

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0323]

MARCH 2023

Sub. Code : 6053

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

FIRST YEAR – SUPPLEMENTARY (CBME)

PAPER I – PHYSIOLOGY

Q.P. Code: 526053

Time: 30 Minutes

Maximum : 20 Marks

Answer All Questions

Choose one correct answer in the box provided in the Answer Script. No overwriting should be done. Choice should be given in Capital Letters.

III. Multiple Choice Questions:

(20 x 1 = 20)

1. Most of the water in the human body is found in the
A) Interstitial fluid compartment B) Intracellular fluid compartment
C) Plasma compartment D) Total extracellular fluid compartment
2. Which is the major site of attachment of intracellular actin filaments?
A) Zona occludens B) Zona adherens C) Desmosomes D) Hemidesmosomes
3. Which of the following solution is hypertonic?
A) 0.9 % NaCl B) 5% dextrose C) 20% mannitol D) Distilled water
4. The total blood volume is
A) 5 ml/kg body weight B) 50 ml/kg body weight
C) 80 ml/kg body weight D) 100 ml/kg body weight
5. Erythrocyte Sedimentation Rate (ESR) is increased in
A) Anemia B) Hypofibrinogenemia C) Spherocytosis D) Polycythemia
6. The H antigen is usually present in individuals of
A) Type A and type B B) Type AB C) Type O D) All blood types
7. The minimum stimulus intensity that produces a compound action potential in nerve or muscle is called
A) Rheobase B) Chronaxie C) Twice rheobase D) Twice chronaxie
8. Contraction of muscles which help in maintaining posture against gravity is an example of
A) Isometric contraction B) Isotonic contraction
C) Lengthening contraction D) Eccentric contraction
9. The T system in cardiac muscle is located at the
A) Z-lines B) A-I junction C) M-line D) H- zone

10. Which of the following hormone is secreted by the stomach and plays an important role in the central control of food intake?
A) Gastrin B) CCK C) Ghrelin D) peptide YY
11. Normally the angle between the anus and the rectum is approximately
A) 15 degree B) 45 degree C) 90 degree D) 180 degree
12. In acute pancreatitis, which of the following causes disruption of pancreatic tissue and necrosis of the surrounding fat ?
A) Trypsin B) Lecithin
C) Lyso- phosphatidylcholine D) All of the above
13. The tubular transport maximum for glucose in a healthy young man is about
A) 100 mg/min B) 225 mg/min C) 375 mg/min D) 500 mg/min
14. The obligatory 24 hr urine volume to maintain solute homeostasis in a healthy adult male weighing 65 kg and consuming a balanced 2000 calorie diet is approximately
A) 100 ml B) 500 ml C) 1000 ml D) 1500 ml
15. All of the following drugs inhibit $\text{Na}^+ \text{K}^+ 2\text{Cl}^-$ cotransporter in the thick ascending limb of loop of Henle except
A) Furosemide B) Ethacrynic acid C) Acetazolamide D) Bumetanide
16. Apparent Mineralocorticoid Excess is due to absence of
A) 3β -hydroxysteroid dehydrogenase B) 21-hydroxylase
C) 11β -hydroxysteroid dehydrogenase 2 D) 11-hydroxylase
17. Which of the following actions of catecholamines requires the permissive action of Glucocorticoids?
A) Calorigenic effect B) Lipolysis
C) Vasopressor response D) All of the above
18. Wolff-Chaikoff effect is
A) Feedback inhibition of TSH by T_3
B) Transient inhibition of thyroid hormone synthesis by large doses of iodide
C) Movement of iodine into the colloid for organification
D) Endocytosis of colloid during release of thyroid hormones
19. Mullerian inhibiting substance is secreted by
A) Granulosa cells B) Sertoli cells C) Leydig cells D) Theca interna cells
20. All of the following are true regarding human chorionic gonadotropin except
A) Production of testosterone in male fetuses
B) Has luteinizing and luteotropic effect
C) Can be detected in urine 6 days after conception
D) Produced by trophoblast cells.
