Progressive Education Society's

Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16, NEP 2020 (Autonomous)

End Semester Examination: March/April 2024

***Total No. of Questions**: 4* ***Total No. of Pages**: 1*

First Year (Blended Chemistry)

COURSE CODE: BIO 201 COURSE NAME – Biology of Cells

(Semester II)

Program: B.Sc. Blended **Credits:** 2
Program Specific: B.Sc. Blended (chemistry) **Time:** 2 Hours
Course Type: Minor (Compulsory) **Max. Marks:** 30
SET: A

Instructions to the candidate:

1) *All questions are compulsory.*
2) *Figures to the right indicate full marks.*
3) *Draw a well labelled diagram wherever necessary.*

Q1] Answer the following. **[5 X 1= 5]**

i) Paracrine signaling
ii) Explain the process of Photosynthesis.
iii) What is the purpose of cell differentiation?
iv) Define codon.
v) Write any two functions of nucleus.

Q2] Answer the following (Attempt any 5/7) **[5 X 2 =10]**

i) How do Mitosis and Meiosis differ in function?
ii) What is cellular respiration?
iii) What is the chemical composition of plasma membrane?
iv) Mention types of chromosomes based on the position of centromere.
v) What are the types of Endoplasmic reticulum .Give its functions.
vi) Draw a labelled diagram of Fluid mosaic model of Plasma membrane
vii) What is Wobble's hypothesis.

Q3] Answer the following/Write short notes on following (Attempt any 2/4) **[2 X 5 = 10]**

i) Describe the different phases of meiotic prophase – I in detail.
ii) What are receptors? Comment on GPCR protein receptor.
iii) Write the characteristics of Genetic code.
iv) Draw and explain structure of a Chromosome.

Q4] Answer the following (Attempt any 1/2) **[5 X 1 = 5]**

i) Explain cell cycle in detail.
ii) Explain Watson and Crick model of DNA.

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