

M.D. DEGREE EXAMINATION

BRANCH V – PHYSIOLOGY

**PAPER IV – HISTORY OF MEDICINE, RECENT ADVANCES IN
CLINICAL PHYSIOLOGY, ENDOCRINOLOGY AND
REPRODUCTIVE SYSTEMS**

Q.P. Code: 202021

Time : Three Hours

Maximum : 100 Marks

I. Essay Questions:

(2 x 15 = 30)

1. a) Describe how insulin secretion is regulated.
b) Explain the metabolic actions of Insulin.
c) Describe the problems caused by abnormal carbohydrate and fat metabolism due to insulin deficiency.
2. a) Explain the major neural and hormonal changes during stress response.
b) What are the specific and nonspecific actions of stressors on the body?

II. Short notes:

(10 x 5 = 50)

1. Regulation of Aldosterone secretion.
2. Calcitriol.
3. Hypothalamo pituitary testicular axis.
4. What are the 3 regimens of contraceptive pills and describe their actions?
5. Functions of Human Chorionic Gonadotropin.
6. Melatonin.
7. Bernardo Alberto Houssay's contribution to physiology.
8. Orexigenic factors.
9. Regulation of thyroid secretion.
10. Somatomedins.

III. Reasoning Out:

(4 x 5 = 20)

1. The excitability of nerve and muscle is increased by a fall in plasma Ca^{2+} .
2. Secondary oocyte completes the 2nd meiotic division only if it is fertilized.
3. Attention deficit hyperactivity disorder is common in individuals with thyroid hormone resistance.
4. Polyspermy is prevented by a change in membrane potential of ovum.
