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 A) Chief cells B) G cells C) Parietal cells D) Mucous neck cells
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 A) Trypsin B) Chymotrypsin C) Amylase D) Carboxy peptidase
13. The defecation reflex is initiated primarily by:
 A) Entry of food into the stomach B) Distention of the rectum
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14. Urea recycling is crucial for:
 A) Maintaining acid-base balance B) Driving the countercurrent exchanger
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 A) Direct H^+ secretion B) Bicarbonate excretion
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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. The majority of circulating thyroid hormones in blood are:
 A) In the free form B) Bound to thyroxine-binding globulin (TBG)
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18. 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
19. Capacitation of sperm occurs:
 A) In the epididymis B) In the seminal vesicle
 C) In the female genital tract D) Inside the seminiferous tubules
20. 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
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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

Time: 20 Minutes

Maximum : 20 Marks

Answer All Questions

Shade the correct answer with Black or Blue ink ball point pen

SET - B

IV. Multiple Choice Questions:

(20 x 1 = 20)

- 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
- Which protein blocks the myosin-binding site on actin in resting skeletal muscle?
A) Myosin B) Actin C) Troponin D) Tropomyosin
- 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
- Which is true 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
- Sarcomere length is decided by the length of
A) A band B) I band C) H band D) M line
- Which of the following is the correct sequence of layers in the wall of the gastrointestinal tract from inner to outer?
A) Submucosa → Mucosa → Muscularis externa → Serosa
B) Mucosa → Submucosa → Muscularis externa → Serosa
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 - A) Active Transport
 - B) Vesicular Transport
 - C) Facilitated Diffusion
 - D) Pinocytosis
18. The indicator used for the measurement of Plasma volume is
 - A) Inulin
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 - 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
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 - C) Pernicious anaemia
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PAPER I – PHYSIOLOGY

Q.P. Code: 527053

Time: 20 Minutes

Maximum : 20 Marks

Answer All Questions

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SET - C

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PAPER I – PHYSIOLOGY

Q.P. Code: 527053

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Answer All Questions

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SET - D

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FIRST PROFESSIONAL – SUPPLEMENTARY (CBME)

PAPER I – PHYSIOLOGY

Q.P. Code: 527053

Time: 20 Minutes

Maximum : 20 Marks

Answer All Questions

Shade the correct answer with Black or Blue ink ball point pen

SET - A

IV. Multiple Choice Questions:

(20 x 1 = 20)

1. The indicator used for the measurement of extra cellular fluid volume is
A) Inulin B) Deuterium C) Evans Blue D) Radio-labelled Chromium
2. The major contributor of Resting Membrane potential is
A) Chloride B) Potassium C) Proteins D) Sodium
3. Which of the following intercellular connections constitutes a low impedance pathway?
A) Tight junctions B) Desmosomes
C) Gap junctions D) Chemical synapses
4. Smooth muscle lacks which of the following structures?
A) Actin B) Myosin C) Sarcomeres D) ATPase activity
5. During surgery, the anaesthetist administered a Curare group drug for providing complete muscle relaxation. What is the effect of curare at the neuromuscular junction?
A) Stimulates ACh receptors B) Inhibits ACh release
C) Blocks ACh receptors D) Enhances muscle contraction
6. True statement regarding cholecystokinin (CCK) is
A) CCK is secreted in response to acidic chime
B) CCK acts on ductal cells of exocrine pancreas
C) CCK causes release of pancreatic juice rich in enzymes
D) CCK inhibits gall bladder contraction
7. What is the last sugar moiety of A and B antigen respectively??
A) Galactose and N acetylgalactosamine B) Galactose and fucose
C) Fucose and galactose D) N acetylgalactosamine and galactose
8. Immunoglobulin present in body secretions
A) Ig A B) Ig M C) Ig D D) Ig E
9. 30 years old male after travelling to deep forest woods experienced high grade fever and was evaluated. He was diagnosed to be having a viral fever with thrombocytopenia with a platelet count of 25,000 per cu.mm. The laboratory investigation will show
A) Normal Bleeding time and Normal Clotting time
B) Normal Bleeding time and Prolonged Clotting time
C) Prolonged Bleeding time and Prolonged Clotting time
D) Prolonged Bleeding time and Normal Clotting time

10. Gastrin is primarily secreted in response to:
 - A) High fat content in chime
 - B) Presence of acidic pH in stomach
 - C) Presence of peptides and amino acids in the stomach
 - D) Alkaline pH in the colon
11. 53 years old obese female presents with chronic indigestion. A complete evaluation of her liver functions was carried out. Bile salts are necessary for:
 - A) Protein digestion
 - B) Glucose absorption
 - C) Emulsification of fats
 - D) Bicarbonate secretion
12. Which of the following is not a component of saliva?
 - A) Amylase
 - B) Lipase
 - C) Mucin
 - D) Intrinsic factor
13. The glomerular filtration barrier restricts plasma protein filtration mainly due to:
 - A) Basement membrane's positive charge
 - B) Thickness of filtration barrier
 - C) Negative charge on the filtration barrier
 - D) Active transport of proteins back into capillaries
14. Which of the following best explains why glucose starts appearing in urine before the transport maximum (T_m) is reached?
 - A) T_m varies between different nephrons
 - B) Renal threshold is higher than plasma glucose level
 - C) There is active secretion of glucose
 - D) Sodium-glucose transporters are inhibited by ADH
15. 58 years old Mr. Bala was diagnosed to be having Diabetes Insipidus. He is on regular Anti-diuretic hormone therapy. ADH increases water reabsorption by:
 - A) Activating Na^+/K^+ pump in the proximal tubule
 - B) Inserting aquaporin-2 channels in the collecting duct
 - C) Inhibiting aldosterone release
 - D) Increasing sodium reabsorption in loop of Henle
16. Which of the following hormones acts through intracellular (nuclear) receptors to alter gene transcription directly?
 - A) Insulin
 - B) Epinephrine
 - C) Cortisol
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17. Mr. X, a known case of Bone carcinoma is on regular Parathyroid hormone supplement for his hypocalcemia. PTH increases serum calcium by all of the following except:
 - A) Enhancing bone resorption
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18. Luteinizing hormone (LH) acts on:
 - A) Sertoli cells to stimulate spermatogenesis
 - B) Leydig cells to secrete testosterone
 - C) Seminiferous tubules to increase FSH sensitivity
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19. Ovulation is triggered by:
 - A) High progesterone levels
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20. In a case of primary infertility, hormone assay was ordered. Which of the following is NOT a function of progesterone?
 - A) Increased uterine contractility
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PAPER I – PHYSIOLOGY

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Maximum : 20 Marks

Answer All Questions

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SET - B

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14. 30 years old male after travelling to deep forest woods experienced high grade fever and was evaluated. He was diagnosed to be having a viral fever with thrombocytopenia with a platelet count of 25,000 per cu.mm. The laboratory investigation will show
 - A) Normal Bleeding time and Normal Clotting time
 - B) Normal Bleeding time and Prolonged Clotting time
 - C) Prolonged Bleeding time and Prolonged Clotting time
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15. Gastrin is primarily secreted in response to:
 - A) High fat content in chyme
 - B) Presence of acidic pH in stomach
 - C) Presence of peptides and amino acids in the stomach
 - D) Alkaline pH in the colon
16. 53 years old obese female presents with chronic indigestion. A complete evaluation of her liver functions was carried out. Bile salts are necessary for:
 - A) Protein digestion
 - B) Glucose absorption
 - C) Emulsification of fats
 - D) Bicarbonate secretion
17. Which of the following is not a component of saliva?
 - A) Amylase
 - B) Lipase
 - C) Mucin
 - D) Intrinsic factor
18. The glomerular filtration barrier restricts plasma protein filtration mainly due to:
 - A) Basement membrane's positive charge
 - B) Thickness of filtration barrier
 - C) Negative charge on the filtration barrier
 - D) Active transport of proteins back into capillaries
19. Which of the following best explains why glucose starts appearing in urine before the transport maximum (T_m) is reached?
 - A) T_m varies between different nephrons
 - B) Renal threshold is higher than plasma glucose level
 - C) There is active secretion of glucose
 - D) Sodium-glucose transporters are inhibited by ADH
20. 58 years old Mr. Bala was diagnosed to be having Diabetes Insipidus. He is on regular Anti-diuretic hormone therapy. ADH increases water reabsorption by:
 - A) Activating Na⁺/K⁺ pump in the proximal tubule
 - B) Inserting aquaporin-2 channels in the collecting duct
 - C) Inhibiting aldosterone release
 - D) Increasing sodium reabsorption in loop of Henle

M.B.B.S. DEGREE EXAMINATION

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

FIRST PROFESSIONAL – SUPPLEMENTARY (CBME)

PAPER I – PHYSIOLOGY

Q.P. Code: 527053

Time: 20 Minutes

Maximum : 20 Marks

Answer All Questions

Shade the correct answer with Black or Blue ink ball point pen

SET - D

IV. Multiple Choice Questions:

(20 x 1 = 20)

1. Luteinizing hormone (LH) acts on:
A) Sertoli cells to stimulate spermatogenesis B) Leydig cells to secrete testosterone
C) Seminiferous tubules to increase FSH sensitivity D) Epididymis for sperm maturation
2. Ovulation is triggered by:
A) High progesterone levels B) Estrogen feedback inhibition
C) LH surge D) Decline in FSH
3. In a case of primary infertility, hormone assay was ordered. Which of the following is NOT a function of progesterone?
A) Increased uterine contractility B) Decreased uterine contractility
C) Maintenance of secretory endometrium D) Thickening of cervical mucus
4. The indicator used for the measurement of extra cellular fluid volume is
A) Inulin B) Deuterium C) Evans Blue D) Radio-labelled Chromium
5. The major contributor of Resting Membrane potential is
A) Chloride B) Potassium C) Proteins D) Sodium
6. Which of the following intercellular connections constitutes a low impedance pathway?
A) Tight junctions B) Desmosomes
C) Gap junctions D) Chemical synapses
7. Smooth muscle lacks which of the following structures?
A) Actin B) Myosin C) Sarcomeres D) ATPase activity
8. During surgery, the anaesthetist administered a Curare group drug for providing complete muscle relaxation. What is the effect of curare at the neuromuscular junction?
A) Stimulates ACh receptors B) Inhibits ACh release
C) Blocks ACh receptors D) Enhances muscle contraction
9. True statement regarding cholecystokinin (CCK) is
A) CCK is secreted in response to acidic chime
B) CCK acts on ductal cells of exocrine pancreas
C) CCK causes release of pancreatic juice rich in enzymes
D) CCK inhibits gall bladder contraction
10. What is the last sugar moiety of A and B antigen respectively??
A) Galactose and N acetylgalactosamine B) Galactose and fucose
C) Fucose and galactose D) N acetylgalactosamine and galactose

11. Immunoglobulin present in body secretions
A) Ig A B) Ig M C) Ig D D) Ig E
12. 30 years old male after travelling to deep forest woods experienced high grade fever and was evaluated. He was diagnosed to be having a viral fever with thrombocytopenia with a platelet count of 25,000 per cu.mm. The laboratory investigation will show
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D) Increasing sodium reabsorption in loop of Henle
19. Which of the following hormones acts through intracellular (nuclear) receptors to alter gene transcription directly?
A) Insulin B) Epinephrine C) Cortisol D) Glucagon
20. Mr. X, a known case of Bone carcinoma is on regular Parathyroid hormone supplement for his hypocalcemia. PTH increases serum calcium by all of the following except:
A) Enhancing bone resorption B) Increasing renal calcium reabsorption
C) Increasing phosphate reabsorption D) Activating vitamin D

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2024-2025 & 2025-2026)

FIRST PROFESSIONAL - (CBME)

PAPER I – PHYSIOLOGY

Q.P. Code: 527053

Time: 20 Minutes

Maximum : 20 Marks

Answer All Questions

Shade the correct answer with Black or Blue ink ball point pen

SET - A

IV. Multiple Choice Questions:

(20 x 1 = 20)

1. The major intracellular anion is
A) Sodium B) Potassium C) Calcium D) Magnesium
2. 40 years old diabetic complaints of giddiness. The treating home nurse suspects hypoglycemia and immediately administers sugar rich solution orally. Glucose transport via GLUT is a type of
A) Simple diffusion B) Facilitated diffusion
C) Primary active transport D) Cytopenpsis
3. The equilibrium potential for a given electrolyte is given by
A) Nernst Equation B) Donnan Gibbs Equation
C) Goldmann Equation D) Bohr Equation
4. During cross-bridge cycling in skeletal muscle, the release of ADP and Pi from the myosin head is directly responsible for
A) Detachment of the myosin head from actin
B) Re-cocking of the myosin head
C) Power stroke
D) Activation of tropomyosin
5. Vitamin K dependent coagulation factor is
A) Fibrinogen B) Prothrombin C) Labile factor D) Hageman factor
6. Myosin and actin filaments are kept in place by
A) Tropomyosin B) Actinin C) Troponin D) Titin
7. A known case of Chronic Kidney Disease on Hemodialysis is administered erythropoietin for correction of anemia. In a normal Healthy individual, Erythropoietin is mainly produced by
A) Liver B) Spleen C) Kidney D) Bone marrow
8. 45 years old Mr. Rajan, a known alcoholic is diagnosed to be having Alcoholic Liver disease. His Liver function tests are suggestive of altered plasma protein levels. Which of the following plasma proteins is mainly responsible for maintaining colloid osmotic pressure?
A) Fibrinogen B) Globulin C) Albumin D) Prothrombin

...2...

9. 8 years old girl Geetha, is recently diagnosed to be having Von Wille Brand Disease. In healthy individuals, the extrinsic pathway of coagulation is initiated by
A) Platelet Factor B) Tissue Factor C) Collagen D) Thromboxane
10. The hormone responsible for stimulating gallbladder contraction and pancreatic enzyme secretion is
A) Secretin B) Cholecystokinin C) Gastrin D) Motilin
11. Slow waves in the gastrointestinal smooth muscle are generated by
A) Sympathetic nerves B) Enteric neurons
C) Interstitial cells of Cajal D) Muscle spindles
12. Brunner's glands are primarily found in
A) Stomach B) Jejunum C) Duodenum D) Ileum
13. Which of the following is not reabsorbed in proximal convoluted tubule?
A) Glucose B) Aminoacids C) Sodium D) Creatinine
14. 16 year-old boy complaints of frequent micturition, exhaustion and tiredness was diagnosed to be having Diabetes Insipidus. The hormone that increases water reabsorption in the collecting duct is
A) Aldosterone B) Renin C) Vasopressin D) Angiotensin –II
15. 56-year-old male diabetic was diagnosed to be having diabetic Ketoacidosis. The main role of the kidneys in acid-base balance is
A) Excreting carbon dioxide
B) Excreting hydrogen ions and reabsorbing bicarbonate
C) Excreting bicarbonate and reabsorbing hydrogen ions
D) Producing aldosterone
16. A 30 year old male met with an accident and presented to the emergency room with femur fracture. On examination, pulse was feeble. Heart rate was 120/min, BP was 80/60 mmHg. The most probable diagnosis is
A) Hypovolemic shock B) Distributive shock
C) Septic shock D) Anaphylactic shock
17. Which of the following gland secretes Melatonin?
A) Hypothalamus B) Pineal gland
C) Pituitary gland D) Adrenal gland
18. Insulin receptor is classified as which type of receptor?
A) G-protein coupled receptor B) Ionotropic receptor
C) Tyrosine kinase receptor D) Nuclear receptor
19. Which hormone is essential for the development of male external genetalia during fetal life?
A) FSH B) LH C) Dihydrotestosterone D) Estradiol
20. The site of fertilization in the female reproductive tract is most commonly in the
A) Uterus B) Cervix C) Ovary D) Ampulla of the fallopian tube

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[MBBS 0726]

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2024-2025 & 2025-2026)

FIRST PROFESSIONAL - (CBME)

PAPER I – PHYSIOLOGY

Q.P. Code: 527053

Time: 20 Minutes

Maximum : 20 Marks

Answer All Questions

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SET - C

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M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2024-2025 & 2025-2026)

FIRST PROFESSIONAL - (CBME)

PAPER I – PHYSIOLOGY

Q.P. Code: 527053

Time: 20 Minutes

Maximum : 20 Marks

Answer All Questions

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