

Human Physiology(P.G.)**[CBCS]****M.Sc. Third Semester End Examination-2024****(Regular & Supplementary Paper)****PAPER-PHY-302****Full Marks: 40****Time: 02 Hrs.***The figures in the right hand margin indicate 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****[Marks – 20]****[Endocrinology and reproductive physiology]****1. Answer any two questions of the following: 2x2=4**

- a. What is meant by the term biological transducer? 2
- b. State the functions of leydig cells. 2
- c. What is recycling of receptors? 2
- d. What is decidualization? 2

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

- a. Classify hormones according to their biochemical nature with examples. What is paracrine signaling? 3+1

(2)

- b. Discuss the galactogenesis and galactopoiesis process in human.

What is lacteolysis? $(1\frac{1}{2} + 1\frac{1}{2}) + 1$

- c. What is graafian follicle? Write down its fate and functions.

1+1+2

- d. Describe the signal transduction mechanism of Ras activation by RTK.

4

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

- a. Critically describe the spermatogenesis process. Discuss the structure of a mature spermatozoon. What is acrosomal reaction?

4+3+1

- b. Define autoimmunity. State the pathophysiology of autoimmune thyroid disease. What is parturition?

2+5+1

Unit – 26

[Marks – 20]

[Human Immune System]

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

- a. Define opsonization.
- b. What is meant by Xenograft?
- c. Write in short about Single Radial Immuno Diffusion test.
- d. What is understood by thymus dependent area of lymph node?

(3)

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

- a. Describe about the structure and functions of secondary lymphoid organs with suitable diagram.

3+1

- b. What is complementarily determining regions?

Write about the structure and functions of IgA.

1+3

- c. Describe the structure and function of class I MHC with suitable diagram.

3+1

- d. "Cytokines are regulators of the development of Th1 and Th2 subsets" – Classify.

4

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

- a) Write about Hashimoto's disease. Explain in detail about the classical pathway. How does epinephrine act to protect type I hypersensitivity?

2+4+2

- b) Write down the name of the cells involved in innate immunity. Write down the characteristics of the acquired immune response. What is anaphylaxis?

2+4+2
