Reg. No..... Name.....

M.SC DEGREE END SEMESTER EXAMINATION OCTOBER 2016

SEMESTER – 3: BOTANY

COURSE: P3BOTT11– BIOTECHNOLOGY

Common for Regular (2015 Admission) & Supplementary / Improvement (2014 Admission)

Time: Three Hours Max. Marks: 75

I. Answer ***any eight*** questions briefly; each question carries **2 marks**

1. Name a gelling agent other than Agar?
2. What is the reason for browning of plant tissue culture media while culture?
3. What is the use of embryo culture?
4. Name an enzyme used for isolating protoplasts.
5. Distinguish between totipotency and pluripotency.
6. What is a vector?
7. What is a promoter sequence?
8. What are cosmids?
9. Distinguish between Innate and acquired immunity?
10. What is GFP?
11. Name the enzyme that digests bacterial cell wall in genetic engineering.
12. Which compound is used for staining DNA in gel? (2 x 8 = 16)

II. Answer ***any seven*** questions; each question carries **5 marks**

13. What are the major types of T lymphocytes?
14. Distinguish between Southern and Western blots.
15. What are the applications of *in vitro* mutagenesis?
16. Describe suspension culture and its importance.
17. Distinguish between solid state and submerged fermentation.
18. What is ELISA? What is its advantage?
19. What is insertional inactivation?
20. What is gene chip technology? What is its use?
21. What is a bioreactor? What is its importance?
22. What are the applications of FISH and GISH? (5 x 7 = 35)

III. Answer ***any two*** questions; each question carries **12 marks**

23. Write an essay on PCR analysis.

OR

24. Write detailed account on various blotting techniques.

25. Write an essay on callus induction, multiplication and suspension culture.

OR

26. What is the role of plant growth regulators in plant tissue culture? (12 x 2 = 24)

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