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Question Paper Code: 52137

M.E.DEGREE EXAMINATION, NOV 2016

Elective

CAD / CAM

15PCD510 – METROLOGY AND NON DESTRUCTIVE TESTING

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

(5 x 20 = 100 Marks)

1. (a) (i) Illustrate briefly about CMM. (10)
(ii) Examine the importance of CMM in measurement of 3D models. (10)

Or

(b) Describe laser viewer's application in profile checks for automated manufacturing systems. (20)

2. (a) (i) Describe briefly on process capabilities. (10)
(ii) Examine the applications of process capabilities. (10)

Or

(b) Illustrate working methodology and functions of three different control charts for variables. (20)

3. (a) (i) Give the detailed inspection procedure of liquid penetrant test. (10)
(ii) Summarize the flaws detected by LPT. (10)

Or

(b) Evaluate the functionality of any four methods that are used to produce magnetic field with respect to particle testing. (20)

4. (a) Explain the various methods of producing x-rays in detail. (20)

Or

(b) Describe the types of magnetic materials used in testing and explain them in detail. (20)

5. (a) Explain the general characteristics and functional nature of instrumentation tools. (20)

Or

(b) Compare ultrasonic and acoustic emission techniques based on functions, applications and efficiency. (20)
