

2019

B.Sc.

3rd Semester Examination  
PHYSIOLOGY (Honours)

Paper - C 7-T

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

1. Answer any five questions : 5×2=10
- (a) What do you mean by decerebrate rigidity ? 2
  - (b) How are evoked cortical potentials useful in sleep research ? 2
  - (c) What is Brown - Sequard syndrome ? 2
  - (d) What do you mean by rheobase and chronaxie? 1+1
  - (e) What is dysmetria ? 2
  - (f) What is meant by REM sleep ? 2

*[ Turn Over ]*

(g) What is Papez circuit ? 2

(h) Briefly state the role of leptin in long term regulation of hunger. 2

2. Answer any *four* questions : 4×5=20

(a) Name the extra pyramidal tracts with their origin, termination and muscle movement involved, which help in control of posture. 5

(b) Give a brief idea about the organization and types of ganglia of autonomic nervous system. 5

(c) Discuss briefly the functions of basal ganglia. 5

(d) Elaborate the neural mechanism of sleep-wakefulness cycle. 2+3=5

(e) Mention the distribution of  $\alpha$  and  $\beta$  adrenoreceptors in human body. 5

(f) Describe the input and output connection of cerebellum with diagram. 5

3. Answer any *one* question : 1×10=10

(a) (i) Define reflex with labelled diagram.

(ii) What are withdrawal reflex and cross extensor reflex ?

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(iii) Write down the role of cerebellum in control of voluntary movement.  $3+(2+2)+3$

(b) What is referred pain ? Discuss gate control theory and endogenous pain inhibition mechanism in relation to pain. Name four pain producing molecules produced in our body.  $2+(3+3)+2$

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