Total No. of Printed Pages:1

SUBJECT CODE:- 300

FACULTY OF ENGINEERING AND TECHNOLOGY

B.E.(MECH) Examination Nov/Dec 2015

Metrology and Quality Control

(Revised)

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

"Please check whether you have got the right question paper."

N.B i) Attempt any three questions from each section.
ii) Assume suitable data if necessary.
iii) Figures to the right indicate full marks.

Section A

Q.1 a) Define the term 'metrology' and explain the methods of measurement. 07
b) Define following terms: 06
1) Precision and accuracy
2) Sensitivity
3) Readability & Repeatability

Q.2 a) What is surface texture? Explain it with the help of neat diagram and defining its elements. 07
b) Explain the construction and working of NPL interferometer. 06

Q.3 a) Describe the parkinson's gear tester and state its limitations. 07
b) With the help of neat diagram. Explain the gear terminology for spur gear. 06

Q.4 a) Differentiate between line standard and end standard. 07
b) What is slip gauge? Explain the procedure to use slip gauges. 06

Q.5 Write short notes: (any three) 14
1) Need, importance & method of calibration
2) Limits and fits
3) Tolerance
4) Co-ordinate measuring machine

Section-B

Q.6 a) Define quality. Explain cost of quality and value of quality. 07
b) Explain quality of design and quality of performance. 06

Q.7 a) What is QFD (Quality Function Deployment)? Explain the same. 07
b) What is TPM? Explain in detail. 06

Q.8 a) What is the concept of variance analysis? Explain with example. 07
b) What is acceptance sampling? Explain with suitable example. 06

Q.9 a) Explain with the help of suitable example cause and effect diagram. 07
b) Explain the importance of 'standardization' with reference to the today's industrial scenario and the techniques of standardization. 06

Q.10 Write short notes: (any three) 14
a) Seven quality tools
b) Poka yoke
c) ISO 9000
d) Value engineering

K-2015

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