PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2017 (Sixth Semester)

Branch - MICROBIOLOGY.

Branch - MICROBIOLOGY,		
APPLIED BIOTECHNOLOGY		
Tim	e	Three Hours Maximum: 75 Marks
1 2 3 4 5 6 7 8 9 10		Ti-Plasmid. Define plant tissue culture. Ovulation. Zebra fish. Misnomer. Define trade mark. Explain-OLA. M-Fish. Hybridoma. Toxoid vaccine. SECTION - B f25 Marks) Answer ALL Questions ALL Questions Carry EQUAL Marks (5x5 = 25)
11	a	Give an account on stress tolerance. OR OR
	b	Comment on artificial seed production.
12	a b	What is invitro fertilization? - OR Comment on Gene knock out.
	a	Comment on public health ethics.
	b	OR Write a short notes on insulin production.
14	a	Write about the DNA chips and its applications. OR
	b	Elaborate on gene delection analysis.
15	a	Give an account on types of vaccines used in commercial. OR
	b	Write the short notes on invivo gene therapy.
		SECTION - C (30 Marks) Answer any THREE Questions ALL Questions Carry EQUAL Marks (3 x 10 = 30)
16		Explain in detail about agro bacterium mediated gene transfer methods.
17		Explain the production of any three transgenic animals.
18		Write about the steps involved in patenting of new discoveries.

Explain the importance of monoclonal antibodies and its production.

Describe the steps involved in RFLP and its application.

19

20

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INDUSTRIAL MICROBIOLOGY

Time: Three Hours Maximum: 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10x2 = 20)

- 1 Crowded plate.
- 2 Feedback inhibition.
- 3 Batch wise sterilization.
- 4 Bioreactor.
- 5 List of nitrogen sources.
- 6 Power number.
- 7 Acid hydrolysis.
- 8 Liquid sheering.
- 9 Solid state fermentation.
- 10 Penicillin extraction.

SECTION - B (25 Marks!

Answer ALL Questions

ALL Questions Carry EQUAL Marks $(5 \times 5 = 25)$

11 a Discuss the strain improvement of industrially important micro organisms.

OR

- b What do you mean by auxotrophic mutants?
- 12 a Describe about the structure and functions of sparger.

OR

- b Explain in brief about the working principle and applications of tower fermentor.
- 13 a Define in detailed about mass cultivation of brewers yeast..

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- b Add on account on Reynolds and fraude's number.
- 14 a How the extra cellular products purified from crude fermentation media?

OR

- b Explain the basic principle and needs of liquids liquid extraction process.
- Write short notes on industrial production of citric acid.

OR

b. Discuss in brief about microbe involved and process of wine brewing.

SECTION - C (30 Marks!

Answer any THREE Questions

ALL Questions Carry EQUAL Marks $(3 \times 10 = 30)$

- Write an essay on the needs of primary screening of industrial microbes.
- 17 Add an account on basic principle and applications of membrane bio reactor.
- List out the basic differences between the Newtonian fluids and non Newtonian fluids.
- Draw and explain the structure and functions of Rotary drum filter.
- Explain in brief about raw materials, micro organism and industrial process involved in penicillin production.