

**PARUL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**B.Sc., Winter 2017-18 Examination**

**Semester: 5**  
**Subject Code: 11102304**  
**Subject Name: Biotechnology for Human Welfare**

**Date: 28/12/2017**  
**Time: 02:00 pm to 04:30 pm**  
**Total Marks: 60**

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**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Brief note (Each of 04 marks) (08)**  
(a) Write a brief note on biofortification of crops.  
(b) Write a brief note on applications of genetically modified plants.
- Q.1. B) Answer the following questions (Any two) (04)**  
(a) Brief note (04)  
1. Chlorinated organic pollutant  
2. non-chlorinated organic pollutant  
(b) Short note probiotic production and applications (04)  
(c) Short note on alcohol formation. (04)
- Q.2. A) Answer the following questions. (04)**  
(a) Short note (Each of 02 marks) (04)  
1 Define monoclonal antibody  
2. Name any two ethanol producing organism.  
(b) Short note on antibiotic formation. (04)
- Q.2. B) Answer the following questions (Any two) (03)**  
(a) Short note on degradation of agricultural wastes. (03)  
(b) Short note Effects of salt stress on plant physiology. (03)  
(c) Short note Effects of temperature stress on plant physiology. (03)
- Q.3. A) Brief note (Each of 04 marks) (08)**  
(a) Gene therapy  
(b) Human genome project
- Q.3. B) Answer the following questions (Any two) (04)**  
(a) Short note on protein engineering. (04)  
(b) Short note on Recombinant live vaccines. (04)  
(c) Short note on Development of non-toxic therapeutic agents. (04)
- Q.4. A) Answer the following questions. (04)**  
(a) Brief note (Each of 02 marks) (04)  
(i) Polyclonal antibody.  
(ii) HGPR T  
(b) Production of monoclonal antibodies (04)
- Q.4. B) Answer the following questions (Any two) (03)**  
(a) Short note on development of biodegradable polymers PHB. (03)  
(b) What are the application of DNA finger printing Solving violent crimes such as murder and rape. (03)  
(c) What are the application of DNA finger printing solving claims of paternity. (03)