

S.Y.B.SC. SEM – IV (2014 COURSE) : SUMMER - 2018
SUBJECT: BOTANY: PLANT BIOTECHNOLOGY (B-41)

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

S-2018-0726

Time: **03.00 PM TO 05.00 PM**
Max. Marks: 40

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
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Q.1 Attempt any **TWO** of the following: **(10)**

- a) Give the important features and properties of restriction enzymes.
- b) What are batch culture and continuous culture in fermentation?
- c) Explain the concept of environmental biotechnology.

Q.2 Attempt any **TWO** of the following: **(10)**

- a) What is bioreactor? Describe tubular tower bioreactor.
- b) Describe the scope and importance of biotechnology.
- c) Give brief account of petro crops and their importance.

Q.3 Attempt any **TWO** of the following: **(10)**

- a) Describe the mass cultivation of *Spirulina* for SCP production.
- b) What are different types of wastes treatments?
- c) Explain the steps involved in plant tissue culture.

Q.4 Attempt any **FIVE** of the following: **(10)**

- a) Enlist organisms involved in the fermentation.
- b) What do you mean by genetic engineering?
- c) Give an advantages and disadvantages of biogas.
- d) Enlist the types of bio fertilizers.
- e) Give applications of tissue culture.
- f) Enlist steps in manufacture of citric acid.
- g) What is totipotency?

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