

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2017
(Third Semester)

Branch - MICROBIOLOGY

MICROBIAL PHYSIOLOGY & METABOLIC REGULATION

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks!)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

- 1 Facilitated diffusion.
- 2 Exponential growth phase.
- 3 Calcium dipicolinate.
- 4 Germination.
- 5 Oxidative phosphorylation.
- 6 Proton motive force.
- 7 Peptidoglycan.
- 8 Transamination.
- 9 Heterolactic fermenters.
- 10 . Anaerobic respiration.

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Write short notes on active transport. 1
OR
b . Write an essay on macro and micro nutrients.
- 12 a What is bacterial endospore? What is the significance of the structure?
OR .
b Write short notes on spore germination.
- 13 a Describe about Pentose Phosphate Pathway.
OR
b Discuss about TCA cycle.
- 14 a Describe about the biosynthesis of lipopolysaccharide.
OR '
b Describe about the biosynthesis of Poly p hydroxybutyrate.
- 15 a Explain about the methanogenesis.
OR
b Write short notes on ethanolic fermentation.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Define diffusion. What are the transport mechanism comes under passive processes? Explain*
- 17 Explain about the sporulation process in Bacillus.
- 18 Explain in detail about Electron Transport Chain.
- 19 Explain about biosynthesis of essential amino acids.
- 20 Describe the process of anaerobic respiration.