SH-III/ZOO/301/C-5/19

B.Sc. 3rd Semester (Honours) Examination, 2019-20

ZOOLOGY

Course ID : 32612 **Course Code : SH/ZOO/302/C-6**

Course Title: Animal Physiology : Controlling and Co-ordinating System

Time: 1 Hour 15 Minutes **Full Marks: 25**

The figures in the right hand side margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer *any five* of the following: 1×5=5

(a) What is polyspermy?

(b) What do you mean by oligomenorrhea?

(c) What is primordial germ cell?

(d) What is spike potential?

(e) What is neurohormone?

(f) Which protein helps in the species-specific recognition of sperm and egg?

(g) On which day ovulation occurs in menstrual cycle?

(h) Name the hormone related to cretinism and myxoedema.

2. Answer *any two* of the following: 5×2=10

(a) Briefly describe how spermatids are transformed into mature sperm with illustration. 5

(b) How metaphase II arrest is relieved in mammalian oocytes? 5

(c) Briefly describe the role of progesterone and oestrogen in menstrual cycle. 2½+2½=5

(d) Discuss the role of two placental hormones —HCG and HCS. 2½+2½=5

3. Answer *any one* of the following: 10×1=10

(a) What is motor-end plate? Briefly describe with suitable illustration the mechanism of synaptic nerve impulse transmission. 2+8=10

(b) Describe the CAMP signalling pathway mediating the peptide hormone activity with proper illustration. State one example of negative feedback control of hormone action. 6+2+2=10

———————