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**E Reg. No. :**

**Question Paper Code: 57P13**

Ph.D. COURSE WORK EXAMINATION, NOV 2017

Elective

CAD / CAM

15PCD524 - MATERIAL TESTING AND CHARACTERIZATION

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. | (a) | Explain polishing with suitable diagram. | CO1- U | (20) |
|  |  | Or |  |  |
|  | (b) | Explain quantitative metallography.  | CO1- U | (20) |
|  |  |  |  |  |
| 2. | (a) | Explain braggs law with suitable example. | CO2- U | (20) |
|  |  | Or |  |  |
|  | (b) | Explain the techniques used in x-ray crystallography.  | CO2- U | (20) |
|  |  |  |  |  |
| 3. | (a) | Explain BF and DF with neat sketch. | CO3- U | (20) |
|  |  | Or |  |  |
|  | (b) | Explain Construction and working of SEM and its applications. | CO3- U | (20) |
|  |  |  |  |  |
| 4. | (a) | Explain various types of test to find the hardness of material. | CO4- U | (20) |
|  |  | Or |  |  |
|  | (b) | Explain the Micro Hardness Test with suitable diagram.  | CO4- U | (20) |
|  |  |  |  |  |
| 5. | (a) | Explain the S-N curves. | CO5- Ana | (20) |
|  |  | Or |  |  |
|  | (b) | Explain LM parameters. | CO5- Ana | (20) |
|  |  |  |  |  |