THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LO 4266) FEBRUARY 2019 **Sub. Code: 4266**

B.PHARM. DEGREE EXAMINATION
(Common to Regulations 2004 – IV year candidates)
THIRD YEAR
PAPER VI - PHARMACEUTICAL BIOTECHNOLOGY

Q.P. Code: 564266

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Define Biosensor. Discuss principle, types and applications of biosensors.

2. a) Discuss in detail the morphology and structure of Eukaryotic cell.
   b) Write about reproduction method of an Yeast.

II. Write notes on: **(8 x 5 = 40)**

1. Discuss characteristics of restriction endonuclease enzyme.
2. Explain northern blotting techniques.
3. Discuss mechanism of transformation.
4. Describe methods of isolating pure cultures.
5. Outline production of Rabies Vaccine.
6. Describe working principle of autoclave in laboratory scale.
7. Discuss briefly a stirred-tank fermenter.
8. Describe classification of bacteria based on shape and size.

III. Short answers on: **(10 x 2 = 20)**

1. What is gene expression?
2. Give two importance of aseptic technique.
3. Define mycology.
4. Draw synchronous growth curve.
5. Define Endotoxin.
6. What is F value?
7. Give methods of immobilization of enzyme.
8. Define Transduction.
9. Organism used for production of citric acid.
10. Plasmid vector.

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