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End Semester Examination of Semester-II, 2016

Subject : PHYSIOLOGY (PG)

Paper : PHYPG-201

Group : Unit 13 & Unit 14

Full Marks : 40

Time : 2 Hrs

The figures in the margin indicate the marks corresponding to the question.

Candidates are requested to give their answers in their own word as far as practicable.

Illustrate the answers wherever necessary.

Unit-13 (Marks : 20)

Answer Q1. and any one out of Q2 and Q3:

Q1. Answer any five question: 2x5=10

- i) What is the concept of vertical cell column in human cerebral cortex?
- ii) What do you mean by sensory and motor aphasia?
- iii) What are the features of REM sleep?
- iv) What is neural plasticity? Give one example of motor cortical plasticity in human.
- v) What is Kluver-Bucy syndrome?
- vi) Give the salient neuro-pathological features of Alzheimer's disease.

vii) What is Vomeronasal organ?

viii) Give the working principle of PET.

- Q2. a) Give a brief note with evidential support in favour of cerebellar involvement in autonomic functions. 4
- b) Discuss the role of NMDA receptor in LTP. 3
- c) Give a critical note on the signal transduction in auditory receptors. 3
- Q3. a) Give a brief note with evidential support in connection with hypothalamic role on feeding behaviour. 3
- b) Briefly discuss the role of Papez circuit in relation to emotional behaviour. 3
- c) Mention the theories of colour vision. 2
- d) Give an outline of the mechanism of signal transduction in Odorant receptors. 2

Unit-14 (Marks : 20)

Answer Q1 and any one out of Q2 and Q3:

Q1. Answer any five questions: 2x5=10

- i) Write the energy sources that lead to reach the steady state in exercise.
- ii) State the fate of lactic acid following exercise.
- iii) Name the factors contribute to the EPOC.

- iv) State the significance of measurement of VO_2 max.
- v) What are ergogenic aids? Who uses them.
- vi) What do you mean by stroke?
- vii) What are the basic risk factors of hypertension?
- viii) Write the importance of free fatty acids as source of energy during exercise.

Q2. a) Discuss the effect of aerobic training on cardiovascular and respiratory system.

b) What is anaerobic threshold? (4+4)+2

Q3. a) Differentiate 'fitness' from the 'health'.

b) State the Therapeutic use of yoga.

c) "Type II diabetes is a outcome of life-style" — explain.
2+3+5
