Total No. of Printed Pages:2

SUBJECT CODE NO: H-373
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (Mechanical)
Metrology and Quality Control
(REVISED)

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B
1) Attempt three questions from each section.
2) Figures to the right indicates full marks.

Section A

Q.1 a) Differentiate between linear and angular measurements with examples. 07

b) Define the following terms 06
1. Metrology
2. Accuracy
3. Precision
4. Measurement error
5. Calibration
6. Slip gauge

Q.2 a) Enlist the different types of comparators used for various measurements and explain in detail construction and working of electrical types of comparator. 07

b) Explain construction and working of angle décor with neat sketch. 06

Q.3 a) What is surface texture? Explain working of stylus probe type surface texture measuring instrument with neat sketch. 07

b) Enlist and explain the different types of gauges used with the help of neat diagram. 06

Q.4 a) What is gear metrology? Explain gear tooth vernier with neat sketch. 07

b) Differentiate between coordinate measuring machine (CMM) and universal measuring machine (UMM). 06

Q.5 Write short notes on: (Any three) 14

a) Autocollimator
b) Need, importance of calibration
c) Types of fits
d) Profile projector

Section B

Q.6	a)	Explain the use of control chart for variable and attributes.	07
	b)	Explain 5S and what are its benefits?	06
Q.7	a)	Explain the QFD with the help of suitable example.	07
	b)	Explain quality of design and quality of performance.	06
Q.8	a)	Explain the Kanban system of production control.	07
	b)	Explain the characteristics of OC curve.	06
Q.9	a)	What is quality circle? Explain in details.	07
	b)	Explain the process capability.	06

Q.10 Write short notes on: (Any three) 14

a) Value engineering
b) Sampling methods
c) Just In Time
d) ISO 9000 standards