

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2018
(Second Semester)

Branch – **BIOCHEMISTRY**

MICROBIAL BIOCHEMISTRY

Time: Three Hours

Maximum: 75 Marks

SECTION -A (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

- 1 a Describe the HMP pathway.
OR
b Describe the reactions involved in the EMP pathway.
- 2 a Discuss about the oxidation of branched chain fatty acids.
OR
b Discuss about synthesis of glycolipids.
- 3 a Which substances provides rigidity to the bacterial cell walls? Give its structure.
OR
b Explain the mechanism of photosynthesis.
- 4 a How are interrelate glutamine, arginine and proline pathway?
OR
b Discuss in detail about the microbial degradation of cellulose and lignin.
- 5 a Explain about solid substrate fermentation process.
OR
b Discuss in detail about the types and applications of Biosensors.

SECTION -B (45 Marks)

Answer any **THREE** questions

ALL questions carry **EQUAL** Marks (3 x 15 = 45)

- 6 Describe the importances and reactions of TCA cycle.
- 7 Explain the biosynthesis of mevalonate.
- 8 Discuss in detail about electron transport in bacteria.
- 9 Explain the denovo synthesis of purines.
- 10 What is mean by down stream processing? Explain any two methods employed for this purpose.