

ASSIGNMENT

RISK AND DISASTER MANAGEMENT IN CONSTRUCTION  
CE -604

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## **ANSWER 1**

Risk is concern to the happening of random future events of whose careful probability and results is unsure but possible affect purpose of given situation in some way.

Qualitative risk includes examination of risks and chances by using qualitative gages such as high level risks ,standard level risks and low level risks-whereas quantitative involves analysis of risks and opportunities by using appropriate mathematical values.

Risks during construction associated with technical aspects of the project.

- Extended duration of construction.
- Technical complexity and innovation in design requiring new methods of construction and/or erection.
- Removal of support.
- Dangerous substances and items during construction and/or commissioning.
- Defective design.
- Defective workmanship and material and quality control.
- Mechanical and electrical breakdown.
- Inadequate site management.
- Ground Movement.
- Subsidence.
- Explosion and fire.
- Vibration and oscillation.
- Defective temporary work and their design.
- Corrosion.

- Collapse.
- Collapse of temporary works.

Technical risk include anything that restricts you from creating the product that your customer wants. This include uncertainty of resources and availability of materials, inadequate site investigation or incomplete design.

The following seven steps could counter the risks associated with technical aspects.

1. Identify key risks, measure probability and impact.
2. Analyze security threats.
3. Analyze risk of hardware and software failure.
4. Analyze outsourcing risks.
5. Identify controlled technology.
6. Measuring impact.
7. Rank potential risks and specify desired outcomes.

## **ANSWER 2**

Risk matrices also called heat maps are basically tools for representing and displaying risks by defining ranges for consequences and likelihood as a Two-dimensional presentation of likelihood and consequences.

According to this method risk is characterized by categorizing probabilities and consequences on the two axes of matrix. Risks matrices have been used extensively for screening of various risks.

- Probability of occurrence of Hazardous event is  $14805 / 6585200 = 0.0022$
- Consequences of event occurs is 4527500 US dollar.

From Table 2.1 likelihood categories for a risk matrix is category "C" and Description is "very unlikely".

From Table 2.2 consequences categories for risk matrix is category "iv" description is "significant loss".

Now to find risk level Use figure 2.1 RISK MATRIX

Risk level from RISK MATRIX table is "L" Low

- Low Level risk can be treated as acceptable without review

High level risk can be considered unacceptable risk

Medium level risk can be treated as either undesirable or acceptable with review

