Risk and Disaster Management in Construction

Question 1.
Considering the **Bus Rapid Transit (BRT) Peshawar**, what were the risks involved during construction associated with the **technical aspects** of the project? Support your answer with logical and factual arguments along with references. State how we could counter the risks associated with the technical aspects.
Hint: You can take help from book "Risk and Insurance in Construction" by Neal G. Bunni

Question 2.
You are going to initiate a construction project. During the project, annual probability of occurrence of a hazardous event is (ID/6585200). If the event occurs, then the cost of the loss will be 45,275,000 US$ (consequence). By referring to Table 2.1 & Table 2.2, identify the risk level in the risk matrix shown in Figure 2.1.
Hint: You can take help from Lecture and book "Risk Analysis in Engineering and Economics" by Bilal M. Ayyub.

Table 2.1

Likelihood Categories for a Risk Matrix

Category	Description	Annual Probability Range
A	Likely	≥0.1 (1 in 10)
B	Unlikely	≥0.01 (1 in 100) but <0.1
C	Very unlikely	≥0.001 (1 in 1,000) but <0.01
D	Doubtful	≥0.0001 (1 in 10,000) but <0.001
E	Highly unlikely	≥0.00001 (1 in 100,000) but <0.0001
F	Extremely unlikely	<0.00001 (1 in 100,000)

Table 2.2

Example Consequence Categories for a Risk Matrix in Monetary Amounts (US$)

Category	Description	Cost (US$)
I	Catastrophic loss	≥10,000,000,000
II	Major loss	≥1,000,000,000 but <10,000,000,000
III	Serious loss	≥100,000,000 but <1,000,000,000
IV	Significant loss	≥10,000,000 but <100,000,000
V	Minor loss	≥1,000,000 but <10,000,000
VI	Insignificant loss	<1,000,000

Probability category	A	L	M	M	H	H	H
	B	L	L	M	M	H	H
	C	L	L	L	M	M	H
	D	L	L	L	L	M	M
	E	L	L	L	L	L	M
	F	L	L	L	L	L	L
		VI	V	IV	III	II	I
		Consequence category					

Figure 2.1 Risk Matrix (L: Low, M: Medium, H: High)