

11. 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. 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
13. The defecation reflex is initiated primarily by:
 A) Entry of food into the stomach B) Distention of the rectum
 C) Secretion of bile into the duodenum D) Inhibition of sympathetic tone
14. 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
15. 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
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)
 C) Bound to Transthyretin D) Bound to thyroxine-binding prealbumin (TBPA)
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
 C) Postmenopausal period D) Menstrual phase

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
C) Serosa → Muscularis externa → Submucosa → Mucosa
D) Muscularis externa → Mucosa → Serosa → Submucosa
- 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
- 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
- The defecation reflex is initiated primarily by:
A) Entry of food into the stomach B) Distention of the rectum
C) Secretion of bile into the duodenum D) Inhibition of sympathetic tone

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. 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. The release of hormones and neurotransmitters is an example of
 - A) Active Transport
 - B) Vesicular Transport
 - C) Facilitated Diffusion
 - D) Pinocytosis
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

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 - C

IV. Multiple Choice Questions:

(20 x 1 = 20)

1. 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
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)
4. 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
5. Capacitation of sperm occurs:
A) In the epididymis
B) In the seminal vesicle
C) In the female genital tract
D) Inside the seminiferous tubules
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
7. The release of hormones and neurotransmitters is an example of
A) Active Transport
B) Vesicular Transport
C) Facilitated Diffusion
D) Pinocytosis
8. The indicator used for the measurement of Plasma volume is
A) Inulin
B) Deuterium
C) Evans Blue
D) Radio-labelled Chromium

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
11. 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
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
14. 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
15. Sarcomere length is decided by the length of
A) A band B) I band C) H band D) M line
16. 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
C) Serosa → Muscularis externa → Submucosa → Mucosa
D) Muscularis externa → Mucosa → Serosa → Submucosa
17. 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
18. 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
19. The defecation reflex is initiated primarily by:
A) Entry of food into the stomach B) Distention of the rectum
C) Secretion of bile into the duodenum D) Inhibition of sympathetic tone
20. 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

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 - D

IV. Multiple Choice Questions:

(20 x 1 = 20)

1. Capacitation of sperm occurs:
A) In the epididymis
B) In the seminal vesicle
C) In the female genital tract
D) Inside the seminiferous tubules
2. 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
3. The release of hormones and neurotransmitters is an example of
A) Active Transport
B) Vesicular Transport
C) Facilitated Diffusion
D) Pinocytosis
4. The indicator used for the measurement of Plasma volume is
A) Inulin
B) Deuterium
C) Evans Blue
D) Radio-labelled Chromium
5. Resting Membrane Potential of thick Spinal motor neurons
A) -30 mV
B) -45 mV
C) -90 mV
D) Fluctuating
6. Microcytic Hypochromic Anaemia is a features of
A) Thalassemia
B) Acute Blood loss
C) Pernicious anaemia
D) Sickle Cell anaemia
7. 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
8. Which protein blocks the myosin-binding site on actin in resting skeletal muscle?
A) Myosin
B) Actin
C) Troponin
D) Tropomyosin
9. 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
10. 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

11. Sarcomere length is decided by the length of
 A) A band B) I band C) H band D) M line
12. 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
 C) Serosa → Muscularis externa → Submucosa → Mucosa
 D) Muscularis externa → Mucosa → Serosa → Submucosa
13. 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
14. 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
15. The defecation reflex is initiated primarily by:
 A) Entry of food into the stomach B) Distention of the rectum
 C) Secretion of bile into the duodenum D) Inhibition of sympathetic tone
16. 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
17. 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
18. 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
19. 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)
20. 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

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 - 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
 - D) Glucagon
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
 - B) Increasing renal calcium reabsorption
 - C) Increasing phosphate reabsorption
 - D) Activating vitamin D
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
 - D) Epididymis for sperm maturation
19. Ovulation is triggered by:
 - A) High progesterone levels
 - B) Estrogen feedback inhibition
 - C) LH surge
 - D) Decline in FSH
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
 - B) Decreased uterine contractility
 - C) Maintenance of secretory endometrium
 - D) Thickening of cervical mucus

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 - B

IV. Multiple Choice Questions:

(20 x 1 = 20)

1. Immunoglobulin present in body secretions
A) Ig A B) Ig M C) Ig D D) Ig E
2. 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
3. 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
4. 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
5. Which of the following is not a component of saliva?
A) Amylase B) Lipase C) Mucin D) Intrinsic factor
6. 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
7. 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
8. 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

9. Which of the following hormones acts through intracellular (nuclear) receptors to alter gene transcription directly?
 A) Insulin B) Epinephrine C) Cortisol D) Glucagon
10. 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
11. 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
12. Ovulation is triggered by:
 A) High progesterone levels B) Estrogen feedback inhibition
 C) LH surge D) Decline in FSH
13. 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
14. The indicator used for the measurement of extra cellular fluid volume is
 A) Inulin B) Deuterium C) Evans Blue D) Radio-labelled Chromium
15. The major contributor of Resting Membrane potential is
 A) Chloride B) Potassium C) Proteins D) Sodium
16. Which of the following intercellular connections constitutes a low impedance pathway?
 A) Tight junctions B) Desmosomes
 C) Gap junctions D) Chemical synapses
17. Smooth muscle lacks which of the following structures?
 A) Actin B) Myosin C) Sarcomeres D) ATPase activity
18. 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
19. 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
20. 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

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 - C

IV. Multiple Choice Questions:

(20 x 1 = 20)

1. Which of the following hormones acts through intracellular (nuclear) receptors to alter gene transcription directly?
A) Insulin B) Epinephrine C) Cortisol D) Glucagon
2. 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
3. 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
4. Ovulation is triggered by:
A) High progesterone levels B) Estrogen feedback inhibition
C) LH surge D) Decline in FSH
5. 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
6. The indicator used for the measurement of extra cellular fluid volume is
A) Inulin B) Deuterium C) Evans Blue D) Radio-labelled Chromium
7. The major contributor of Resting Membrane potential is
A) Chloride B) Potassium C) Proteins D) Sodium
8. Which of the following intercellular connections constitutes a low impedance pathway?
A) Tight junctions B) Desmosomes
C) Gap junctions D) Chemical synapses
9. Smooth muscle lacks which of the following structures?
A) Actin B) Myosin C) Sarcomeres D) ATPase activity
10. 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

11. True statement regarding cholecystokinin (CCK) is
 - A) CCK is secreted in response to acidic chyme
 - 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
12. 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
13. Immunoglobulin present in body secretions
 - A) Ig A
 - B) Ig M
 - C) Ig D
 - D) Ig E
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
 - D) Prolonged Bleeding time and Normal Clotting time
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 cholecystikinin (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
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
13. 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
14. 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
15. Which of the following is not a component of saliva?
A) Amylase B) Lipase C) Mucin D) Intrinsic factor
16. 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
17. 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
18. 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
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
