Q.19 Explain the profile testing of spur gears. (CO6)

Q.20 What is calibration? Also explain its principle. (CO8)

Q.21 Explain the working principle of tool maker's microscope with neat sketch. (CO6)

Q.22 What is surface roughness? Explain its classification. (CO7)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain the Screw thread terminology with neat sketch. (CO5)

Q.24 Explain the concept of mechanical comparators and working principle of pneumatic comparator in detail with neat sketch. (CO8)

Q.25 Write short notes on (CO6)

a) Bevel Protector

b) Snap Gauge

(Note : Course outcome/CO is for office use only)

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Roll No. .....

2nd Year / Advance Diploma in Tool & Die Making

Subject:- Engineering Metrology

Time : 3Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The branch of science dealing with measurement and its application is known as: (CO1)

a) Geometry b) Metrology

c) Algebra d) Trigonometry

Q.2 What type of error occurs due to changes in temperature during measurements? (CO3)

a) Systematic error

b) Parallax Error

c) Environmental Error

d) Random Error

Q.3 Which gauges are used in the workshop to check the work while it is being made? (CO4)

a) Working gauges b) Inspection gauges

c) Master gauges d) References gauges

Q.4 The least count of micrometer is (CO1)

a) 0.001mm b) 0.02mm

c) 0.002mm d) 0.01mm

Q.5 A sine bar is used for (CO6)

a) Linear measurements

b) Angular measurements

c) Both a and b

d) None of the above

Q.6 A bore gauge is used to measure (CO1)

a) Linear dimensions b) Internal dimensions

c) Angular deviations d) Surface roughness

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define sensitivity. (CO2)

Q.8 The process of comparing a measurement instrument to a known standard to adjust its accuracy is called _____ (CO1)

Q.9 Name any two measuring instruments used for linear measurement. (CO1)

Q.10 Define error. (CO4)

Q.11 Name any two methods used for measuring flatness of parts. (CO7)

Q.12 Write full form of CMM. (CO8)

SECTION-C

Note: Short an'swer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 What is the need of Inspection and also enlist its advantages? (CO7)

Q.14 Explain the classification of gauges. (CO4)

Q.15 What are the different types of error occurring during measurement? (CO4)

Q.16 Define Flatness, co-axiality and run out. (CO7)

Q.17 Explain systems of fits and diagram. (CO3)

Q.18 Explain the principle of Tayler's for designing of Plain limit gauges. (CO4)