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First B.P.Th. (2012) Examination. Winter 2017 HUMAN PHYSIOLOGY

Total Duration : Section A + B = 3 Hours Total Marks : 80

SECTION - A and SECTION - B

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 answerbook for **all** Sections.

SECTION - A SAO (50 Marks)

Short answer question (any five out of six):

(5x3=15)

- a) State Landsteiner's law. Describe "ABO" blood group system.
- b) Functions of Liver.
- c) Errors of refraction.
- d) Factors affecting Glomerular filtration rate.
- e) Cushing's syndrome.
- f) Role of hypothalamus in body temperature regulation.
- 2. Short answer question (any five out of six):

(5x7=35)

- a) Origin and spread of cardiac impulse.
- b) Classify the nerve fibers. Add a note on saltatory conduction.
- c) Explain the 'milk let down' reflex.
- d) Functions of cerebellum.
- e) Draw a neat and labeled diagram of oxygen-hemoglobin dissociation curve. State the factors causing the shift to right.
- f) Define homeostasis. Explain the various feedback mechanisms with examples.

P.T.O.



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SECTION — B LAO (30 Marks)

3. Long answer question (any one out of two):

(1x15=',5)

- a) Describe the contractile and regulatory proteins of the skeletal muscle. Discuss the molecular mechanism of muscle contraction. Add a note on energy sources for muscle contraction.
- b) Discuss in detail the various properties of skeletal, cardiac and smooth muscle.
- 4. Long answer question (any one out of two):

 $(1 \times 15 = 15)$

- a) Define and classify pain. Describe the pain pathways. Add a note on analgesic system of brain.
- b) Define Cardiac Cycle. Explain in detail the various phases of cardiac cycle. Draw and label the Pressure Volume curves occurring during cardiac cycle.