

2022

Human Physiology

[P.G.]

(M.Sc. Third Semester End Examination-2022)

PAPER-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*

Unit – 25

Marks 20

Endocrinology And Reproductive Physiology

1. Answer any two questions of the following: 2x2= 4
 - a) What are cytokines? 2
 - b) What is Self tolerance? 2
 - c) Write down the function of Sertoli cells. 2
 - d) What is facto-placental unit? 2

2. Answer any two questions of the following: 2x4 = 8
 - a) Describe the recycling process of receptors with suitable diagram. 2+2
 - b) Briefly state the pathophysiology of auto immune thyroid disease (AITD). 4

(2)

- c) What is capacitation? Explain the mechanism of ovulation 2+2
- d) Write the functions of placenta. What is IVF? 2+2
- 3. Answer any one question of the following: 1x8 = 8**
- a) i) Describe the JAK-STAT signalling mechanism of cytokines with a suitable diagram.
- ii) Describe diagrammatically the transformation of spermatids to spermatozoa. 5+3
- b) Write the molecular mechanism of fertilization. Give a brief idea about feedback control of gametogenesis. 5+3

Unit – 26

Marks 20

Human Immune System

- 1. Answer any two questions of the following: 2x2= 4**
- a) What is macrophage?
- b) What is opsonisation?
- c) Define MALT
- d) What is PALS?
- 2. Answer any two questions of the following: 2x4 = 8**
- a) Discuss the structure of Thymus gland.
- b) How does antigen-antibody reaction occur?
- c) What is the genetic basis of antibody diversity?
- d) How C5 convertase is formed in classical complement system?

(3)

- 3. Answer any one question of the following: 1x8 = 8**
- a) What do you mean by hyper sensitivity reaction? Discuss the structure of MHC-I and its role in immunity. 2+6
- b) Explain-
- i) Monoclonal antibody
 - ii) Cytokines and Interleukins
 - iii) Sandwich ELISA
 - iv) Mast cell and allergy. 2x4
-