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[MBBS 0825]

## **AUGUST 2025**

#### M.B.B.S. DEGREE EXAMINATION (For the candidates admitted from the Academic Year 2024-2025)

### FIRST PROFESSIONAL – (CBME) PAPER I – PHYSIOLOGY

	Q.P. Code: 527053		
Ti	me: 20 Minutes Maximum : 20 Marks		
	Answer All Questions Shade the correct answer with Black or Blue ink ball point pen		
<b>TX</b> 7	SET - A  (20 v. 1 - 20)		
	Multiple Choice Questions: $(20 \times 1 = 20)$		
1.	The release of hormones and neurotransmitters is an example of  A) Active Transport  B) Vesicular Transport  C) Facilitated Diffusion  D) Pinocytocsis		
2.	The indicator used for the measurement of Plasma volume is  A) Inulin  B) Deuterium  C) Evans Blue  D) Radio-labelled Chromium		
3.	Resting Membrane Potential of thick Spinal motor neurons A) -30 mV B) -45 mV C) -90 mV D) Fluctuating		
4.	Microcytic Hypochromic Anaemia is a features of A) Thalassemia B) Acute Blood loss C) Pernicious anaemia D) Sickle Cell anaemia		
5.	. 18 years old Anjali, complaints of recurrent painful joint swelling, associated with profuse menstrual bleeding during her cycles. A diagnosis of Haemophilia was made. Coagulation abnormality seen in a patient with Haemophilia B disease is  A) Prolonged PT  B) Normal PT  C) Normal APTT  D) Prolonged APTT		
6.	Which protein blocks the myosin-binding site on actin in resting skeletal muscle?  A) Myosin  B) Actin  C) Troponin  D) Tropomyosin		
7.	<ul> <li>Fast-twitch muscle fibers (Type II) are characterized by:</li> <li>A) High myoglobin content</li> <li>B) Slow contraction velocity</li> <li>C) High resistance to fatigue</li> <li>D) Anaerobic metabolism</li> </ul>		
8.	<ul> <li>Which is <u>true</u> about smooth muscle contraction?</li> <li>A) Relies exclusively on troponin for calcium binding B) Uses calmodulin instead of troponin</li> <li>C) Requires somatic motor nerve stimulation D) Is faster than skeletal muscle contraction</li> </ul>		
9.	Sarcomere length is decided by the length of A) A band B) I band C) H band D) M line		
10	<ul> <li>Which of the following is the <u>correct</u> sequence of layers in the wall of the gastrointestinal tract from inner to outer?</li> <li>A) Submucosa → Mucosa → Muscularis externa → Serosa</li> <li>B) Mucosa → Submucosa → Muscularis externa → Serosa</li> <li>C) Serosa → Muscularis externa → Submucosa → Mucosa</li> </ul>		

D) Muscularis externa → Mucosa → Serosa → Submucosa



11.	1. 18 years old Mr. Praveen, A II MBBS students while preparing for his exams complaints of recurrent epigastric pain. Recurrent he is skipping his regular meals and taking pain killers for his headache. Which cell is responsible for secreting hydrochloric acid in the stomach				
	A) Chief cells	B) G cells	C) Parietal cells	D) Mucous neck cells	
12.	abdominal pain. His	serum amylase and	d lipase levels are ele e is secreted in its activ	udden onset of intractable vated. A diagnosis of acute ve form by the pancreas?  D) Carboxy peptidase	
13.	3. The defecation reflex is initiated primarily by:  A) Entry of food into the stomach  C) Secretion of bile into the duodenum  D) Inhibition of sympathetic tone				
14.	Urea recycling is cruc A) Maintaining acid- C) Facilitating obliga	base balance 1	B) Driving the counter D) Enhancing medulla	current exchanger ry osmolarity for urine concentration	
15.	The kidneys regular fundamental mechanist A) Direct H <sup>+</sup> secretion C) Bicarbonate reabs	sms <u>except</u> n	luid H+ concentrati B) Bicarbonate exc D) Production of ne		
16.	16. 65 years old male met with road traffic accident and sustained head injuries. Following recovery he developed a Syndrome of Inappropriate Secretion of Anti diuretic Hormone (SIADH). Which of the following is true regarding vasopressin (ADH)?  A) It is synthesized in the posterior pituitary  B) It increases water reabsorption via aquaporin-1 channels  C) It increases blood volume by acting on the collecting ducts  D) It increases potassium reabsorption				
17.	7. The majority of circulating thyroid hormones in blood are:  A) In the free form  B) Bound to thyroxine-binding globulin (TBG)  C) Bound to Transthyretin  D) Bound to thyroxine-binding prealbumin (TBPA)				
18.	Which organ is real (1,25-dihydroxychole	sponsible for the calciferol)?	final activation of	Vitamin-D are prescribed.  f vitamin D to calcitriol	
19.	<ul><li>A) Liver</li><li>Capacitation of sperm</li><li>A) In the epididymis</li><li>C) In the female geni</li></ul>		C) Intestine B) In the seminal ve D) Inside the semini		
20.	•	nde out. She was ntains corpus luteur se	advised to have hC	se	
				[MBBS 0825]	



[MBBS 0825]

#### **AUGUST 2025**

# M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2024-2025)

### FIRST PROFESSIONAL – (CBME) PAPER I – PHYSIOLOGY

Q.P. Code: 527053				
Ti	me: 20 Minutes  Angree All Oregins  Maximum: 20 Marks			
	Answer All Questions Shade the correct answer with Black or Blue ink ball point pen			
	<u>SET - B</u>			
IV	Multiple Choice Questions: $(20 \times 1 = 20)$			
1.	18 years old Anjali, complaints of recurrent painful joint swelling, associated with profuse menstrual bleeding during her cycles. A diagnosis of Haemophilia was made. Coagulation abnormality seen in a patient with Haemophilia B disease is  A) Prolonged PT B) Normal PT C) Normal APTT D) Prolonged APTT			
2.	Which protein blocks the myosin-binding site on actin in resting skeletal muscle?			
	A) Myosin B) Actin C) Troponin D) Tropomyosin			
3.	Fast-twitch muscle fibers (Type II) are characterized by:			
	A) High myoglobin content B) Slow contraction velocity			
	C) High resistance to fatigue D) Anaerobic metabolism			
4.	Which is <u>true</u> about smooth muscle contraction?  A) Relies exclusively on troponin for calcium binding B) Uses calmodulin instead of troponin C) Requires somatic motor nerve stimulation D) Is faster than skeletal muscle contraction			
5.	Sarcomere length is decided by the length of A) A band B) I band C) H band D) M line			
6.	<ul> <li>6. Which of the following is the <u>correct</u> sequence of layers in the wall of the gastrointestinal tract from inner to outer?</li> <li>A) Submucosa → Mucosa → Muscularis externa → Serosa</li> <li>B) Mucosa → Submucosa → Muscularis externa → Serosa</li> <li>C) Serosa → Muscularis externa → Submucosa → Mucosa</li> <li>D) Muscularis externa → Mucosa → Serosa → Submucosa</li> </ul>			
7.	. 18 years old Mr. Praveen, A II MBBS students while preparing for his exams complaints of recurrent epigastric pain. Recurrent he is skipping his regular meals and taking pain killers for his headache. Which cell is responsible for secreting hydrochloric acid in the stomach  A) Chief cells  B) G cells  C) Parietal cells  D) Mucous neck cells			
8.	40 years old Kumaran, a known alcoholic experienced sudden onset of intractable abdominal pain. His serum amylase and lipase levels are elevated. A diagnosis of acute pancreatitis was made out which enzyme is secreted in its active form by the pancreas?  A) Trypsin  B) Chymotrypsin  C) Amylase  D) Carboxy peptidase			
9.	The defecation reflex is initiated primarily by:  A) Entry of food into the stomach  B) Distention of the rectum			

D) Inhibition of sympathetic tone

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C) Secretion of bile into the duodenum



	r's choice WWW.FIRSTRANKER.COM WWW.FIRSTRANKER.COM		
10.	Urea recycling is crucial for:  A) Maintaining acid-base balance B) Driving the countercurrent exchanger C) Facilitating obligatory water loss D) Enhancing medullary osmolarity for urine concentration		
11.	The kidneys regulate extracellular fluid H+ concentration through all the three fundamental mechanisms except  A) Direct H+ secretion  B) Bicarbonate excretion  C) Bicarbonate reabsorption  D) Production of new bicarbonates		
12.	65 years old male met with road traffic accident and sustained head injuries. Following recovery he developed a Syndrome of Inappropriate Secretion of Anti diuretic Hormone (SIADH). Which of the following is true regarding vasopressin (ADH)?  A) It is synthesized in the posterior pituitary  B) It increases water reabsorption via aquaporin-1 channels  C) It increases blood volume by acting on the collecting ducts  D) It increases potassium reabsorption		
13.	The majority of circulating thyroid hormones in blood are:  A) In the free form  B) Bound to thyroxine-binding globulin (TBG)  C) Bound to Transthyretin  D) Bound to thyroxine-binding prealbumin (TBPA)		
14.	In a case of severe osteoporosis, Calcium supplements with Vitamin-D are prescribed.  Which organ is responsible for the final activation of vitamin D to calcitriol (1,25-dihydroxycholecalciferol)?  A) Liver B) Kidney C) Intestine D) Skin		
15.	Capacitation of sperm occurs:  A) In the epididymis  B) In the seminal vesicle  C) In the female genital tract  D) Inside the seminiferous tubules		
16.	6. 28 years old female, a case of recurrent abortions was evaluated and a diagnosis of luteal phase defect was made out. She was advised to have hCG injections from the next conception. hCG maintains corpus luteum during:  A) The follicular phase  B) The early stages of pregnancy  C) Postmenopausal period  D) Menstrual phase		
17.	7. The release of hormones and neurotransmitters is an example of A) Active Transport B) Vesicular Transport C) Facilitated Diffusion D) Pinocytocsis		
18.	The indicator used for the measurement of Plasma volume is A) Inulin B) Deuterium C) Evans Blue D) Radio-labelled Chromium		
19.	Resting Membrane Potential of thick Spinal motor neurons A) -30 mV B) -45 mV C) -90 mV D) Fluctuating		
20.	Microcytic Hypochromic Anaemia is a features of A) Thalassemia B) Acute Blood loss C) Pernicious anaemia D) Sickle Cell anaemia		

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#### **AUGUST 2025**

# M.B.B.S. DEGREE EXAMINATION (For the candidates admitted from the Academic Year 2024-2025)

# FIRST PROFESSIONAL – (CBME) PAPER I – PHYSIOLOGY

PAPER I – PHYSIOLOGY Q.P. Code: 527053					
Ti	Time: 20 Minutes  Answer All Questions Shade the correct answer with Black or Blue ink ball point pen				
IV	$\frac{\text{SET - C}}{\text{IV. Multiple Choice Questions:}} \tag{20 x 1 = 20}$				
1.	The kidneys regulate extracellular fluid H+ concentration through all the three fundamental mechanisms except  A) Direct H+ secretion  C) Bicarbonate reabsorption  B) Bicarbonate excretion  D) Production of new bicarbonates				
2.	2. 65 years old male met with road traffic accident and sustained head injuries. Following recovery he developed a Syndrome of Inappropriate Secretion of Anti diuretic Hormone (SIADH). Which of the following is true regarding vasopressin (ADH)?  A) It is synthesized in the posterior pituitary  B) It increases water reabsorption via aquaporin-1 channels  C) It increases blood volume by acting on the collecting ducts  D) It increases potassium reabsorption				
3.	The majority of circulating thyroid hormones in blood are:  A) In the free form  B) Bound to thyroxine-binding globulin (TBG)  C) Bound to Transthyretin  D) Bound to thyroxine-binding prealbumin (TBPA)				
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8. The indicator used for the measurement of Plasma volume is

B) Deuterium

D) Pinocytocsis

C) Evans Blue

D) Radio-labelled Chromium

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C) Facilitated Diffusion

A) Inulin



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9.	Resting Membrane Potential of thick Spinal motor neurons A) -30 mV B) -45 mV C) -90 mV D) Fluctuating
10.	Microcytic Hypochromic Anaemia is a features of  A) Thalassemia  B) Acute Blood loss  C) Pernicious anaemia  D) Sickle Cell anaemia
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12.	Which protein blocks the myosin-binding site on actin in resting skeletal muscle?  A) Myosin  B) Actin  C) Troponin  D) Tropomyosin
13.	Fast-twitch muscle fibers (Type II) are characterized by:  A) High myoglobin content  B) Slow contraction velocity  C) High resistance to fatigue  D) Anaerobic metabolism
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[MBBS 0825]

#### **AUGUST 2025**

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	Answer All Questions Shade the correct answer with Black or Blue ink ball point pen			
<b>TX</b> 7	SET - D			
	IV. Multiple Choice Questions:	$(20 \times 1 = 20)$		
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	C) In the female genital tract D) Ins	side the seminiferous tubules		
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