2019 Scheme

Q.P. Code: 113001 **Reg. no.: ……**

First Professional MBBS Degree Regular/Supplementary Examinations
November 2023
Physiology I

Time: 3 Hours **Total Marks: 100**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space • Answer all parts of a single question together***
- ***Leave sufficient space between answers • Draw table/diagrams/flow charts wherever necessary***

Long Essays **(2x15=30)**

1. A 45-year-old man was brought to the emergency department with pain in the chest and left upper arm for the past 30 minutes. His ECG showed ST segment elevation and the cardiac enzymes were elevated.
   a) Name the most probable clinical condition.
   b) Describe the physiological basis for the changes in the ECG and cardiac enzymes
   c) List the uses of ECG
   d) Describe the special features of coronary circulation (1+6+3+5)
2. Depict the coagulation pathways using suitable flow charts. Briefly describe the fibrinolytic system. Write the physiological basis for why blood does not clot in the circulation normally (8+4+3)

Short essays **(5x8=40)**

3. Describe the various methods of carbondioxide (CO_2) transport in blood. Add a note on chloride shift. (6+2)
4. Describe the phases and regulation of gastric juice secretion. (4+4)
5. With a neat labelled diagram describe the micturition reflex. Add a note on autoregulation of renal blood flow. (5+3)
6. Briefly describe the thermoregulatory mechanisms in human body.
7. Describe the cardio-respiratory adjustments in high altitude.

Write briefly **(5x4=20)**

8. Physiological basis for renal splay.
9. Describe how edema is prevented in a normal body.
10. Physiological basis for fat malabsorption in obstructive jaundice.
11. ESR can be low in spherocytosis - why.
12. Describe the importance of dietary fiber

One word Answers **(10x1=10)**

13. Cell mediated immunity is mediated by ---------- blood cells.
14. Cessation of respiration during swallowing is called ----------
15. Hypoxia is the most potent stimulus for ---------- chemoreceptors.
16. Name the substance produced by pancreas to prevent its autodigestion.
17. The osmotic pressure exerted by plasma proteins is called ----------
18. Normal value of Glomerular Filtration Rate is ----------
19. Substances that can cause contraction of the gall bladder are called ----------
20. Name the lung volume that cannot be measured using spirometer.
21. Renin is secreted by ---------- cells of the juxta glomerular apparatus.
22. Name the tissue macrophages in liver.

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