

**S.Y.B.SC. SEM – IV (CBCS - 2016 COURSE) : SUMMER - 2018**

**SUBJECT: BOTANY: PLANT BIOTECHNOLOGY**

Day: **Tuesday**  
Date: **24/04/2018**

**S-2018-0669**

Time: **11.00 A.M. TO 02.00 PM**  
Max. Marks: 60

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**N.B:**

- 1) All Questions are **COMPULSORY**.
  - 2) Draw neat and labeled diagrams **WHEREVER** necessary.
  - 3) Figures to the right indicate **FULL** marks.
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**Q.1** Answer **ANY TWO** of the following: **(12)**

- a) What is organic farming? Explain how it is helpful for the human health.
- b) What is bioreactor? Describe tubular tower fermenter.
- c) What is bioplastic? Give its significance in environmental biotechnology.

**Q.2** Attempt **ANY TWO** of the following **(12)**

- a) What is plant tissue culture? Briefly explain the steps involved in plant tissue culture.
- b) What are biofertilizers? Describe the type of biofertilizers.
- c) Enlist products and bi-products of fermentation.

**Q.3** Attempt **ANY TWO** of the following **(12)**

- a) What are petrocrops? Explain their importance
- b) Which are processes of anaerobic waste water treatment?
- c) Comment on meaning of genetic engineering.

**Q.4** Attempt **ANY THREE** of the following **(12)**

- a) Give merits and demerits of biogas.
- b) Give the importance of SCP
- c) Enlist the organisms involved in fermentation.
- d) What are phages? Give their properties.

**Q.5** Attempt **ANY FOUR** of the following **(12)**

- a) Give the concept of plant biotechnology.
- b) Explain process of manufacture of citric acid.
- c) Give the importance nano-biotechnology
- d) Describe the gaseous fuels.
- e) Give the concept of scaling up.

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