

Paper Code: M-EPA-IMP4004

Level  
4

# Improvement Practitioner - EPA Mock Knowledge Examination

## Information for registered centres

The seal on this examination paper must only be broken by the candidate at the time of the examination. Under no circumstances should a candidate use an unsealed examination paper.

## Information for candidates

**Under no circumstances should you, the candidate, use an unsealed examination paper.**

This examination consists of **40 multiple-choice** questions.

The exam is worth **40 marks**, with a Pass being **25 marks**, Merit **30 marks**, and Distinction **36 marks**.

The duration of this examination is **40 minutes**.

You are **NOT** allowed any assistance to complete the answers.

You must use a pencil to complete the answer sheet - pens must **NOT** be used.

When completed, please leave the **examination answer sheet (EAS)** on the desk.

### EXAMINATION ANSWER SHEET (EAS) INSTRUCTIONS:

For each question, fill in **ONE** answer **ONLY**.

If you make a mistake, ensure you erase it thoroughly.

You must mark your choice of answer by shading in **ONE** answer circle only.

Please mark each choice like this:

01  A  B  C  D **ANSWER COMPLETED CORRECTLY**

**Examples of how NOT to mark your examination answer sheet (EAS). These will not be recorded.**

01  A  B  C  D **DO NOT** partially shade the answer circle  
**ANSWER COMPLETED INCORRECTLY**

01  A  B  C  D **DO NOT** use ticks or crosses  
**ANSWER COMPLETED INCORRECTLY**

01  A  B  C  D **DO NOT** use circles  
**ANSWER COMPLETED INCORRECTLY**

01  A  B  C  D **DO NOT** shade over more than one answer circle  
**ANSWER COMPLETED INCORRECTLY**

All candidates **MUST** sign the Examination Answer Sheet (EAS) in the bottom right-hand corner of the page before leaving the examination room.

1

A problem has occurred, and has not been detected by the earliest control point in the system following the root cause of the issue. What is the control point that failed to detect the issue known as?

- A. The entrance point
- B. The escape point
- C. The exit point
- D. The early point

2

According to the lean principle of value stream mapping, which 2 categories is waste made up of?

- A. Value added and necessary, and value added but unnecessary
- B. Non-value added but necessary, and value added and necessary
- C. Value added but necessary, and non-value added and unnecessary
- D. Non-value added but necessary, and non-value added and unnecessary

3

During which phase of the PDCA cycle are solutions or changes put into action?

- A. Plan
- B. Do
- C. Check
- D. Act

4

How is takt time calculated?

- A. By adding the available production time to the customer demand
- B. By subtracting the available production time from the customer demand
- C. By multiplying the available production time by the customer demand
- D. By dividing the available production time by the customer demand

5

If a problem needs solving, which of the following processes check if the root causes are true, accurate, and relevant to the issue?

- A. Root cause validation
- B. Root cause and effect
- C. Root cause and analysis
- D. Root cause chain

6

In a parameter diagram, noise factors:

- A. positively contribute to the process
- B. are completely unrelated to the process
- C. create variations and unintended outcomes
- D. are under the strict control of the project manager

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In Failure Mode and Effects Analysis, which rating is used to assess the severity of a failure mode?

- A. 1 to 5, with 1 being the most severe
- B. 1 to 5, with 5 being the most severe
- C. 1 to 10, with 1 being the most severe
- D. 1 to 10, with 10 being the most severe

8

In Kotter's 8-step change model, which step involves removing obstacles that hinder the change process?

- A. Generating short-term wins
- B. Empowering broad-based action
- C. Anchoring new approaches in the culture
- D. Communicating the vision

9

In measurement system appraisal, what is the difference between repeatability and reproducibility?

- A. Reproducibility measures consistency by the same operator and repeatability measures consistency by different operators
- B. Repeatability and reproducibility are interchangeable terms in measurement system assessment
- C. Repeatability measures the consistency of results by the same operator and reproducibility the consistency of results by different operators
- D. Reproducibility and repeatability both focus on planning efficiency and consistent timekeeping

10

In problem-solving, what role does 'is not' analysis play in relation to the 'is' part?

- A. It provides further analysis on the 'is' part
- B. It specifies alternative perspectives on the problem
- C. It helps define what the problem is by ruling out incorrect assumptions
- D. It attempts to disprove any hypotheses developed in the 'is' part

11

In the breakthrough equation used in conjunction with Six Sigma:

- A.  $Y = \text{the inputs}$ ,  $X = \text{the outcomes}$  and  $F = \text{the function}$
- B.  $Y = \text{the outcomes}$ ,  $X = \text{the inputs}$  and  $F = \text{the function}$
- C.  $Y = \text{the current performance}$ ,  $X = \text{the improvements}$  and  $F = \text{the function}$
- D.  $Y = \text{the improvements}$ ,  $X = \text{the current performance}$  and  $F = \text{the function}$

12

Six Sigma focuses on quality and consistency, through process improvement and:

- A. variation enhancement which can have positive long-term effects
- B. variation enhancement which can have positive short-term effects
- C. variation reduction which can have positive long-term effects
- D. variation reduction which can have positive short-term effects

13

The cost of poor quality is:

- A. associated with low standard services, processes and goods
- B. linked with direct material costs rather than customer satisfaction
- C. financial, with limited impact on an organisation's reputation
- D. related to amount spent on services, processes and goods

14

The median is a measure of central tendency, which is calculated by:

- A. adding all the numbers together and then dividing by the number of scores
- B. putting the numbers in order and then identifying the number(s) that occurs most often
- C. placing the numbers in order and finding the middle value
- D. taking the smallest number from the largest number

15

Throughout a project's lifecycle, benefits tracking can:

- A. monitor project performance
- B. ensure project leaders are satisfied
- C. minimise project risks
- D. accelerate the project schedule

16

Under the current Health and Safety at Work etc. Act, what does 'so far as reasonably practicable' mean in relation to an **employer's** duty?

- A. Every possible action must be taken by employers, regardless of cost or effort
- B. Employers are only required to take health and safety precautions that are convenient for them
- C. Employers must take actions that are proportionate to the risks and resources available
- D. Any health and safety actions requested by competent staff must be taken by the employers

17

What are experiments designed to test?

- A. The correlation between variables
- B. The significance of null hypotheses
- C. Naturally occurring events
- D. Cause and effect relationships

18

What are pivot tables an important tool for?

- A. Data entry and storage
- B. Creating data visualisations
- C. Summarising and analysing data
- D. Data encryption

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What are swim lanes in a flow diagram used for?

- A. Identifying the flowchart's title
- B. Representing parallel or separate processes
- C. Highlighting decision or passive points
- D. Defining the flowchart's boundaries

20

What are the 3 factors in overall equipment effectiveness?

- A. Quality, performance and availability
- B. Availability, speed and quantity
- C. Performance, quantity and availability
- D. Quantity, speed and performance

21

What are the **key** benefits of applying the RACI model to managing change?

- A. It clarifies roles and responsibilities, reduces confusion and improves accountability
- B. It enhances team morale, motivation and focus by providing financial incentives
- C. It speeds up the change process by bypassing the need for detailed planning
- D. It focuses on individual contributions, team dynamics and maximising profits

22

What does a high standard deviation indicate?

- A. The range in the data is high
- B. The average of the data is high
- C. The amount of data is high
- D. The variation within the data is high

23

What is a risk analysis?

- A. A process of risk identification, ranking and providing associated mitigation actions
- B. A method that allows individual risk events and overall risk levels to be understood
- C. A careful examination of what could cause harm to people in the workplace
- D. A procedure that anticipates what might not go to plan, and takes steps to reduce any uncertainty

24

What is included in a Service Level Agreement (SLA)?

- A. Services provided, conclusion and appendices
- B. Service levels, terms and conditions and payment details
- C. Service milestones, service objectives and timelines
- D. Service description, service levels and responsibilities

25

What is the difference between active and passive data?

- A. Active data requires direct user interaction or input. Passive data is collected without direct user involvement
- B. Passive data requires direct user interaction or input. Active data is collected without user involvement
- C. Active data is continuously collected. Passive data is only collected during specific time intervals
- D. Passive data is continuously collected. Active data is only collected during specific time intervals

26

What is the **main** advantage of using a bar chart?

- A. To visually display the frequency of data to identify trends or patterns
- B. To visually represent data and show the relationship between 2 continuous variables
- C. To visually represent data in a way that is easy to understand and interpret
- D. To visually display simple data in a complex manner

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What is the **main** focus of the Theory of Constraints (TOC) methodology when analysing processes?

- A. Minimising costs
- B. Identifying and alleviating bottlenecks
- C. Maximising efficiency
- D. Improving and assessing employee satisfaction

28

What is the **main** purpose of a toll-gate review process in project management?

- A. To collect project data
- B. To evaluate project performance
- C. To allocate project resources
- D. To define project objectives

29

What is the **main** purpose of conducting a process capability analysis?

- A. To measure the inherent variability of a process and assess its ability to consistently produce outputs within specified limits
- B. To measure the variation between groups of results to assets and analyse a process change
- C. To measure and analyse parts of a process to set overly stringent specifications limits
- D. To measure and ensure consistent outputs and estimate the financial costs associated with process improvements

30

What is the **main** purpose of process management when leading a project?

- A. It increases project complexity without extra cost
- B. It ensures that the project stays within budget and on time
- C. It provides governance and a programme management plan for stakeholders
- D. It eliminates the need for project schedules and project management tools

31

What is the purpose of the 'Prepare and Plan' phase in the 8D approach to problem-solving?

- A. To establish a clear roadmap for addressing the problem and defining the scope of the issue
- B. To identify individuals to blame for the problem and assigning responsibility
- C. To document unrelated issues that might be encountered in the future
- D. To contain the failure and develop an interim containment plan to correct the issue

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What is the purpose of value stream mapping?

- A. To display the current state of a process, and design a future state for that process
- B. To use a strategy that will retain and attract new customers, and increase sales
- C. To create a project management technique and focus on a detailed project schedule
- D. To analyse process workflows, and provide working instructions around them

33

Which describes the difference between failure mode, failure cause and failure effect?

- A. Failure mode refers to what has failed and the ways something might fail. Failure effect refers to the reason why it has failed. Failure cause refers to the consequences of the failure
- B. Failure cause refers to what has failed and the ways something might fail. Failure mode refers to the reason why it has failed. Failure effect refers to the consequences of the failure
- C. Failure effect refers to what has failed and the ways something might fail. Failure cause refers to the reason why it has failed. Failure mode refers to the consequences of the failure
- D. Failure mode refers to what has failed and the ways something might fail. Failure cause refers to the reason why it has failed. Failure effect refers to the consequences of the failure

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Which describes the outputs of a control chart?

- A. The upper and lower lines establish an acceptable range of variance
- B. The central line establishes an acceptable range of variance
- C. The upper and lower lines establish an acceptable range of central tendency
- D. The central line establishes an acceptable range of central tendency

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Which statistical analysis software is often associated with Six Sigma, and is known for its specialised tools for process improvement and quality control?

- A. SPSS Statistics
- B. Minitab
- C. JMP
- D. SigmaXL

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Who is the person who will often produce the business case for a project and be involved in the initiation?

- A. The sponsor
- B. The project manager
- C. The funding manager
- D. The practitioner

37

Why is a work breakdown structure used in project management?

- A. Because it helps to estimate the final costs of a project
- B. Because it mitigates any project risks
- C. Because it keeps team members focused
- D. Because it replaces the need for a team schedule

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Why is continuous data used in capability analysis?

- A. Because it has an infinite number of possible values and is fixed
- B. Because it has an infinite number of possible values and is not fixed
- C. Because it has a finite number of possible values and is fixed
- D. Because it has a finite number of possible values and is not fixed

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Why is it important that critical inputs in a process are identified?

- A. To reduce the number of inputs in the process
- B. To assign blame for process failures
- C. To streamline administrative procedures
- D. To ensure the stability and quality of the process

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Why is the Kanban system used in manufacturing?

- A. To automate all processes, minimise human involvement and review waste
- B. To enforce rigid production schedules and allow staff to meet set deadlines
- C. To prioritise high-speed production over product quality
- D. To minimise overproduction, improve inventory management and reduce waste

# Level 4

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