

FINAL EXAM
 DECEMBER 2015

NATIONAL BOARD OF EXAMINATIONS

PHYSIOLOGY
PAPER – II

PHY/D/15/36/II

Time : 3 hours

Max. Marks : 100

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:

1.	a) What is Reynold number? b) Factors affecting it. c) How much increase in Reynold number leads to turbulence? Give examples.	2+4+4
2.	Draw a diagram of Einthoven's triangle showing Bipolar and Unipolar limb leads. Draw normal aVR and aVL records, and explain why the contours of the two are different.	3+(3+4)
3.	a) Explain how cerebrospinal fluid (CSF) is formed and reabsorbed; b) Its role in protecting the brain from injury.	6+4
4.	What are J receptors? Name the conditions when they are stimulated. Discuss the response observed.	2+2+6
5.	Changes in breathing and composition of alveolar air after forced hyperventilation for 2 minutes.	4+6
6.	a) Difference in ventilation and blood flow in different parts of lung. b) Its significance and applied aspect.	5+5
7.	a) Define Stress. b) Enumerate and explain the responses to known and unknown stress.	2+8
8.	Compare and contrast the physiological significance of core and shell body temperature.	10
9.	Blood flow in skeletal muscles during rest and exercise, and the mechanisms involved.	10
10.	Relation between work load, blood lactate levels and oxygen uptake during graded exercise.	10
