

SECTION-1

- Q-1 (A) Discuss the causes of variations in a production process. (7)
(B) Describe the construction and uses of \bar{X} and R chart. (7)
- Q-2 (A) Write a short note on theory of runs. (7)
(B) Write a note on C chart. (7)
- Q-3 (A) Write a short note on p and np charts. (7)
(B) Write a short note on O.C. curve for \bar{X} chart. (7)
- Q-4 (A) Give the difference between the charts for variables and charts for attributes. (7)
(B) Write a note on specification limits, process limits and modified limits. (7)
- Q-5 (A) Write a short note on single sampling plan. (7)
(B) Explain the terms (1) AQL (2) LTPD (3) producer's risk (4) consumer's risk (7)
- Q-6 (A) Write a short note on O.C. curve (7)
(B) What is acceptance sampling. Give the advantages of acceptance sampling. (7)
- Q-7 (A) Write a short note on double sampling plan. (7)
(B) Explain single sampling plan when upper limit is specified and sigma is unknown. (7)
- Q-8 (A) Write a note on ASN, AOQ and ATI. (7)
(B) Explain single sampling plan when lower limit is specified and sigma is known. (7)

(P.T.O)

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SECTION-II

All questions are compulsory.

(8)

- Q-9 (1) The full form of AOQ ____
- (a) Average Outgoing Quality
 - (b) Average Outgoing Quantity
 - (c) both of above
 - (d) none of above
- (2) ____ chart is used for controlling number of defects in a TV set.
- (a) R
 - (b) P
 - (c) C
 - (d) none of above
- (3) The points falling below L.C.L. of C chart indicate ____ in the process.
- (a) Improvement
 - (b) Deterioration
 - (c) no change
 - (d) none of above
- (4) p and np charts are based on ____ distribution.
- (a) Binomial
 - (b) Poisson
 - (c) Hyper geometric
 - (d) none of these
- (5) The formula of ATI is _____
- (a) $n+(N-n)(1-Pa)$
 - (b) $n-(N-n)(1-Pa)$
 - (c) $N+(N-n)(1-Pa)$
 - (d) $n+(N-n)+(1-Pa)$
- (6) Probability of accepting a lot of inferior quality is known as ____
- (a) producer's risk
 - (b) consumer's risk

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- (c) both of above
 - (d) none of above
- (7) The maximum limit of percentage defective in a finally accepted product is called
- (a) AQL
 - (b) AOQL
 - (c) LTPD
 - (d) All of above
- (8) For \bar{X} chart if $UCL = 50$ and $\bar{X} = 40$ then its $LCL =$ _____
- (a) 10
 - (b) 20
 - (c) 80
 - (d) 30
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