

**Madhya Pradesh Medical Science University,
Jabalpur
MBBS First Professional Examination 2018
Summer
Subject- Physiology
Paper-I**

Time: 3:00 Hours

Maximum Marks : 50

Instructions:

- a) All questions are compulsory
- b) Draw diagrams wherever necessary
- c) Answers of Questions and Sub-questions must be written strictly according to serial order of question paper.
- d) Do not write anything on the blank portion of question paper, if written anything such type of act will be considered as an attempt to resort to unfair means

Q1. Long Answer questions 2 x 5 = 10

- a. Describe the basis of blood grouping. Discuss in short, clinical importance of blood grouping. Add a note on blood banking
- b. Describe cardiac cycle in short. What are the pressure and volume changes in different chambers of heart and nearby vessels connected to it. Add a note on heart sounds

Q2. Short Answer Questions 10 x 3 = 30

- a. How do cardiac and skeletal muscles differ structurally and functionally
- b. Discuss the importance of spirometry in diagnosis of pulmonary diseases
- c. Countercurrent multiplication of osmolality in the loop of Henle
- d. Describe the process of micturition
- e. Acid secretion in stomach
- f. Enterohepatic circulation of bile salts
- g. How is ventilation of lungs carried out
- h. Describe transfer of oxygen from lungs to tissues
- i. Describe in short role of neutrophils against invading organisms
- j. Regulation of arteriolar tone

Q3. Very Short Answer Questions 10 x 1 = 10

- a. Functions of blood platelets and their clinical importance
- b. Typical ECG trace
- c. Aquaporin
- d. Non excretory functions of kidneys
- e. Segmentation movement in gut
- f. Dalton's law of partial pressure
- g. Forces governing capillary exchange of fluids
- h. Define anemia. What is the most common type of

anemia in India

- i. Glucose dependent insulinotropic hormone (GIP)
- j. Properties of active transport

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