

# Paper Code: M-EPA-IMP4002

# Improvement Practitioner - EPA

#### 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.

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) (

**ANSWER COMPLETED CORRECTLY** 

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



DO NOT partially shade the answer circle ANSWER COMPLETED INCORRECTLY DO NOT use ticks or crosses

ANSWER COMPLETED INCORRECTLY

DO NOT use circles
ANSWER COMPLETED INCORRECTLY

**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

Under the Health and Safety Act (1974), all employers **must**:

- A. make reasonable adjustments for employees
- B. provide inclusivity training in induction
- C. provide a safe place to work
- D. provide manual handling training

#### 2

What is the **main** benefit of using the responsible, accountable, consulted, informed (RACI) model when managing change?

- A. It allows all stakeholders to see deadlines and the return on investment
- B. It shows each person what to do and how to do it
- C. It is helpful in toll-gate reviews for the tracking of tasks and benefits
- D. It avoids confusion and duplication of work and assists communication

#### 3

The purpose of the 8D approach is to:

- A. identify, fix and stop recurring problems
- B. guide project managers through a known methodology
- C. enable understanding throughout all stakeholders
- D. improve financial forecasts against actuals

# 4

The purpose of 'is/is not' analysis is to:

- A. analyse if a problem is likely to occur or not
- B. understand the stakeholders who are most likely and least likely to be affected by the outcomes of a project
- C. document the circumstances resulting in a problem and the boundaries of what it is or is not
- D. illustrate the resources and costs that will result from solving problems and which costs can be attributed to 'business as usual' activities

### 5

In flow diagrams, the function of a swim lane is to:

- A. identify individuals' responsibilities
- B. sh<mark>ow cost management</mark>
- C. identify task priorities
- D. show systems analysis

6

How does an understanding of Theory of Constraints support process analysis?

- A. Gives information about activities that provide most value to the business
- B. Helps to identify key wastes and eliminate them from the process flow
- C. Helps to identify a lack of skilled personnel
- D. Provides understanding of bottlenecks and how to manage them

7

The **main** use of the Kanban system in the manufacturing process is to:

- A. add customer value
- B. control inventory
- C. reduce waste
- D. improve processes



#### 8

Which of the following is **most** likely to be seen on a control chart?

- A. A root cause analysis process showing bottlenecks in a process
- B. A stakeholder mapping document that shows power and influence
- C. A process flow map that shows inputs, processes and outputs
- D. A line of central tendency with an upper and lower control limit

#### 9

The 3 measures of central tendency are:

- A. mean, median and mode
- B. median, range and mode
- C. average, mean and median
- D. mean, average and mode

#### 10

The **best** reason to verify the root cause of a problem is to:

- A. ensure that allocated tasks related to solving the problem are allocated to the correct people
- B. prioritise the order in which potential root causes are dealt with
- C. statistically prove that the possible root cause is the real root cause
- D. provide statistical evidence of the value of solving the root cause of a problem

## 11

One expected **benefit** of following customer compliance requirements of a business is:

- A. clearer standards and measures to assist with management of operations
- B. receiving more positive comments and fewer customer complaints
- C. business processes are more efficient and unnecessary costs are eliminated
- D. absenteeism and staff turnover are reduced to acceptable levels



Risk analysis and management is used to clarify the business case by producing:

- A. a risk assessment to understand how much training is required for staff
- B. a risk log to show all risks to customer service throughout the project
- C. both a risk log and risk assessment to analyse risk for a specified governance process
- D. a risk log to assist with a business case as it outlines all known risks at the start of a project

#### 13

Which of these terms **best** describes the toll-gate review process?

- A. A meeting of the steering committee and project manager to determine the feasibility of a project on its initiation
- B. A checkpoint in a project to determine if all the goals in a stage have been completed and if you can move on to the next stage
- C. A budgetary review of the project involving the chief financial officer to determine whether the project is being delivered to the agreed budget
- D. A summative review of the project as it reaches its conclusion to determine its success or failure and to document any lessons learned



# 14

Benefits tracking is helpful in project management because it:

- A. assists when producing a business case and risk analysis
- B. allows a project lead to ensure all expected benefits are managed
- C. tracks the expected benefits to make sure there is a return on investment
- D. tracks the expected benefits to ensure they are realised and controlled

# 15

Why would a work breakdown structure be created?

- A. To define each task, associated costs and schedule
- B. To allocate staff to specific tasks and train them accordingly
- C. To enable a full risk assessment to take place and be mitigated
- D. For the project sponsor to understand what the project team will complete

#### 16

Which of the following is the **most** likely response from individuals going through organisational change?

- A. Anger, consultation, disagreement and achievement
- B. Shock, resignation and low morale
- C. Denial, grief, anger and loss
- D. Shock, anger, acceptance and commitment

# 17

Why is process management important when managing projects?

- A. Process management enables the staff to improve the process
- B. Well managed processes ensure successful projects
- C. Project management is about improving processes
- D. Well managed processes make risk analysis simpler in projects



change by using:

A compelling point of view supports organisational

- A. communication, insistence, HR policies and senior leaders
- B. emails, letters to all staff, meetings, focus groups and risk assessments
- C. communication, data, inspiration, storytelling and empowerment
- D. delegation, confrontation and financial forecasts

#### 19

What is included within the 5 principles of Lean to help reduce waste?

- A. Value stream
- B. Push production
- C. Performance
- D. Efficiency

#### 20

Why are DMAIC phases important when using Six Sigma problem solving?

- A. It is a proven method to show return on investment
- B. It allows all stakeholders to understand project management
- C. It provides a guide to introducing new ideas
- D. It clearly provides a structure for process improvement



# 21

A **benefit** of using a balanced scorecard is that it:

- shows individuals how their role is directly linked to organisational strategy
- B. assists performance management and shows individual performance against KPIs
- C. shows senior managers that individual staff members are performing in line with expectations
- D. enables a targeted approach to managing a bonus within a large organisation

### 22

The Cost of Poor Quality is **best** defined as the costs incurred when:

- A. purchasing material and labour attributed to rectification work
- B. reimbursing customers for returns and delays
- C. conducting statistical process control
- D. producing defective material

# 23

The **key** objective of value stream mapping is to:

- A. document, analyse and quantify the value of each process in detail
- B. investigate a specific area of the overall process cycle and analyse the value it brings to the supply chain
- C. document, analyse and improve the flow of information or materials required to produce a product
- D. analyse and eliminate the operating methods that create the most waste

# 24

Dividing available production time by customer demand is used to calculate:

- A. takt time
- B. balanced scorecard
- C. escape point
- D. waiting time

25

# Which of the following is **most** likely to be seen in a parameter diagram?

- A. Swim lanes
- B. Bottlenecks
- C. Noise factors
- D. Risk rating

#### 26

The 3 factors in Overall Equipment Effectiveness are:

- A. availability, performance and waste
- B. availability, performance and quality
- C. performance, efficiency and waste
- D. performance, quality and utilisation



In data analysis, it is important to measure the spread of data as it:

- A. provides an indication of when data sample size is large enough to cease collection
- B. identifies sample data that can be removed from the analysis
- C. indicates whether the mean, median or mode is the best consideration in data analysis
- D. gives an idea of how well the measures of central tendency represent the data



# 28

Pivot tables are useful in data analysis because they:

- A. summarise data quickly and are easy to understand
- B. reorganise data which aids creative thinking
- C. manage data and make changes that are insightful
- D. allow data to be understood by all stakeholders

### 29

It is important to understand the critical inputs of a process because these **must** be:

- A. removed to eliminate waste and improve quality of the end product
- B. used to deliver the end product to the customer on time
- C. able to meet customer requirements by ensuring the product is at or above a certain quality
- D. carried out in a pre-defined order for the end product to be right first time

#### 30

The **most** likely benefit of statistical analysis software is that it:

- A. is often free to use and therefore a cost-effective option
- B. can understand and access different types of data and perform analysis
- C. requires very little IT knowledge or skills to be able to run complex analysis
- D. requires no user input in order to deliver solutions to problems

# 31

The main purpose of process capability analysis is to:

- A. predict if a process can meet its specifications
- B. determine the maximum output of a system
- C. understand the inputs and outputs of the system
- D. ensure the system is controlled

32

The **most** significant difference between passive and active analytics is:

- A. accuracy
- B. reproducibility
- C. <mark>cost</mark>
- D. c<mark>onsent</mark>

33

The purpose of Design of Experiments is to:

- A. allow for a range of testing to take place without the associated cost
- B. show the effects of a range of factors on output results
- C. allow project leads an understanding of all related issues
- D. enable data analysis to reduce project risks

#### 34

Continuous data is used in process capability analysis as it:

- A. provides a complete set of performance measures including standard Six Sigma statistics and traditional capability
- B. ensures that problems can be solved by people with relevant skills and knowledge
- C. provides a means for determining if an adequate amount of data has been collected
- D. provides a complete set of performance measures, an assessment of process stability and a determination on adequacy of data size



# 35

Which of the following is a **key** advantage of visually representing data in graphical form?

- A. The data can be more easily manipulated to present a desirable picture to the reader
- B. It allows as much information as possible to be communicated to a wider audience
- C. The technical details behind each data set are easy to see in one form
- D. Readers can more easily understand the substance of the findings rather than the technical details behind them

#### 36

An 'escape point' in a control system is **best** described as the point that:

- A. allows a problem to occur without detection
- B. prevents any problems from occurring
- C. indicates the end of the process
- D. determines where variance to standard impacts the quality to the customer

#### 37

Which of the following **best** describes the differences between repeatability and reproducibility?

- A. Repeatability is related to a count. Reproducibility enables the count to happen again
- Repeatability is variability in measurement. Reproducibility enables experiments
- C. Repeatability is data collection. Reproducibility uses historical data
- D. Repeatability is automatic data collection. Reproducibility is data collected by a person

## 38

What is the **main** difference between failure mode and failure cause?

- A. Mode is the average number of failures. Cause is the issue
- B. Mode is the frequency failure rate. Cause is the issue
- C. Mode is what could go wrong. Cause is why it went wrong
- D. Mode is the cost of that failure. Cause is the reason for failure



#### A prioritisation matrix is a:

- A. method to determine the respective roles, interactions and authority of project team members
- B. technique to identify and justify which problems to solve first and achieve consensus about an issue or proposed solution
- C. method used to explore costs, business mission and vision and the timescale of completion
- D. technique to identify which problems can be discounted as non-urgent and prioritise those that remain after non-essential issues have been eliminated

# 40

A failure mode and effects analysis is a structured approach to identify the ways in which a process or product can:

- A. fail, estimate risk, and prioritise actions to reduce risk
- B. fail and analyse the impact of those risks on business profitability
- C. fail needs and estimate the cost of the failure to the business
- D. fail and communicate those ways to the decision makers in the business



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