
- 3C. Name the hormones of islets of Langerhans. List the factors that stimulate and inhibit the release of these hormones.
- 3D. Draw the neural circuit to illustrate inverse stretch reflex. Mention the significance of this reflex.
- 3E. Explain using a diagram, why upper half of face is not affected by the supranuclear type of facial palsy.
- 3F. Explain the organization of thalamic nuclei. List the features of thalamic syndrome.
- 3G. Explain the cause and features of syringomyelia affecting the upper thoracic cord.
- 3H. Draw and label parts of iridocorneal angle. Mention the importance of the structure.
- 3I. Name the receptors for visual acuity. Give the specific location of these receptors. List any two stimulus factors that affect visual acuity.
- 3J. List the special features of auditory pathway. Give the location of auditory area.
- 3K. Explain the role of calmodulin in smooth muscle contraction. What is plasticity of smooth muscles?
- 3L. What is EMG (electromyogram)? Explain its normal pattern and clinical use.
- 3M. Write briefly on stages of spermatogenesis.
- 3N. Explain the role of corpus luteum.
- 30. Define and give the physiological basis of male pseudohermaphroditism.

 $(4 \text{ marks} \times 15 = 60 \text{ marks})$ 



Reg. No.			

## MANIPAL UNIVERSITY

# FIRST MBBS DEGREE EXAMINATION - SEPTEMBER 2016

SUBJECT: PHYSIOLOGY-PAPER II (ESSAY)

Wednesday, September 14, 2016

Time: 10:20 - 13:00 Hrs.

Max. Marks: 80

- ∠ All questions are compulsory. Write brief, clear and legible answers.
- Essay Questions:
- 1. Define cardiac output and give its normal value. Describe the regulation of cardiac output.

(2+8 = 10 marks)

2. Explain the changes occurring during different stages of erythropoiesis. Define and classify anaemia.

(6+4 = 10 marks)

#### 3. Write short notes on:

- 3A. Explain the composition and functions of pancreatic juice.
- 3B. Define glomerular filtration rate and explain the different factors affecting it.
- 3C. Explain in detail about the fat digestion and absorption.
- 3D. Draw and explain cystometrogram.
- 3E. Describe the oxygen transport in blood.
- 3F. Define hypoxia and explain the different types of hypoxia.
- 3G. Explain the functions of saliva.
- 3H. Mention four gastrointestinal hormones. Write their functions.
- 31. Explain the various functions of plasma protein.
- 3J. Explain the factors that influence cerebral blood flow.
- 3K. Describe the generation and propagation of cardiac impulse.
- 3L. Draw the ECG in limb lead II. Mention its uses in clinical practice.
- 3M. Pulmonary surfactant and its importance.
- 3N. Explain the term Tubular maximum. Give a brief account of glucose reabsorption in the nephron.
- 30. Explain the role of skin in thermoregulation.

 $(4 \text{ marks} \times 15 = 60 \text{ marks})$ 

