

Department of physiology, L.T.M.M.C. & G.H., Sion, Mumbai – 400 022
First M. B. B .S. IInd Internal Assessment examination Physiology Batch (2024 – 2025)

Date: 03.04.2025

Time : 10.00 am to 01.00 pm

Total Marks : 100

Instructions:

- Use Black ball point pen only.
- Do not write anything on the blank portion of the question paper. If anything is written, such type of act will be consider as an attempt to resort to unfair means.
- All questions are compulsory.
- The number to the right indicates full marks.
- Draw diagram wherever necessary.
- Write roll number on top right hand corner of the question paper & answer paper in **BOLD**

Section A

1. Multiple choice questions. (1M x 20 = 20M)

Section B

2. Long Answer Question (No choice) (12M x 1 = 12M)
Describe lung compliance and factors affecting it. Enumerate the conditions that increase and decrease compliance. (3M +5M +4M)

3. 2. Short Answer Questions (No choice) (4M x 5 = 20M)

- Decrease in GFR due to renal ischemia leads to increase in blood pressure. Explain.
- Explain the haemodynamic basis of aortic valvular stenosis causing coronary arterial insufficiency.
- Explain with reason the mechanisms of monospermy in most of the cases of fertilization.
- Explain the cause of steatorrhea, after having a fatty meal in a patient who has undergone surgical removal of gall bladder.
- Venous blood haematocrit is more than arterial blood. Explain.

4. 3. Short Answer Question (Any 4 out of 5) (5M x 4 = 20M)

- Describe micturition reflex. What are the abnormalities seen in atonic and automatic bladder? (2M+3M)
- A 24 year old married lady visited a doctor to seek advice for planning pregnancy. On taking menstrual history she had regular cycle of 35 days
 - What is the period during menstrual cycle in this case when the chances of pregnancy are maximum? (2M)
 - Describe the indicators of ovulation? (3M)

c. A premature new born baby is showing signs of respiratory distress. Investigations showed low thyroid and cortisol levels in his plasma. X-Ray chest revealed multiple areas of collapsed alveoli.

- i) What is this condition? (1M)
- ii) Explain the pathophysiology. (3M)
- iii) How is this condition treated? (1M)

d. What is upper motor neuron lesion? Describe its clinical features. (1M+4M)

e. A 65 year old lady comes to a doctor complaining of chest pain. During history taking the patient starts crying upon being asked about her family history. The doctor tells her not to waste his time as many patients were waiting and to come after some time. Is this behaviour of the doctor appropriate? Justify why? Describe a doctor's duties. (2M+3M)

5 * Short Answer Question (Any 4 Out of 5)

(7M x 4 = 28M)

a. Describe countercurrent multiplier and countercurrent exchange mechanism for formation of concentrated urine. (5M+2M)

b. What is deglutition reflex? Describe in detail stages of deglutition. (2M+5M)

c. Explain in detail Oxygen-Haemoglobin dissociation curve. What is the clinical significance of P_{50} ? (5M+2M)

d. Explain the effects of atrial stretch due to volume overload.

e. Describe the process of spermatogenesis and its regulation. (5M+2M)

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