

B.Sc. 4th Semester (Programme) Examination, 2021

PHYSIOLOGY

Course ID: 42518

Course Code: SP/PHY/401/C-1D (T)

Course Title: Bio-engineering

Time: 1 Hour 15 Minutes

Full Marks: 25

The figures in the margin indicate full marks.

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

- 1. Answer any five questions from the followings: 1×5=5**
- (a) What is Taq polymerase?
 - (b) What is cloning?
 - (c) State the importance of transgenic animals.
 - (d) What do you mean by hybridoma technique?
 - (e) Write the name of two enzymes used in ELISA.
 - (f) What do you mean by monoclonal antibody?
 - (g) What is totipotency?
 - (h) Which hormone is used in tissue culture?
- 2. Answer any two questions from the following: 5×2=10**
- (a) Describe the stages of polymerase chain reaction. 5
 - (b) What is enzyme immobilization? Discuss about the applications of enzyme immobilization. 2+3=5
 - (c) Discuss about the applications of biotechnology. 5
 - (d) Briefly discuss about the process of southern blotting. 5
- 3. Answer any one question from the following: 10×1=10**
- (a) What is DNA finger printing? Discuss the application of DNA finger printing in forensic science. 8+2=10
 - (b) How monoclonal antibody is produced in hybridoma technology? Write any two applications of monoclonal antibody. What is satellite DNA? 6+2+2 =10