First B.P.T.H. (2012) Examination, Summer - 2021
HUMAN PHYSIOLOGY - II

Total Duration : 3 Hours | Total Marks : 80

Instructions :

1) *Use **blue/black** ball point pen only.*
2) ***Do not** write anything on the **blank portion of the question paper.** If written anything, such type of act will be considered as an attempt to resort to unfair means.*
3) ***All questions are compulsory.***
4) *The number to the **right** indicates **full** marks.*
5) *Draw diagrams **wherever** necessary.*
6) *Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.*
7) *Use a common answer book for all sections.*

SECTION "A" (SAQ) (50 Marks)

1. Short answer question (any five out of six): **[5 × 3 = 15]**

a) Deglutition

b) What is LH surge? Describe the various phases of ovarian cycle.

c) Define GFR. Give its normal value. State the determinants of GFR.

d) Draw a neat and labeled diagram of visual pathway. Discuss the various lesions across the pathway

e) Define immunity. Discuss cell mediated immunity

f) Define homeostasis. Describe the positive feedback mechanism

2. Short answer question (**any five** out of six): [5 × 7 = 35]

a) Discuss the characteristic features of pulmonary circulation

b) Define Shock. Discuss the various stages of circulatory shock.

c) Describe the role of insulin in blood glucose homeostasis

d) Functions of basal ganglia. Add a note on Parkinsonism.

e) Give the classification of nerves. Explain any 4 properties of the nerves.

f) Discuss the various physiological changes observed in a person acclimatized at high altitude

SECTION "B" (LAQ) (30 Marks)

3. Long answer question (**any one** out of two): [1 × 15 = 15]

a) State the various modes of carbon dioxide transport in blood. Describe in detail the Chloride shift. Discuss Haldane effect.

b) i) Define cardiac output, stroke volume, cardiac index, & ejection fraction with their normal values. [4]

ii) Discuss the determinants and factors affecting the cardiac output. [9]

iii) Name any 2 methods for measuring cardiac output. [2]

4. Long answer question (**any one** out of two) [1 × 15 = 15]

a) Discuss in detail the various properties of skeletal & cardiac muscles. [11]

b) i) Describe the dorsal column pathway. [2]

ii) Describe the sensations carried by this tract. [2]

iii) What is sensory ataxia?