

Human Physiology (P.G.)

[CBCS]

M.Sc. Third Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER-302

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate full marks

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

Illustrate the answers wherever necessary

[Use separate answer script for each unit]

Unit – 25

[ENDOCRINOLOGY AND REPRODUCTIVE PHYSIOLOGY]

[F.M. – 20]

1. Answer any two questions from the following: **2x2= 4**
- a) Discuss the role of SRY gene in gonadal development. **2**
 - b) What are meant by upregulation and down regulation of receptors? **2**
 - c) What are growth factors? Give example. **1+1**
 - d) What is feto-placental unit? **2**

(2)

Answer any two questions from the following: 2x4 = 8

- a) How does heat shock proteins help in steroid hormone action? 4
- b) Discuss the let-down reflex of milk ejection. 4
- c) What is IVF? Describe one chemical and one mechanical method of fertility control. 2+2
- d) State the pathophysiology of Hashimoto's thyroiditis. 4

2. Answer any one question of the following: 1x8 = 8

- a) i) Discuss the biological effect of melatonin on reproductive function of humans.
- ii) What is capacitation?
- iii) Briefly explain the process of fertilization. 2+2+4
- b) i) Name two lifestyle disorders.
- ii) Discuss the feedback control mechanism of gametogenesis.
- iii) Write down the functional importance of trophoblast. 2+3+3

Unit – 26

[HUMAN IMMUNE SYSTEM]

[F.M. – 20]

1. Answer any two questions from the following: 2x2 = 4

- a) Differentiate between precipitation and agglutination. 1+1
- b) What is TLR? Mention its importance. 1+1
- c) Define titre. 2
- d) Describe the role of HCl in a human stomach. 2

(3)

2. Answer any two questions from the following: 2x4 = 8

- a) Explain the T cell – B cell cooperation with a suitable diagram. 3+1
- b) Explain the process of monoclonal antibody synthesis. 4
- c) Erythroblastosis foetalis is a type-II hypersensitivity – explain. 4
- d) Describe the structure of class II MHC with a multiple diagram. 3+1

3. Answer any one question of the following: 1x8 = 8

- a) Describe the structure and function of the given isotypes of antibody –
 - i) IgG ii) IgM 2+2+2+2
- b) Explain the role of cytokines in hypersensitivity. Differentiate between immunogens, antigens and haptens. Name two organ specific autoimmune disease. 3+3+2
