

Q.P. Code :01667

[Time: 2 $\frac{1}{2}$ Hours]

[Marks:75]

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory

2. Figures to the right indicate full marks

3. Draw neat labeled diagrams wherever necessary

- Q.1. a. Give the function of the following (any three) 03**
- Oxytocin
 - Thyroxine binding prealbumin
 - TSH
 - G-proteins
 - Nor epinephrine
 - Hormone responsive element
- b. Give an account of the following (any two) 12**
- Mechanism of action of group I hormones
 - Effect of Thyroid hormones on metabolism
 - Biochemical functions of Adrenaline
 - Disorders associated with abnormal insulin function
- Q.2. a. State the role/ significance of the following (any one) 02**
- Zona glomerulosa*
 - Estrone
- b. Name the following (any one) 01**
- Cells of the testes that produce androgens
 - Disease associated with impairment of adrenocortical function
- c. Answer the following (any two) 12**
- Discuss release and any three biochemical functions of ovarian hormones
 - Describe the physiological and biochemical functions of androgens
 - Give an account of any three metabolic functions of glucocorticoids
 - Menstrual cycle is under the control of four hormones- Justify
- Q.3. a. Name the analytical technique to which the following are associated with (any three) 03**
- rpm
 - Sedimentation Coefficient
 - Gradient maker
 - Mobile phase
 - FID
 - Microporous support

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- b. Describe the principle and two applications of the following (any two) 12**
- i. Differential centrifugation
 - ii. Rate Zonal centrifugation
 - iii. Gel permeation chromatography
 - iv. Ion exchange chromatography
- Q.4. a. Explain the following term (any one) 02**
- i. Molar absorptivity
 - ii. Primary fluor
- b. Give an example of the following (any one) 01**
- i. Source of UV light in spectrophotometer
 - ii. Gas present in GM tube
- c. Discuss the following (any two) 12**
- i. Working of UV spectrophotometer
 - ii. Applications of spectrophotometer
 - iii. Principle and working of Geiger Muller counter
 - iv. Autoradiography
- Q.5. Write short notes on the following (any three) 15**
- i. Functions and disorder of vasopressin
 - ii. Effect of insulin on metabolism
 - iii. Biochemical functions of progesterone
 - iv. Types of rotors
 - v. Stationary phase used in GC
 - vi. Double beam spectrophotometer
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