

EXAM 1

Q1 (30 pts/0.5) - Please indicate whether each of the following statements is True/False. Correct the false part.

- Having the ISO 9001 certification does not imply that non-conformities at all stages of the process will not occur. ~~True~~ **False**
- QFD should be considered once the organization has taken some steps to improve quality. ~~QMS (False)~~ **benchmarking**
- Changing process methods to improve trends in non-conforming output results in the need for changes. ~~True~~ **False**
- For those organizations developing a QMS for the first time, an internal audit should be established. ~~False~~ **(steering committee)**
- Strategy and innovation are examples of opportunities. ~~Quality objective~~ **Internal Issues**
- The quality manual in QMS is considered Level 2 document. ~~False (Level 1)~~
- ISO/TS 9002:2016(E) provides guidance on ISO 9001:2015. ~~True~~ **Does not provide**
- ISO 9001:2008 is the responsibility of the technical committee ISO 176. ~~False (ISO/TC 176)~~
- There is no formal requirement in ISO 9001:2015 for risk assessment. ~~(T)~~
- In ISO 9001: 2015, the "policy" sub-clause corresponds to the leadership clause. ~~(T)~~
- In the interrelationship matrix, an empty column means that the HOW is delivering value to customer's needs. ~~False (isn't)~~
- The tree diagram indicates which technical requirements support another, which impede another, and which do neither. ~~False (Correlation matrix)~~
- Appropriate air conditioning and clean room environment for a hospital are examples of Infrastructure. ~~True~~
- Actions to address risks include adopting new technologies and seeking new markets. ~~False (opportunities)~~
- Examples of the risks that indicate the QMS will not achieve its targets are failures of processes, products, and services to meet their requirements. ~~False (objectives)~~
- The certification body specifies the different types of documented information needed to support its quality management system. ~~(organization) itself~~ **False**
- An external audit is conducted on the existing QMS before ISO 9001 implementation. ~~(gap analysis)~~ **False**
- In QFD, the technical requirements are the design specifications of the product or service. ~~False (design targets)~~
- Benchmarking provides a best-in-class model to be adopted, or not even improved on. ~~False (or ever)~~
- Promoting a customer focus is the responsibility of the assigned person for communicating with customers. ~~False (top management)~~ **True**
- Quality objectives should be established at all functions, levels and processes, as appropriate, to ensure the effective deployment of the organization's strategic direction and its quality policy. ~~False (relevant)~~
- If the scope of QMS covers a part of an organization, then top management refers to those who direct and control that organization. ~~False (part)~~
- The SWOT or PESTLE outputs determine policy and objectives. ~~False (risk & opportunities)~~

- A focus on on-time delivery performance provides information on any necessary actions to achieve or improve customer relationships. ~~False~~ (satisfaction)
- If the expected results are not achieved, then a PDCA cycle should be followed until customer needs and expectations are met. ~~(T)~~ consistently
- Authorities and responsibilities can be delegated, but the authority remains with top management. ~~False~~ (overall responsibility) accountability
- Relevant experience and reputation are among the factors employed in selecting a registration body. ~~False~~ (certification)
- The benchmarking ensures that the organization's processes are adequately resourced and, managed and those opportunities for improvement are determined and acted on. ~~False~~ (PDCA cycle)
- Enhanced quality and sustained success are achieved by meeting the needs and expectations of the interested parties over the long term. ~~T~~ consistently
- The object of benchmarking is to discover processes to make major changes that should be approved by management. T
- Communicating quality policy includes notifying manufacturing persons about expected reductions in scrap. ~~T~~ Quality Objective
- Benchmarking compares your process or practice with the target company's best-in-class process, practice, or product. ~~T~~ without product
- In determining the application of requirements in ISO 9001, the organization should consider each requirement and just decide that a whole clause is not applicable. ~~T~~ subclause not whole clause
- When examining its scope, the organization should first determine and assess the potential risks to the QMS associated with them. ~~T~~ opportunity
- External and internal issues can have positive and negative impacts on the intended results of its QMS. ~~T~~ either positive or negative
- Conformance to ISO 9001:2015 requirements requires planning and implementing actions to address risks and issues. ~~(T)~~ opportunities
- Conformity to the international standard may only be claimed if the requirements determined as being applicable do not affect the organization's stability. ~~T~~ being not applicable
- A policy shall be established, implemented, and maintained to provide a framework for setting quality objective. ~~T~~ Setting quality objective
- QFD ensures that risks are determined, considered and controlled throughout the design and use of the quality management system. ~~T~~ Risk based thinking
- External providers and employees are planning matrix. (relevant interested parties) False
- The scope of QMS should be kept as retained documented information. ~~False~~ (maintained)
- Information in documented procedures, manuals, and checklists is maintained documented information. ~~(retained)~~ T False
- The organization's short-term direction and core values are inputs to ISO 9001:2015. ~~False~~ (strategic) (quality policy)
- The actions that an organization can take to address risks will depend on the nature of the opportunity. ~~False~~ The nature of the risk (potential impact on conformity)

In QFD, technical benchmarking defines how an organization plans to provide product characteristics customers need. ~~design targets~~ (false)

In ISO 9001:2008, the verb "shall" indicates a recommendation. ~~should~~ (false)

A logistics company can benchmark a process or practice in the telecom industry (OK-in-class). T

A sales point of 1.5 sales-point increases the overall weighting by one and a half again beyond that indicated by the customer importance of the need and its improvement factor. ~~False~~ (half again)

Investing in manufacturing technology under unknown returns is an example of avoiding risk. ~~taking the risk to pursue opportunity~~

Relevant documented information that traces outputs of a process should be retained and available. ~~T maintained~~ (false)

Output per hour of a production process with a maximum acceptable reject level is an opportunity. ~~quality policy~~ Quality Objective (false)

In QMS, the processes for production and service provision should be determined as well as Internal audit, and management review. (T) ✓

ISO 9001:2015 requirements are based on 7 clauses and 10 principles. ~~(10, 7)~~ False

Documented information cannot be changed and developed as an organization improves its processes and its quality management system. ~~False~~ (can)

Using documented procedures to assist persons with less experience is an example of risk sharing. ~~(eliminating the risk)~~

The format for the documented information is decided by ISO 9001:2015. ~~(organization)~~ False

The customer requirements room of the HOQ is sometimes referred to as the voice of the company. ~~(technical)~~ false

ISO 9004:2018 provides guidelines for managing for the sustained success of an organization. (T)

Certification is the responsibility of ISO. (T) X Certification Bodies

QMS is a specialized method for making customer wants important components of design and production of product or service. (False) QFD

-5

EXAM 2

(5 pts) Please circle the correct answer.

- ✓ It is ----- inputs to management review be addressed at one time, but instead, they may be addressed during sequenced management reviews.
- (a) Not required that all
 - (b) Required that all
 - (c) required that necessary
- ✓ More complex processes can require -----
- (a) more frequent internal audits
 - (b) less frequent internal audits
 - (c) no internal audits
- ✓ ----- such as material specifications, test requirements, quality plans, process specifications, and details of necessary production equipment.
- (a) Design outputs should be retained as documented information.
 - (b) Design outputs should be maintained as documented information
 - (c) Design inputs should be maintained as documented information
- ✓ ----- helps to determine and eliminate the causes of nonconformities, to prevent their recurrence.
- (a) Correcting
 - (b) Corrective action
 - (c) verification
- ✓ ----- can include actions to increase the consistency of outputs in order to increase the level of conforming outputs and improve process capability.
- (a) Performance
 - (b) Continual improvement
 - (c) Post-delivery services
- ✓ The outputs of ---- should include decisions and actions relating to opportunities for improvement
- (a) Management reviews
 - (b) Control of changes
 - (c) Improvement
- ✓ On-site installation of equipment and disposal of a customer's old equipment is an example of ---
- (a) post-delivery activities.
 - (b) Identification
 - (c) Verification of external providers
- ✓ A part number or permanent marking or label on a physical part of a product is an example of -
- (a) post-delivery activities.
 - (b) Identification
 - (c) Traceability
- ✓ Performing alternative calculations and comparing the new design with a similar proven design
- (a) post-delivery activities.
 - (b) Validation.
 - (c) Verification.
- ✓ ----- organizations could need to consider ----- of the design and development requirements.
- (a) All, all
 - (b) All, some
 - (c) Some, all

EXAM 3

- Infrastructure and the organization's different sites and activities should be considered in determining the ----

a. Quality objectives.	b. Quality policy.	c. QMS	<input checked="" type="radio"/> d. Scope.
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- ISO/TS 9002:2016(E) -----

a. does not provide guidance on ISO 9001:2015.	b. applying the QMS requirements	<input checked="" type="radio"/> c. a+b	d. is the guideline for auditing.
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- It is up to ----- to specify the different types of documented information needed to support its quality management system.

a. Quality objectives.	b. ISO 9001:2015.	c. ISO 19011:2018	<input checked="" type="radio"/> d. Organization
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- is conducted on the existing quality management system before ISO 9001 implementation.

a. Certification.	b. Quality policy.	<input checked="" type="radio"/> c. Internal audit.	d. Scope
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- If the scope of the management system covers only part of an organization, then top management refers to those --.

<input checked="" type="radio"/> a. Who directs and controls that part of the organization.	b. Certification body.	c. Leaders of the organization	d. Top management.
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- The outputs of SWOT or PESTLE determine -----.

a. Internal issues.	b. External issues.	<input checked="" type="radio"/> c. a+b	<input checked="" type="radio"/> d. Risks and opportunities.
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- Adopting new technologies and seeking new customers or markets are actions to address -----.

a. Internal issues.	<input checked="" type="radio"/> b. Opportunities.	c. External issues.	d. Risks.
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- The failure of processes, products, and services to meet their requirements are examples of the risks that the QMS will not achieve its ----.

a. Quality policy.	b. Scope.	c. ISO9001:2015.	<input checked="" type="radio"/> d. Objectives.
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- Changing process methods to improve trends in non-conforming outputs result in the need for -----

a. Quality policy.	<input checked="" type="radio"/> b. Changes.	c. Brainstorming	d. Risk actions.
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- Communicating clear requirements for products and services is a way to create ----.

a. Establish scope.	b. Form steering committee.	c. Establish quality policy.	<input checked="" type="radio"/> d. Create awareness.
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- Risk-based thinking and the ----- are considered designated for specific processes in determining the persons needed.

a. Process approach.	b. PDCA.	c. Internal and external issues.	<input checked="" type="radio"/> d. Responsibilities and authorities.
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- Benchmarking libraries and awareness sessions are used in determining, maintaining, and making -- available.

a. Quality policy.	b. Awareness.	<input checked="" type="radio"/> c. Organizational knowledge	d. Competence.
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- Evidence of employee's competence is ----- documented information.

a. Awareness.	<input checked="" type="radio"/> b. retained	c. Organizational knowledge	d. maintained
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- For those organizations developing a QMS for the first time, a ----- should be established.

a. issues	b. Scope	c. Quality policy.	<input checked="" type="radio"/> d. Steering committee.
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- is attained when persons understand their responsibilities and authorities and how their actions contribute to the achievement of the organization's quality objectives.

<input checked="" type="radio"/> a. Awareness.	b. Opportunities.	c. External issues.	d. Internal issues.
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- Conformity to the international standard may only be claimed if the requirements determined as not being applicable do not affect the organization's stability to -----.

a. ensure the nonconformity of its services	<input checked="" type="radio"/> (b). ensure the conformity of its products	c. reduce customer satisfaction.	d. All
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- In ISO 9001: 2015, the "Internal audit" requirement corresponds to ----- clause.

<input checked="" type="radio"/> (a). Performance evaluation.	b. Evaluation.	c. Operation.	d. Prevention-based system.
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- Top management shall establish, implement, and maintain a ----- that provides a framework for setting -----

a. Objectives, policy.	<input checked="" type="radio"/> (b). Quality policy, objectives	c. issues	d. Scope, objective
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- Actions to enhance desirable effects and prevent, or reduce undesirable effects" are considered in ----- -clause.

a. Leadership.	b. Customer focus	<input checked="" type="radio"/> (c). Actions to address risks and opportunities.	d. Determining risks and opportunities.
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- Agreements with public authorities and industry codes and standards are ----- requirements

a. Resources	b. infrastructure	<input checked="" type="radio"/> (c). interested parties	d. Internal issues
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- The requirement for applicability of the ISO 9001:2015 shall be addressed in -----

<input checked="" type="radio"/> (a). Determining the scope of the QMS	b. Internal and external issues.	c. Context of the organization.	<input checked="" type="radio"/> (d). Scope
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- Economic and political factors are -----

a. External risks	b. Responsibility	c. Internal risks	<input checked="" type="radio"/> (d). External issues
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- Resource and operational factors are -----

<input checked="" type="radio"/> (a). internal issues	b. Scope	c. Organization knowledge	d. Interested parties
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- External providers and employees are -----

a. Competent persons	b. relevant	c. QMS	<input checked="" type="radio"/> (d). interested parties
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- The scope of QMS should be kept as ----- documented information.

<input checked="" type="radio"/> (a). Maintained	b. Retained	c. a+b	d. Applicable
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- The quality policy provides a framework for setting the ----

a. scope	b. QMS	c. issues	<input checked="" type="radio"/> (d). objectives
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- Information contained in documented procedures, manuals, and checklists are ----- documented information

<input checked="" type="radio"/> (a). Maintained	b. Retained	c. Continually changes	d. Format and date
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- The organization's strategic direction and core values are inputs to -----

a. Scope	b. QMS	<input checked="" type="radio"/> (c). Quality policy	<input checked="" type="radio"/> (d). objectives
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- The ----- are considered when determining the risks and opportunities for QMS.

a. The external and internal issues	b. Relevant interested parties' requirements.	c. Negative and positive risks	<input checked="" type="radio"/> (d). a+b
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- The actions that an organization can take to address risks will depend on -----

a. Customer satisfaction.	b. nature of opportunity.	c. Product design	<input checked="" type="radio"/> (d). The nature of the risk.
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- Investing in new capital equipment to launch a product line where the return on investment is unknown is ----

a. Sharing the risk	<input checked="" type="radio"/> b. Taking the risk to pursue an opportunity	c. Eliminating the risk	d. Avoiding the risk
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- To be able to trace outputs, the relevant documented information about the identified process output is ----

a. Retained and maintained.	<input checked="" type="radio"/> b. Maintained and available.	c. Retained and available.	d. Retained NOT available.
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- Appropriate air conditioning and a clean room environment for a hospital are ----

a. Continual improvement	<input checked="" type="radio"/> b. Infrastructure	c. Internal risks	d. Planning changes
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- At a production location, the output per hour with the maximum acceptable reject level can be set as ----

a. Target	b. Policy.	c. Scope	<input checked="" type="radio"/> d. Objective
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- Benchmarking is employed to understand the ----

<input checked="" type="radio"/> a. Needs and expectations of relevant interested parties.	b. External issue.	c. Internal issues.	d. ISO 9001:2015
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- Not only the processes for production and service provision should be determined but also other processes such as -

a. Process approach	b. Risk-based thinking.	c. Customer needs and requirements	<input checked="" type="radio"/> d. Internal audit and management review.
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- ISO 9001:2015 requirements are based on - principles

a. 8	<input checked="" type="radio"/> b. 7	c. 22	d. 10
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- In ISO 9001:2015, the issues can include ---- factors or conditions for consideration.

a. Positive or negative	<input checked="" type="radio"/> b. Positive and negative	c. Positive only	d. Negative only
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- In ISO 9001:2015, the persons doing the work under the organization's control shall be aware of ---

a. Quality policy	b. Objectives	<input checked="" type="radio"/> c. Relevant objectives and quality policy	d. A+b
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- Internal meetings, emails, and personal discussions are used to --- the value and benefits of the QMS and adherence to its requirements.

a. document	<input checked="" type="radio"/> b. communicate	c. retain	d. maintain
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- Documented information can --- as an organization improves its processes and its quality management system.

a. can be changed but not developed	b. not be changed and developed	c. cannot be changed but developed	<input checked="" type="radio"/> d. change and develop
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- Risk--- using documented procedures to assist persons in the organization with less experience

a. avoidance	<input checked="" type="radio"/> b. elimination	c. sharing	d. no actions
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- The ---- should establish the format for the documented information

a. Certification body	b. ISO 9001:2015	c. ISO 3001	<input checked="" type="radio"/> d. Organization
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- The level of planning and action required will vary depending on the ---- of the change.

a. potential consequence(s)	<input checked="" type="radio"/> b. causes	c. cost	d. planning
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- There is no requirement in ISO 9001 to use formal risk management

<input checked="" type="radio"/> a. Risk assessment	b. ISO 14001:2015	c. a+b	d. process approach
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Formal risk management

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- Infrastructure and competence of persons are examples of issues.

a. Risks.	(b) Issues.	c. Environmental factors.	d. Opportunities.
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- Strategy and innovation are -----.

a. Opportunities.	(b) Internal issues.	c. External issues.	d. Risks and opportunities.
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- The ----- ensures that organization processes are adequately resourced and, managed and those opportunities for improvement are determined and acted on.

a. Risks-based thinking.	b. QMS.	(c) Process approach.	d. External issues.
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- Enhanced quality and sustained success are achieved by ----- of the interested parties over the long term

(a) Consistently meeting the needs and expectations.	b. Frequently the needs and expectations.	c. Communicating quality objectives.	d. Continuously meeting the needs and expectations.
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- Notifying manufacturing persons about expected reductions of scrap is a kind of -----

a. Quality policy.	b. Planning changes.	c. Opportunities.	(d) Communicating quality objectives
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- When examining its -----, the organization should first determine and assess the potential risks to the QMS associated with them.

a. Internal issues.	(b) Opportunities.	c. Risks and opportunities.	d. External issues.
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- A focus on on-time delivery performance and customer complaints can provide information on any actions that might be necessary to achieve or improve -----

(a) Customer satisfaction.	b. Risks.	c. Risks and opportunities.	d. Opportunities
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- If the expected results are not consistently achieved, then a --- approach should be followed until customer needs and expectations are achieved. -----

a. Customer satisfaction.	(b) PDCA.	c. SMART.	d. Risk-based thinking.
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- Although certain authorities and responsibilities can be delegated, the --- remains with top management.

a. Responsibility	(b) Accountability.	c. Authorities	d. a+c.
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- Relevant experience, fee structure, and reputation are among the factors employed in selecting -----.

a. Resources.	(b) Registration body.	c. Leadership	d. Competent person
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- The external and internal issues can have ----- impacts on the intended results of its QMS.

a. Negative only.	b. Positive only	(c) Positive and negative	d. Either positive or negative
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- Conformance to ISO 9001:2015 requirements requires planning and implementing actions to ---

a. Address risks and opportunities.	(b) Establish quality policy.	c. Retain documented information.	d. measure customer satisfaction.
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- The organization shall determine external and internal sources that are -----.

a. relevant to its purpose.	b. relevant to its strategic direction	c. Risks and opportunities	(d) a+b
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EXAM 4

University of Jordan

Department of Industrial Engineering
Quality Management Quiz 2/4/2024

Name: [REDACTED]

ID: [REDACTED]

+1.5

20/20

(40 pts) Please whether each of the following statements is True/False. Please correct the false part (only the bold-font text)

- Industrial organization puts considerable effort into anticipating the future expectations of its customers. ~~customer focused organization~~
- Mystery shoppers are one of the methods for increasing the level of customer satisfaction. ~~contact~~
- In a predictive system, there is a clearly defined closed loop with both negative and positive feedback in the process, product, and service improvement system. ~~prevention system~~
- Identifying sources of nonconformance is a characteristic of quality control. ~~inspection~~
- Before ISO 9001 implementation, it is important that an external audit be conducted of the existing quality management system by certification bodies. ~~internal audit, by a qualified auditor~~
- Fee structure, reputation, and relevant experience are among the factors employed in selecting accreditation bodies. ~~certification bodies~~
- Eliminating errors, customer complaints, and nonconforming products are the main advantages of implementing ISO 9001. ~~Reduction in error~~
- The main objective of quality assurance activity is to build quality into products and services during the downstream design and planning stage. ~~upstream~~
- Having an ISO 9000 certificate of registration does not imply that non-conformities at all stages of the process will not occur. ~~ISO 9001~~
- "Documentation, quality manual, documented procedure" in ISO 9001: 2008 are replaced by risk-based thinking in ISO 9000:2015. ~~document information~~
- It costs five times more to keep an existing one than to attract a new customer than. ~~less~~
- Cost, reliability, and quality improvements are not complementary objectives. ~~are complementary, cost, productivity, quality improvement~~
- A quality management system is to direct and control an organization with regard to the environment. ~~quality~~
- Detection-based system emphasizes products/services and the upstream processes. ~~prevention-based system~~
- ISO 9001:2000 is the fourth edition. ~~third~~
- Quality is not negotiable and leads to better performance in the marketplace. ~~T~~
- The cost of non-quality is high. A related cost is warranty costs. ~~liability cost~~
- Quality control is part of quality management focused on fulfilling quality requirements. ~~T~~
- "Sorting, grading, and reblending" are performed in the inspection approach to the management of quality. ~~T~~

- "Use of quality costs" is performed in the **quality assurance** to the management of quality. ~~-----~~ ^T
- "Policy deployment and teamwork" are features of the **TQM approach** to the management of quality. ~~-----~~ ^T
- ISO 9001 requirements are **published every 5 years**. ~~-----~~ ^{revised every 5 years}
- Crosby defines quality as conformance to agreed and fully understood requirements. ~~-----~~
- ISO/TC 167 prepares ISO 9001. ~~-----~~ ^{ISO/TC 176}
- ISO is a worldwide federation responsible for **certification** of ISO 9001 standards. ~~-----~~ ^{ISO develops standards, ISO is not responsible for certification}
- ISO 9011:2018 are **requirements** for auditing quality and environment systems. ~~-----~~ ^{ISO 19011:2008}
- Quality procedures are termed the Level 1 documents. ~~-----~~ ^{quality manual}
- ISO 9001:2008 implementation should be a **marketing decision**. ~~-----~~ ^{not be / should be long-term objective}
- ISO 9001:2008 includes 8 requirements and 7 principles. ~~-----~~ ^{8 principles}
- AQL is one of the quantitative measures of **productivity**. ~~-----~~ ^{quality}
- Customer complaints are one indication of **customer dissatisfaction**. ~~-----~~ ^{satisfaction}
- Quality management system development is one of the characteristics of **quality control**. ~~-----~~ ^{assurance}
- Teamwork is one of the characteristics of **ISO 9001 management systems**. ~~-----~~ ^{TQM}
- Customer focus is one of the **requirements** of ISO 9000. ~~-----~~ ^{principles}
- ISO 9001:2015 should be considered a **minimal** requirement. ~~-----~~ ^T
- Accreditation bodies **certify certification bodies**. ~~-----~~ ^{accredit certification bodies}
- For registration, the management systems have to be in efficient and effective operation for at least 3 years. ~~-----~~ ^{6 months}
- The certification body will continue **unplanned routine visits after certifications** for 3 years, twice a year. ~~-----~~ ^{planned}
- Good/excellent is the **quantitative** measure of quality. ~~-----~~ ^{qualitative}
- Quality control and **quality assurance** are prevention-based systems. ~~-----~~ ^{TQM and QA}

EXAM 5

The University of Jordan

Department of Industrial Engineering

Quality Management Midterm Prof. Al-Refaie, A.

Name: _____

ID: _____

Please state whether each of the following statements is True/False. Please correct the false part.

- ISO/TS 9002:2016(E) does **not provide guidance** on ISO 9001:2015. _____
- The external and internal issues can affect, **either positively or negatively**, the organization's ability to achieve the intended results of its quality management system. _____
- The **external issues** related to market factors; such as market share, similar products or services, and supply chain relationships shall be considered. _____
- Participating in relevant associations and benchmarking are activities and methods to **understand the needs and expectations of relevant interested parties**. _____
- The organization should determine **not only the processes** for production and service provision but also other processes such as **internal audit and management review**. _____
- **Internal issues related** to organizational knowledge and resource factors shall be considered. _____
- While ISO 9004:2018 focuses on providing confidence in the **organization's ability to achieve sustained success**. _____
- In **determining the scope**, the organization should consider issues such as the infrastructure of the organization and the organization's different sites and activities. _____
- The organization should consider each individual ISO 9001 requirement, and **not just decide that a whole clause is not applicable**. _____
- ISO/TS 9002:2016(E) document assists users **in applying the QMS** requirements of ISO 9001:2015. _____
- Noticeboards, screensavers, by the organization's website, or during routine meetings can be used to communicate the **quality policy communicated**. _____
- It is up to the **organization to specify** the different types of documented information needed to support the operation of its processes and its quality management system. _____
- Industry codes standards, and policies for employees are examples of **relevant interested party requirements**. _____
- Relevant information developed by governmental agencies; reports on the current and future status of the organization's industry sector **should not be considered** as documented information. _____
- The established quality policy should provide a framework for **setting objectives**. _____

- The inputs to establish the **quality policy** include the organization's strategic direction, based on its mission, vision, guiding principles, and core values; expected degree of customer satisfaction.
- For ISO 9001:2015, **responsibilities and authorities** should be assigned to ensure that the quality management system conforms to ISO 9001 requirements **for specific roles**; internal auditors.
- If the scope of the management system covers only part of an organization, then top management refers to those who **direct and control that part of the organization**.
- In determining **risks and opportunities**, the organization can consider using the outputs of techniques such as SWOT or PESTLE.
- Although certain **authorities and responsibilities** can be delegated, the accountability remains with top management.
- When examining its **opportunities**, the organization should first determine and assess the potential risks to the quality management system associated with them.
- A focus on on-time delivery performance and customer complaints can provide information **on any actions** that might be necessary to achieve or **improve customer satisfaction**.
- If the expected results are not consistently achieved, then a **PDCA approach** should be followed until customer needs and expectations are achieved.
- The output per hour with the maximum acceptable reject level can be set as **an objective** at a production location.
- The actions should be based on the **potential impact on the conformity** of products and services or customer satisfaction.
- Examples of actions to address **opportunities** include adopting new technologies and seeking new customers or markets.
- The **quality policy** shall include a commitment to continual improvement of the QMS.
- Resources to manage the noise level in a factory so the operators can hear process sounds necessary for process monitoring is an example **of infrastructure**.
- **Quality objectives** should be established at **relevant functions**, levels, and processes, as appropriate, to ensure the effective deployment of the organization's strategic direction and **its quality policy**.
- The intent of actions to address risks and opportunities is to ensure that when planning the QMS processes, the organization determines its **risks and opportunities and plans actions** to address them.

- Benchmarking libraries and awareness sessions should be considered in determining, maintaining, and making available **organizational knowledge**. -----
- The ISO 9001 is **not prescriptive** as to the means of **prevention**. -----
- “Transportation resources” is an example of **infrastructure**. -----
- External sources of **organization knowledge** include standards and gathering knowledge from customers or external providers. -----
- The organization should **retain appropriate** documented information that provides evidence of an employee’s competence. -----
- **The procedures manual** is referred to as a level 2 document. -----
- **Awareness is** attained when persons understand their responsibilities and authorities and how their actions contribute to the achievement of the organization’s **quality objectives**. -----
- The **fifth edition (ISO 9001: 2015) cancels** and replaces the fourth edition (ISO 9001:2008). -----
- The main objective of quality assurance is to build quality into the product and services during **the upstream design and planning processes**. -----
- For those organizations developing a QMS for the first time, **a steering committee** should be established. -----
- The scope of the organization’s QMS **shall state** the types of products and services covered. -----
- Issues can include **positive and negative factors** or conditions for consideration. -----
- Involvement of people is **one of the principles** of ISO 9001:2008. -----
- Top management shall **demonstrate leadership and commitment** concerning **customer focus** by ensuring that the risks and opportunities that can affect the ability to enhance customer satisfaction **are determined and addressed**. -----
- **Registration to QS 9000** has become the norm in the automobile industry. -----
- In ISO 9001:2015, the terms “product” or “service” **only apply to** products and services intended for, or required by, a customer. -----
- **Opportunities**, for example, a set of circumstances that allow the organization to attract customers, develop new products and services, reduce waste, or improve productivity. -----
- **It is not the intent** of ISO 9001:2015 to imply the need for alignment of documentation to the clause structure of this International Standard. -----
- ISO 9001 should be considered **the minimal requirement**. -----
- **Elimination of nonconforming** products and errors are benefits of ISO 9001 registration. -----

- When documented information is retained as evidence of conformity, it should be protected from unintended alterations.

- The organization might plan performance tests and validation with the introduction of new software for order handling is an example of actions to help plan the change.
- The failure of processes, products, and services to meet their requirements are examples of the risks that the quality management system will not achieve its objectives.
- Relevant documented information for job descriptions, work instructions, organization charts, and procedures are used to communicate the relevant roles, responsibilities, and authorities.
- Examples of opportunities include the potential to identify new customers, determine the need for new products or services, and bring them to market.
- In general, ISO 9001 is not prescriptive in terms of the extent of documented information needed.
- Notifying manufacturing persons about expected reductions of scrap as an example of communicating quality objectives.
- The transfer of production lines from one site to another, and changing process methods to improve trends in non-conforming outputs result in the need for changes.
- If the organization has a statement in its quality policy to exceed its customer expectations, then it could have a quality objective that relates to on-time delivery or customer complaints.
- The organization should establish the format for the documented information.
- Properly planning a change can help to avoid negative consequences and result in positive consequences.
- Communicating clear requirements for products and services is a way to create awareness.
- It is not intended that you should implement a formal environmental management system or an occupational health and safety management system, to meet the requirements of ISO 9001:2015.
- The organization should use risk-based thinking and consider the responsibilities and authorities that have been designated for specific processes in determining the persons needed.
- The organization shall ensure appropriate identification, description, and format when creating and updating documented information.
- Avoiding high workloads and stress to prevent potential errors for employees should be considered when determining the environment for the operation of the processes.
- Documented information can change and develop as an organization improves its processes and its quality management system.
- Infrastructure can involve IT systems or workspaces in service organizations.
- “The organization should consider how the measuring equipment is verified and/or calibrated, controlled, stored, used, and maintained” is the intent of measurement traceability.

EXAM 6

University of Jordan
Department of Industrial Engineering
Quality Management Course (2023/2024 1st semester)

Name: _____ ID: _____ Serial Number: _____

Please state whether each of the following statements is True/False. Please correct the false part. (45 min: 20 %)

Statement	Answer/Correction
Infrastructure and competence of persons are examples of <u>internal audits</u> .	issues
The products and services provided by the organization are considered in <u>establishing the standards of QMS</u> .	Scope
Benchmarking and market surveillance are methods to understand <u>the needs and expectations of customers</u> .	interested parties
The key factors to consider <u>when determining the identity of an organization</u> are the <u>external</u> and internal issues and the relevant interested parties. <u>Context</u>	Scope / context
The organization should apply the <u>applicable quality principles</u> of QMS. Particular attention should be given to <u>customer focus and customer relationship management</u> .	all
Customer complaints are one indication of <u>customer dissatisfaction</u>	Satisfaction
<u>All requirements of ISO 9001 are considered applicable unless they have an effect on the organization's ability to provide a product or deliver a service that meets requirements or on its enhancement of customer satisfaction.</u>	no
Structure, reputation, and relevant experience are among the factors employed in <u>selecting internal auditors</u> .	certification bodies
The scope should be <u>retained documented information</u> .	maintained
Questionnaires are one of the methods for increasing the level of <u>customer satisfaction</u> .	contacts
Cost, productivity, and quality <u>improvements</u> are <u>complementary and alternative objectives</u> .	not alternative
Investing in new capital equipment to launch a product line where the return on investment is unknown is an example of <u>sharing the risk</u>	taking
The quality of an organization is enhanced and <u>sustained success is achieved by meeting the needs and expectations</u> of the interested parties over the long term.	consistently
Identifying sources of nonconformance is a characteristic <u>of the preventive-based approaches</u> .	detection/inspection
In the prevention system, <u>there is no clearly defined closed loop with both negative and positive feedback in the process, product, and service improvement system</u> .	there is
Economic and political factors are examples <u>of organizational issues</u> .	external
PDCA enables an organization to <u>determine the factors that could cause its processes and its quality management system to deviate from the planned results</u> .	RBT
There is no requirement in ISO 9001 to <u>use formal risk management</u> .	True
Risks are those that can affect, be affected by, or <u>perceive themselves to be affected by a decision or activity of the organization</u> .	interested parties
ISO 9002:2015 provides Quality management systems — Guidelines for the application of ISO 9001:2016.	9002:2016 9001:2015

Statement	Answer/Correction
Strategy and innovation are examples of <u>organizational identity</u> .	internal issues
Employees and others working on behalf of the organization and end users are examples of <u>internal issues</u> .	interested parties
The information contained in documented procedures, manuals, forms, and checklists are examples of <u>risk documentation</u> .	maintained
Evidence-based decision-making is one of the <u>QM requirements</u> .	principles
The cost of <u>quality</u> is high.	non quality
Levels of service is one of the quantitative <u>measures of productivity</u> .	Quality
Basic quality planning is one of the characteristics of <u>quality assurance</u> .	QC
Using documented procedures to assist persons in the organization <u>with less experience</u> avoids the risk.	Eliminate
The organization shall <u>determine external and internal risks that are relevant</u> to its purpose and its strategic direction.	issues
The requirement for applicability of the ISO 9001:2015 shall be <u>addressed in determining the scope of the international standard sub-clause</u> .	QMS system context/scope
Non-fulfillment of a <u>requirement</u> is called nonconforming.	non conformity
Where there is a requirement to be able to trace outputs, the organization should ensure that relevant documented information about the <u>identified process output</u> is available and maintained.	retained
ISO 9004:2015 aims at <u>managing</u> the sustained success of an organization. The process approach is one of the <u>Risk-based thinking principles</u> .	9004:2018 ISO 9001
The <u>risk assessment enables</u> an organization to ensure that its processes are adequately resourced and managed and that opportunities for improvement are determined and acted on.	process approach (PDCA)
In ISO 9001: 2008, the "Internal audit" sub-clause corresponds to the <u>improvement clause</u> .	Performance
The " <u>quality procedures</u> " is a document specifying the QMS of an organization.	quality manual
Once the organization is registered <u>the accreditation body has a system of routine surveillance visits. After two years, a reassessment is made.</u>	3 Year / cert
Audits conducted by organizations on their external providers and <u>other external interested parties (third party)</u> .	2nd
ISO 9001 registration will prevent suppliers from producing and delivering nonconforming products to customers.	not
ISO 9001:2008 includes <u>8 requirements</u> and is based on 7 principles.	8 principles

EXAM 7

Q1 (22.5 pts/0.7) - Please indicate whether each of the following statements is True/False. Correct the false part.

- For a given customer need, the 5-likert scale for planned and existing customer satisfaction ratings are 5 and 3. No change the overall weighting is required. Customer importance = 4. The overall weight is 9.6. ~~False~~ 5.6
- Quality-based system emphasizes products/services and the upstream processes. ~~prevention~~
- "Use of quality costs" is performed in quality assurance. ~~T~~
- If a firm has a very good process to begin with, use FMEA to make it better. ~~Continual improvement~~ ✓
- Quality is not negotiable and leads to better performance in the marketplace. ~~T~~
- Benchmarking gives structure to the creative process by organizing ideas in a way that allows discussion and improvement by all participants. ~~Affinity diagram~~ ✓
- The cost of high-quality is high. ~~No-quality~~
- Technical benchmarking indicates the importance of the customer's needs from the marketing point of view. ~~Competitive~~
- Benchmarking is part of quality management focused on fulfilling quality requirements. ~~T~~ X
- In quality, HOWs defines how much of the product characteristics must be provided. ~~Design Targets~~
- Mystery shoppers are one of the methods for increasing the level of customer satisfaction. ~~perception~~
- The competitive analysis is intended to provide specific information on where the organization stands relative to competing products. ~~Technical~~ X ~~Bench~~
- Cost, quality, and productivity are alternatives and complementary objectives. ~~Complementary~~, not alternatives
- There is a rule of thumb in benchmarking that only 15 % of the interrelation cells will show no relationship between Whats and Hows. ~~with-out "No"~~ ✓
- "Sorting, grading, and reblending" are performed in the inspection approach to management of quality. T
- Customer complaints are one indication of customer dissatisfaction. ~~Satisfaction~~
- A related cost to poor quality is the reliability cost. ~~liability~~
- Quality management system development is one of the characteristics of quality assurance. ~~T~~
- QFD teams must include process operators. T X
- Quality control and inspection are prevention-based systems. ~~detection~~
- Identifying sources of nonconformance is a characteristic of quality control. ~~Assurance~~
- The weight percentage is calculated by dividing the function by cost. ~~Value Engineering~~
- QFD requires competitive analysis to compare customer satisfaction with the current product versus competing products. ~~benchmarking~~
- AQL is one of the qualitative measures of quality. ~~quantitative~~
- "Policy deployment and teamwork" are features of the TQM approach to the management of quality. T
- Human resources, funding, and involvement approved by management are crucial in quality assurance. ~~benchmarking~~
- The improvement factor with a 1-10 scale for planned and existing customer satisfaction ratings of 8 and 6 = 1.4 / 1.2

22.5 + 5

The house of quality employs ~~six~~ 1 attached submatrices.

Competitive analysis involves comparing a competitor's product features and pricing against those of the current firm.

One of the disadvantages of **poor quality** is that there is no guarantee that after spending time and resources, it becomes competitive. reengineering

Brainstorming is an involved process that cannot be compressed into a few weeks. Benchmarking

The first step in identifying key business processes is to identify the metrics for the critical success factors, identifying organizations (CSFs)

Q2 (4 pts) Three quality characteristics (A, B, C) are correlated with 5 technical characteristics (x1 to x5) as follows

QCH	Importance	X1	X2	X3	X4	X5	Improvement factor		
A	4	9				5	1.2	5.76	
B	5		5		3		1.3	7.8	
C	4	1		9			1.5	7.2	
		59.04	39	64.8	23.4	29.8			

The sales point = 1.2 for each characteristic. Based on the % of total weights and technical priorities.

Most important HOW X3 WHAT B (show calculations)

$$5.76 = 4 \times 1.2 \times 1.2$$

$$59.04 = 9 \times 5.76 + 1 \times 7.2$$

2.0

Q (3.5) Please provide concise justifications for the following statements: (3pts)

- Benchmarking supports total quality. How?
it used to show which process are candidates for continual improvement and which require major changes
- Not all processes in an organization need to be benchmarked! Which process?
the weakest processes. 1.5

- Benchmark the best-in-class, not the best-in-industry. Why?

because best-in-class is dynamic in the process not in industry