

**2020**  
**PHYSIOLOGY**  
**[HONOURS]**  
**Paper : VIII**

Full Marks : 80

Time : 4 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***GROUP-A**

1. Answer any **seven** questions: 1×7=7
- a) Why ADH is also called vasopresin?
  - b) What is PDGF?
  - c) What is poikilothermia?
  - d) What is morula?
  - e) What is GLUT4?
  - f) What do you mean by endemic goiter?
  - g) What is menopause?
  - h) Mention one symptom of Cushings syndrome.
  - i) What is ultradian rhythm?

*[Turn over]***GROUP-B**

2. Answer any **six** questions: 2×6=12
- a) State the differences between identical twins and dizygotic twins.
  - b) What are the preventive measures of AIDS?
  - c) What do you mean by germ disc?
  - d) What is Xerophthalmia?
  - e) What do you mean by thyroid storm?
  - f) What is Oogenesis?
  - g) What do you mean by biological clock?
  - h) What is hypoglycemia?

**GROUP-C**

3. Answer any **three** questions: 7×3=21
- a) Describe the functions of leydig cells and Sertoli cells. 4+3=7
  - b) Describe the physiology of sweat secretion. 7
  - c)
    - i) What is colostrum?
    - ii) Describe the role of oxytocin in parturition and milk ejection. 2+5=7

- d) i) What is iron deficiency anaemia?  
 ii) What measures can be taken to prevent it?  
 iii) Discuss its social implications.  $2+2+3=7$
- e) Describe the biosynthesis of  $T_3$  and  $T_4$ . 7

**GROUP-D**

4. Answer any **four** questions:  $10 \times 4 = 40$
- a) i) Discuss the uterine changes during different phases of menstrual cycle.  
 ii) Discuss how hypothalamo-hypophyseal-genadal axis regulate this sexual cycle in female.  $5+5=10$
- b) i) Classify hormones with example on the basis of their chemical nature.  
 ii) How insulin secretion is regulated by exogenous food substances.  $3+7=10$
- c) i) Discuss the mechanism of hormone action mediated by JAK-STAT pathways.  
 ii) Discuss the role of ADH in regulation of water balance in body.  $6+4=10$

- d) i) Describe the mechanism of implantation.  
 ii) Mention the role of progesterone in uterine development for implantation.  
 iii) What is menarche?  $5+4+1=10$
- e) i) Discuss the different stages of spermatogenesis.  
 ii) Briefly describe the role of hypothalamus in control of testicular function.  
 iii) What is rate testis?  $5+4+1=10$
- f) Write short notes on (any **two**):  $5 \times 2 = 10$
- i) In vitro fertilization  
 ii) Osteoporosis  
 iii) Oral contraceptives.

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