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**Question Paper Code: 95704**

B.E./B.Tech. DEGREE EXAMINATION, MAY 2022

Fifth Semester

Mechanical Engineering

19UME504– MEASUREMENTS AND INSTRUMENTATION

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The ease with which observations can be made accurately is referred to as CO1- R  
(a) readability      (b) sensitivity      (c) accuracy      (d) precision
2. The maximum amount by which the result differs from the true value is called CO1- R  
(a) Correction      (b) discrepancy      (c) error      (d) all of the above
3. Optical flats are made of CO2- R  
(a) Quartz      (b) glass      (c) plastic      (d) steel
4. The two slip gauges in precision measurement are joined by CO2- R  
(a) assembling      (b) sliding      (c) adhesion      (d) wringing
5. What is the first and the foremost step in image processing CO1- R  
(a) Image restoration      (b) Image enhancement  
(c) Image acquisition      (d) Segmentation
6. Which of the following is the most important element for stabilizing machine vision inspections in almost all applications? CO4- R  
(a) Processing speed      (b) Illumination      (c) High-resolution      (d) Above all



- 18 (a) List and explain the various types of CMM CO3-U (16)  
Or  
(b) How is CMM used for measuring distance between holes? CO3-U (16)
19. (a) Discuss with neat diagram on using a proving ring to measure force. CO4-U (16)  
Or  
(b) Explain the construction and working of an orifice meter CO4-U (16)
20. (a) Explain the Sensors for Displacement and Position CO5-U (16)  
Or  
(b) Write the construction and working principle of engine management system CO5-U| (16)

