Date: 30/05/2016.

Exam No: _____

GANPAT UNIVERSITY

M. TECH SEM- II (ME-AMT) REGULAR EXAMINATION–APRIL-JUNE-2016

3ME204 Precision and Quality Engineering

MAX. TIME: 3 HRS **MAX. MARKS: 60**

Instructions: (1) This Question paper has two sections. Attempt each section in separate answer book.
(2) Figures on right indicate marks.
(3) Be precise and to the point in answering the descriptive questions.

SECTION: I

Q.1 **(A)** State the content of Quality Assurance Manual. **(10)**

(B) Explain concurrent Engineering.

OR

Q.1 **(A)** What is meaning of quality of conformance? Explain factors which influences the quality of conformance **(10)**

(B) Write short note on lean manufacturing.

Q.2 **(A)** Draw a neat sketch of an O.C curve showing its different zones. **(10)**

(B) It is desired to have a reliability of at least 0.990 for a specified service period of 8000 hours on the assumption of a uniform failure rate. What is the least value of Θ' that will yield this desired reliability?

OR

Q.2 **(A)** What is reverse engineering? How it plays important role for quality improvement. **(10)**

(B) Assuming that the life in hours of an electric bulb is a random variable following normal distribution with mean of 2000 hours and standard deviation of 400 hours. Find expected number of bulbs froma random sample of 2000 bulbs having life (A) more than 3000 hours (B) Between 2600 and 2800 hrs.

Q.3 **Attempt Any Two.** **(10)**

(A) Describe in brief the evaluation of six sigma quality approach.

(B) Explain robust design with example.

(C) Explain process of Benchmarking for product quality improvement.

SECTION: II

SECTION: II

Q.4 (A) Give Five major steps of product's life cycle, and explain one of them.

(B) Explain in detail Magnetic float polishing process.

OR

Q.4 (A) Give the name of Precision Finishing Processes. And explain Lapping process. **(10)**

(B) What is MEMC? Explain in detail.

Q.5 (A) What are the technical parameters affecting lapping process? **(10)**

(B) In Precision And Quality Engineering. What is LIGA Process?

OR

Q.5 (A) Explain Honing process. **(10)**

(B) Explain etching process in micromachining.

Q.6 **Attempt Any Two.** **(10)**

(A) What is Difference between Conventional machining and Micromachining?

(B) Give detail about Precision Grinding Processes

(c) Explain combination of MEMC and manufacturing.

----------**END OF PAPER**----------