

PHYSIOLOGY
PAPER-IITime: 3 hours
Max. Marks:100

PHY/J/20/36/II

Important Instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

- Enumerate functions of liver. Add a note on its glucose buffer function. (2+3)+(1+4)
 - Define jaundice. What is the pathophysiologic basis of its classification?
- Components that contribute to the work of breathing. 5+5
 - Normal and pathological conditions that cause alterations in each component.
- Mechanism of autoregulation of glomerular filtration rate. 5+5
 - Intrinsic mechanism of regulation of renal tubular reabsorption
- Role of central and peripheral chemoreceptors in regulation of respiration. (3+4)+3
 - Add a note on the responses that are mediated by airway and lung receptors.
- Cerebral circulation. 5+3+2
 - Enumerate three methods for measuring blood flow in various parts of the brain.
 - Mention a key drug used in treatment of early ischaemic cerebral stroke and its mechanism of action.
- Modalities for regulation of gastrointestinal motility. 6+4
 - Gut brain axis.
- Enumerate central and peripheral hormonal factors that increase food intake. 5+(2+3)
 - How is obesity classified on basis of BMI? What is the role of non-exercise activity thermogenesis in obesity?
- Role of platelets in haemostasis. 5+5
 - Tests used to assess the clotting mechanism.
- Process of renal H⁺ secretion. 6+4
 - Describe how renal H⁺ secretion contributes to regulation of acid base balance.
- Physiological actions of angiotensins. 5+5
 - Clinical importance of renin angiotensin system.
