PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2018
(Third Semester)

Branch - APPLIED ELECTRONICS

CORE ELECTIVE ! SENSORS AND SIGNAL CONDITIONING

Time : Three Hours Maximum i 75 Marks

SECTION -A (30 MarksV

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

1 a Define the general concepts of measurement systems and terminology,

OR

b Define the terms : (i) Accuracy and (ii) Precision.

2 a Write short note on strain gauges and its types.

OR

b Describe the construction of voltage dividers with diagrams.

3 a Brief about the working of inductive sensors.

OR

b Define the principle of carrier amplifiers.

4 a What is thermoelectric sensor and explain its working?

OR

b Describe the construction and working of offset and drift amplifiers.

5 a Write short note on variable frequency sensors.

OR*

b Explain briefly about the charge coupled sensors.

SECTION -B (45 Marks)

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

6 Explain briefly about the static characteristics of measurement systems.

7 Describe in detail about the construction and working of magnetic resistors.

8 Explain briefly about the concept of (i) Reluctance variation and (ii) Eddy current.

9 Discuss in detail how the signal conditioning for self generating sensors are done.

10 Explain briefly about the principle and working of photo diodes and photo transistors

END