

**Avinashilingam Institute for Home Science and Higher Education for Women  
Coimbatore-641043.**

**Master's Degree Examination – November 2017**

**I-Semester**

**Class : I PG  
Major : Zoology**

**Time: 3 hours  
Max. Marks: 60**

**17MZOC03 Cell and Molecular Biology**

**Part A**

**10 x 1/2 = 5**

**Choose the correct answer**

1. Fluid Mosaic model favors that cell membrane contains proteins, which are embedded in fashion of  
a. Zig zag    b. Criss-cross    c. Mosaic    d. Eplic
2. ----- is a common second messenger  
a. cAMP    b. cGTP    c. cATP    d. cRNA
3. The term endoplasmic reticulum was coined by  
a. Reinert    b. Porter    c. Johnson    d. Pomaret
4. Ribosomes are synthesized in part of cell called  
a. Golgi complex    b. Mitochondria    c. Nucleolus    d. Nucleus
5. In order to enter the cell cycle a cell must be stimulated from outside. What type of molecule provides this stimulation?  
a. Cyclins    b. Tyrosine kinases  
c. Cyclin-dependent kinases    d. Cytokines and growth factors
6. The stage of mitosis when chromosomes condense to form rod-shaped structures visible under the microscope is called:  
a. Interphase    b. Prophase    c. Metaphase    d. Anaphase
7. Who amongst the following scientists had no contribution in the development of the double helix model for the structure of DNA  
a. Rosalind Franklin    b. Maurice Wilkins    c. Erwin Chargaff    d. Meselson and Stahl
8. Transcription requires  
a. RNA polymerase enzyme    b. DNA demplate  
c. Ribonucleoside triphosphate    d. All of the above
9. In terms of *lac operon* regulation, what happens when *E. coli* is grown in medium containing both glucose and lactose?  
a. Both CAP and the *lac* repressor are bound to the DNA  
b. CAP is bound to the DNA but the *lac* repressor is not  
c. *Lac* repressor is bound to the DNA but CAP is not  
d. Neither CAP nor the *lac* repressor are bound to the DNA
10. Gene regulation in eukaryotes may be influenced by  
a. Environmental conditions    b. Developmental stage    c. Tissue or cell type    d. All of these

