Examination Nov/Dec 2019

H-373

Total No. of Printed Pages:2

SUBJECT CODE NO:- H-373
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (Mechanical) (Sem-I)
Metrology and Quality Control
[OLD]

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

Please check whether you have got the right question paper.

N.B.
1) Solve any three questions from each section.
2) Figure to the right indicates full marks.
3) Assume suitable data if required.
4) Use of non-programmable calculator is allowed.

Section – A

Q.1	a) Explain and differentiate Linear and Angular measurement.	05
	b) Define the following terms:	08
	1) Accuracy	
	2) Reproducibility	
	3) Sensitivity	
	4) Readability	

| Q.2 | a) What is surface finish measurement? Explain any one of the equipment for surface finish measurement. | 07 |
| | b) Draw a neat sketch of NPL flatness interometer and explain in detail. | 06 |

| Q.3 | a) Explain the Gear Terminology with the help of neat diagram. | 07 |
| | b) List down the possible sources of errors in gear manufacturing and name their types. | 06 |

| Q.4 | a) Explain LVDT in detail with neat sketch. | 07 |
| | b) Explain the use of laser in metrology. | 06 |

Q.5	Write short notes: (Any three)	14
	a) Co-ordinate Measuring Machine	
	b) Gear Tooth Vernier	
	c) Tool marker's microscope	
	d) Sine bar-Sine center	

Section – B

| Q.6 | a) Explain cost of quality and value of quality | 06 |
| | b) Explain 5S and what are its benefits? | 07 |

| Q.7 | a) Explain Poka Yoke in detail. | 06 |
| | b) Explain Kanban in detail. | 07 |

| Q.8 | a) Explain the importance and use of statistical quality control. | 07 |
| | b) Explain the use of control chart for variable and attribute. | 06 |

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Q.9	a) What is quality circle? Explain in details.	07
	b) Explain the process of capability.	06

Q.10   Write short notes on: (Any three)   14
     a) Value engineering
     b) Sampling methods
     c) Pareto Analysis
     d) Brain Storming