

## 2019 Scheme

Q.P. Code: 113001

Reg. no.: .....

### **First Professional MBBS Degree Supplementary (SAY) Examinations May 2022 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 35- year old female had come to a medical outpatient department with complaints of weakness, giddiness and loss of appetite. On examination she was pale. On investigation RBC count :3.5 millions/mm<sup>3</sup>, Hb:9gm%. Peripheral smear showed microcytes with hypochromia
  - Identify the condition
  - Discuss the physiological basis for the above condition and its management
  - Discuss the stages of erythropoiesis
  - Describe the various factors which regulate erythropoiesis(1+4+5+5)
2. Discuss the characteristic features of coronary circulation. Explain the various factors regulating coronary blood flow. (7+8)

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

3. Describe the factors regulating heart rate.
4. Discuss the compensatory changes at high altitude.
5. Describe the mechanisms of oxygen diffusion across lung.
6. Describe the mechanism of micturition reflex.
7. Describe the mechanisms of digestion and absorption of fat along the gastro-intestinal tract.

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

8. Explain the physiological basis of edema formation in hypoproteinemia
9. Draw and label a normal ECG tracing in lead II.
10. Draw and label a normal oxygen dissociation curve. (2+2)
11. Explain the physiological basis for glycosuria
12. Describe the enteric nervous system. Write the physiological basis for achalasia cardia.

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

13. Normal serum bilirubin level is.....
14. Perforins are secreted by.....cells
15. Carbohydrate digesting enzyme present in saliva is.....
16. The gastric gland which secretes HCl is.....
17. 'a' wave of jugular venous pulse is caused due to.....
18. End systolic ventricular volume is.....
19. A law denoting relationship between heart rate and blood pressure is.....
20. Normal ventilation perfusion ratio is.....
21. Bluish discoloration of skin and mucus membrane is called.....
22. Ideal substance used to measure GFR is.....

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