JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -3 EXAMINATION- 2017
BTDD/ M.Tech IV Semester
COURSE CODE: 14M1WBT334   MAX. MARKS: 35
COURSE NAME: QC Analysis and Management
COURSE CREDITS: 03   MAX. TIME: 2 HR

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1.   [2x5=10]

a) What are quality control requirements for sterile products?
b) Distinguish clearly between quality of design and quality of conformance.
c) What are pareto diagram? When you adopt a pareto diagram in quality control process?
d) Briefly explain about quality audit system.
e) Explain the elements of TQM.

Q3. Write short notes on followings. (Any Two)   [3x2=6]

a) Cost of quality
b) Quality control requirement for production of biopharmaceuticals
c) PDCA cycle

Q3.   [3x3=9]

a) Explain the implementation of ISO: 9000:2000 quality systems. Explain the need for the quality system in organization.
b) Explain the need, construction and application of control chart for variables.
c) A quality control inspector at the Cocoa Fizz soft drink company has taken 15 samples with 4 observations each of the volume of bottles filled. The data and the computed sample mean $\bar{x}$ ounces and sample range R ounces are shown in the table. For given $n = 4$, $A_2 = 0.73$, $D_3 = 0$, $D_4 = 2.28$. Use this information to develop control limits of three standard deviations for the bottling operation.

Sample	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
$\bar{x}$ ounces	15.9	16	15.9	15.9	16	16	16	15.9	16	15.8	16	16	15.8	15.9	16.1
R ounces	0.2	0.3	0.2	0.5	0.5	0.2	0.5	0.2	0.2	0.3	0.3	0.4	0.2	0.4	0.3

Construct control chart *for mean and for range* and check whether the process is under control or not in terms of centrality and comment on the state of the control.

Q4. What is 5S? What are its benefits? Enumerate the steps in implementing the 5S in an organization.   [5]

Q5. Emphasize the need of quality functions deployment in service organization. Explain by taking suitable examples.   [5]