Q.25 Describe with the help of a neat sketch, the working of an outside micrometer.
Q.26 What are the sources of instrumental errors?
Q.27 Explain Sine Bar with a Neat sketch.
Q.28 Explain pneumatic comparators.
Q.29 What is normal distribution? Explain.
Q.30 Write the applications of control charts.
Q.31 Explain Control charts for variables.
Q.32 Write a short note on 5S system.
Q.33 Define transducer? Classify transducer on the basis of output?
Q.34 Explain the various systems of units.
Q.35 Write any five advantages of LVDT.

SECTION-D

Note: Long answer type questions. Attempt any two out of three questions. (2x10=20)

Q.36 What is vernier caliper? Explain construction and working of a vernier caliper with diagram.
Q.37 Write the names of various sampling plan? Explain double sampling plan in detail.
Q.38 What is ISO-9000? Explain the main functions, characteristics and benefits of ISO-9000.

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6th Sem. / Mech. Engg. (MSIL)

Subject : Inspection and Quality Control

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple choice Questions. All questions are compulsory (10x1=10)

Q.1 Quality is _____ variability.
a) Opposite of b) Proportional to
c) Reciprocal of d) Synonym of

Q.2 _____ the process of comparing an unknown quantity with a known fixed unit quantity.
a) Kaizen b) Calibration
c) Measurement d) Maintenance

Q.3 Repeatability is defined as _____
a) Repeating ability of a process to give almost same products in short interval of time.
b) Repeating ability of a measuring instrument to give almost same measurement in short interval of time.
c) Repeating ability of a process to give almost same products in long interval of time.
d) Repeating ability of a measuring instrument to give almost same measurement in long interval of time.

Q.4 Straightness of a part may be checked by :

a) Straight edge b) Spirit level

c) Auto collimator d) All of the above

Q.5 Control chart is a useful_____

a) Manufacturing process

b) Process monitoring technique

c) Off-line quality control tool

d) Part of acceptance sampling techniques

Q.6 The most important measure of central tendency in a sample is_____.

a) Sample average

b) Sample variance

c) Frequency of highest observation

d) Frequency of lowest observation

Q.7 When was first ISO quality system standards published?

a) 1977 b) 1989

c) 1987 d) 1981

Q.8 The objective of ISO-9000 family of Quality management is

a) Customer satisfaction

b) Employee satisfaction

c) Skill enhancement

d) Environmental issues

Q.9 Thermocouples are _____ transducers

a) Adhesive b) Passive

c) Active d) None of the above

Q.10 LVDT is a _____.

a) Resistive transducer

(b) Inductive transducer

(c) Capacitive transducer

(d) None of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 What is preventive inspection?

Q.12 What are line standards of measurement?

Q.13 What is the use of clinometers?

Q.14 Define the term 'error'.

Q.15 Define Range.

Q.16 What is S.Q.C.?

Q.17 What is Kaizen?

Q.18 What is T.Q.M.?

Q.19 Define instrumentation.

Q.20 Define active transducer.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Define Preventive and operative inspection.

Q.22 Write a short note on centralized inspection.

Q.23 What are the Line Standards and End Standards? How do they differ?

Q.24 What are straightness, flatness and parallelism? Explain.