

2021

PHYSIOLOGY — HONOURS

Paper : CC-13

Full Marks : 50

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

1. Answer **any five** questions : 2×5
- (a) Mention one accessory sex organ of male and mention its function.
  - (b) Why are the testes localized in scrotum instead of being placed in the abdominal cavity?
  - (c) Mention two symptoms of menopause.
  - (d) What is the Blood-Testis Barrier?
  - (e) What is Totipotency?
  - (f) What is Blastulation?
  - (g) What is Puberty?
  - (h) Define capacitation of the sperm.
  - (i) What is Hysterectomy?
  - (j) What is Galactorrhoea?
2. Answer **any two** questions :
- (a) Discuss the histological structure of adult ovary with a suitable diagram. 5
  - (b) Describe foetal circulation with its special characteristics. 5
  - (c) Describe the formation and function of Corpus Inteum. 3+2
  - (d) How is lactation initiated after parturition? 5
  - (e) Write short note on foeto-placental unit. 5
3. Answer **any three** questions :
- (a) (i) What is gastrulation?
  - (ii) Describe induction, determination and differentiation in gastrulation. 1+3+3+3
  - (b) (i) Describe the physiological mechanism of ovulation.
  - (ii) Discuss the process of development of mammary gland with diagram. 5+5

**Please Turn Over**

- (c) (i) Distinguish between adult stem cells and embryonic stem cells.  
(ii) Elucidate the neuroendocrine mechanisms that control parturition. 4+6
- (d) (i) Distinguish between menstrual and estrous cycle.  
(ii) Write a note on Fertilization. 4+6
- (e) (i) Describe the hypothalamic-pituitary-testis axis on the basis of feedback mechanism.  
(ii) Describe the Oogenesis process in humans. 5+5
- (f) (i) Describe the embryological development of urinary bladder and urethra.  
(ii) What are committed stem cells? (4+4)+2
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