(Pages : 3) **F – 2414**

Reg. No. : .....

Name : .....

Fifth Semester B.Sc. Degree Examination, December 2018
First Degree Programme under CBCSS
ZOOLOGY
Core Course – V
ZO1542 : Cell Biology and Molecular Biology
(Common for 2013 & 2014 Admission)

Time : 3 Hours Max. Marks : 80

PART – A

I. Answer the following questions (In **one** or **two** sentences. **One** mark **each**).

1) Lamellae.

2) Microtubule organizing center.

3) Rosalind Franklin.

4) Role of oxygen in electron transport chain.

5) Ubiquitin.

6) Facilitated diffusion.

7) Satellite chromosomes.

8) Write down the complementary DNA strand of AUUCCGCUCAU.

9) Secretory vesicle.

10) Nucleoid. **(10×1=10 Marks)**

P.T.O.

PART – B

II. Answer **any eight** of the following. **(Not** to exceed **one** paragraph. **Each** carries **two** marks).

11) M Phase of cell cycle.

12) Inducible operon.

13) Polytene chromosome is a giant chromosome. Justify.

14) Co-linearity of genes.

15) Termination of translation.

16) Characteristics of A DNA.

17) Origin of endoplasmic reticulum.

18) Significance of mitosis.

19) Electron transport chain.

20) Differentiate heterochromatin and euchromatin.

21) Synaptonemal complex.

22) One gene one polypeptide hypothesis. **(8×2=16 Marks)**

PART – C

III. Answer **any six** of the following. **(Not** to exceed **120** words. **Each** carries **4** marks).

23) Characteristics of cancer cells.

24) Transformation in bacteria.

25) Trans-membrane transport.

26) Post–transcriptional modification of mRNA.

27) Structure and functions of mitochondria.

28) Explain DNA replication. Why replication oriented in opposite direction ?

29) Properties of genetic code.

30) Giant chromosomes.

31) Theories of aging. **(6×4=24 Marks)**

PART – D

IV. Answer **any two** of the following. (**Each** carries **15** marks).

32) Describe the structure and functions of cytoskeleton.

33) Write any three experiments to prove the nature of genetic material.

34) Write an essay on transcription.

35) Elucidate structure and functions of Golgi complex. **(2×15=30 Marks)**