

**INDIAN STATISTICAL INSTITUTE
SQC & OR Unit, Hyderabad**

**MS in Quality Management Science : 2015 - 2017
III SEMESTER : FINAL EXAMINATION**

Subject : Quality Assurance

Date : 17.11.2016 (Thursday)

Duration : 3 hrs

Max. Marks : 100

INSTRUCTIONS

*This paper contains questions for 120 Marks. Answer as much as you can but the maximum you can score is 100 Marks. You will also be given soft copy of this question paper. You need to submit the hard copy and soft copy(if any) in a **word file format** opened in your name.*

I. State whether the following statements are TRUE or FALSE. Give brief justification to your answer.

(10 x 3 = 30)

- a) Every Defect is Nonconformity.
- b) The organization shall determine and comply with applicable EMS legal requirements, and maintain documented information.
- c) While reviewing with customer, the organization shall determine legal requirements applicable to products and services.
- d) Statutory requirements and Regulatory requirements are not the same.
- e) Preventive action is the action taken to eliminate the cause of nonconformity and to prevent recurrence.
- f) ISO 9001 Clause # 8.2.4 encompasses Incoming/Inprocess/Final Inspection of the product.
- g) As per ISO 14001, persons shall be competent on the basis of appropriate education, training, experience and skills.
- h) Significant events under OH&S emergency preparedness shall include fire, explosion, toxic release or natural disasters that threaten the organization's viability.
- i) Usage of Personal Protective Equipment is the most effective method in the hierarchy of risk control.

- j) The organization shall maintain documented information to have confidence that, to the extent necessary the operation planning and control processes to meet EMS requirements have been carried out as planned.

II. Briefly explain any FOUR of the following

(4 x 6 = 24)

- a) What are the objectives of software projects? What are the causes for failure of software projects?
- b) Define software process? In addition to process, what are the factors that need to be considered for success of software projects? Explain them in detail.
- c) What are the organizations that can use COPC standard? Give COPC standard frame work with points.
- d) Product design skills under IS/ISO/TS 16949 - 2009
- e) Integrated Management System(ISO 9001/ISO 14001/IS 18001)

III. Write short notes on any FOUR of the following:

(4 x 7 = 28)

- a) Managing and maintaining audit programme records with one example from any organization
- b) Give two examples of appropriate Statistical Techniques applicable for any two Clauses under each of ISO 9001, ISO 14001 and IS 18001 with brief explanation.
- c) Identify ISO 9001 Clauses relevant to four different functions in a typical organization. Briefly explain with relevant documents and records.
- d) Monitoring and measurement of Environmental performance with examples.
- e) Hazard Identification and Risk Assessment

IV. The following audit observations are made at an IMS (ISO 9001 : 2015/ ISO 14001 : 2015 / IS 18001 : 2007) certified organization. State whether each observation is a NC or not. If NC, then mention the relevant Standard, Clause #, justify with brief explanation, suggest Correction and Corrective Action. Even if it is not an NC, give justification of compliance to the Clause.

- a) The criteria for re-evaluation of External Providers are not determined. All documents of external origin are identified as appropriate, and controlled. Quality Objectives of Maintenance function are not being monitored. One measuring equipment is not being calibrated at specified interval.

(3+3+3+3=12)

- b) All the Environmental aspects have been identified. However, the criteria to determine significance of environmental aspects have not been established. The organization has not determined the environmental parameters that need to be monitored and measured. The Stores I/C is aware of the implications of noncompliance of EMS requirements in his department. The organization has not determined the frequency of evaluation of fulfilment of compliance obligations of EMS. The adequacy of resources is not considered during the recent MRM.

(3+3+3+2+3=14)

- c) The organization has not determined how legal requirements apply to OH&S hazards and risks. Occurrences of few incidents are not reported. Responsibility & Authority for handling and investigation of Accidents is established. OH&S policy is not available to the public.

(3+3+3+3=12)