

AQS 115 - Exam #1 (60 pts)

1. What are the basic elements of a process?
 - a. **Input, activities, output**
 - b. Sources, personnel, equipment
 - c. Training, time, materials
 - d. Cost, productivity, throughput
2. What should be consistent with the quality policy, be measurable and improve customer satisfaction?
 - a. Corrective actions
 - b. Internal audits
 - c. Management review
 - d. **Quality objectives**
3. In flow charts, the diamond symbol is used to represent
 - a. Process steps
 - b. **Decision branch**
 - c. Start of a process
 - d. Continuation
4. When comparing internal and external customers, one finds that
 - a. **Feedback is essential in both areas**
 - b. The requirements of internal customers must be more clearly defined
 - c. An external customer may have less flexibility to make a change
 - d. There are no significant differences
5. The best evidence of acceptable quality is
 - a. Complete compliance to design requirements
 - b. A low rejection rate
 - c. **A satisfied customer**
 - d. Long-term usefulness
6. The organization shall determine evaluation criteria for external providers based on service requirements. **T F**
7. The status of monitoring and measurement requirements shall be identified throughout the process. **T F**
8. Accountability for the QMS is not required of Top Management. **T F**
9. Quality objectives are not required to be documented. **T F**
10. When determining the scope of the QMS interested parties do not have be considered. **T F**
11. Documented information shall include traceability to personnel responsible for product release. **T F**
12. The organization is required to maintain the infrastructure including software necessary for the operation. **T F**

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13. Match the following terms as defined by ISO9000:2015 (11 pts)

Term	Answer	Definition
Management System	d	A. Degree to which a set of characteristics fulfill requirements
Quality	a	B. Need that is stated.
Organization	e	C. Result of a process
Policy	i	D. Set of interrelated elements to establish policies and process to achieve those objectives.
Objective	j	E. Group of people that has its own function with authorities to achieve objectives.
Process	h	F. Distinguishing feature
Characteristic	f	G. Effect of uncertainty
Requirement	b	H. Set of interacting activities that use inputs to deliver intended output
Top Management	k	I. Intention of organization as formally expressed by top management
Output	c	J. Result to be achieved
Risk	g	K Person who directs an organization at the highest level

14. Match the following quality management principles and their application (7 pts)

Principle	Answer	Application
Customer Focus	e	A React to changes in internal and external conditions
Leadership	d	B Recognize and employer individual skills and knowledge
Engagement of the People	b	C Manage interested part interactions to optimize performance impact
Process Approach	f	D Create unity of purpose, direction and engagement.
Improvement	a	E Understand interested party future needs
Evidence-based Decision making	g	F Understand how all resources and controls produce results
Relationship management	c	G Understand cause and effect relationships

15. Describe the Plan-Do-Check-Act cycle in reference to implementation of ISO 9001:2015. (8 pts)

Plan – establish objectives and processes required
 Do – implement the processes
 Check – measure and monitor the process and report results
 Act – take action to improve performance of the QMS based on results

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16. Fireworks America is expanding its operations and building a facility in Smallton USA and the professional grade fireworks will be delivered to states within the continental US where they're legal. (16 pts)
- a. Based on the criterion described in ISO 9001:2015 who are the interested parties. Provide examples of their potential needs and/or expectation. Examples should be descriptive not categories, i.e. Staff expect healthcare and vacation benefits.

Answer provided is example, not an exhaustive all-inclusive list.

Interested Party	Needs/Expectations
Customers	Product that meets requirements Terms and conditions of delivery/payment
Staff	Training on job and safe handling of materials Safe working conditions (well lit, proper storage, etc.)
Suppliers	Clear specifications Terms & conditions of material receipt/payment
Regulators	Comply with state/local laws for safety and distribution of product
Owners/Shareholder	Return-on-investment
Surrounding Community	Safety

- b. Provide examples of what the internal and external issues associated with the new plant location for Fireworks America.

Answer provided is example, not an exhaustive all-inclusive list.

	Category	Example
External (per Clause 4.1 can include: legal, technological, competitive, market, cultural, social and economic environments)	Local/State/Federal Laws	Water discharge from Fire safety permits
	Shipping (trucking)	Hazardous material permits
	Suppliers	Chemical make-up of individual ingredients Packaging material requirements to prevent moisture/ignition
	Perceptions of Plant	Fire /explosion hazard Waste disposal (ground water, air, soil)
	Customer Contracts	Delivery schedules Colors/patterns when blasted
Internal (per Clause 4.1 can include: values, culture, organizational knowledge, organizational performance)	Training	Employees need to know their job function
	Supplier Quality	How will materials be accepted/rejected
	Safety Issues	How to handle the materials when storing, manufacturing, preparing for shipping

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17. Match the following statements to the appropriate section of ISO 9001:2015 (6 pts)

Principle	Answer	Application
QMS scope shall consider products and services of the organization.	C	A. 4.4.1b
Top Management shall promote the use of the process approach and risk-based thinking.	E	B. 7.1.5.2b
Status of measurement equipment shall be identified	B	C 4.3c
Quality objectives must be documented and maintained.	F	D 6.3a
The organization shall determine the sequence and interaction of the processes needed for the QMS.	A	E 5.1.1d
The organization shall consider the purpose of changes and their potential consequences.	D	F 6.2.1