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**Question Paper Code: 53P14**

M.E.DEGREE EXAMINATION, NOV 2017

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) Analyze the working parameters of UMM. (10)
- (ii) Assess the functions of Image Shearing Microscope. (10)

Or

- (b) Describe briefly about use of microscope in metrology. Also tabulate the classification, merits and demerits of microscope. (20)

2. (a) (i) Examine briefly theory of probability. (10)
- (ii) Describe about reliability and life testing. (10)

Or

- (b) Summarize the rules of combining probability. Also state the functions of permutation and combination. (20)

3. (a) List out the characteristics of developers, liquid penetrants and magnetic particles. (20)

Or

- (b) Analyze the types and methods of magnetization applied in magnetic particle test. (20)

4. (a) Draw a diagram of stationary anode x-ray and explain its different parts. (20)

Or

(b) Describe the production methods of d- ray and its properties. (20)

5. (a) Describe the applications of resonance and ultrasonic waves in detail (20)

Or

(b) Summarize the principles and applications of acoustic emission techniques. (20)

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