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Questions & Answers

Project Appraisal, Contract Procurement, Tendering,
Cost Management, Claims, Variation, Dispute handling and other
Post Contract Administration

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PREFACE

First and foremost, I thank Mr. Thiruchelvam and Mr. Benny for their valuable time reviewing this book. Indeed, their expertise added value to this piece of writing.

As emphasized in this book, construction projects involve high risk due to their unique nature, high capital involvement and multiple parties' involvement. Hence, each construction project must be managed properly from the inception to the end. Therefore, the book takes you through the key stages of a construction project, and the questions are arranged accordingly.

Further, since having basic knowledge of the contract is vital, the book starts with a set of questions on the general law of contract. Accordingly, the questions are arranged in the following sections.

Contract Law

Project Appraisal

Pretender Cost Management

Tendering

Contract Procurement

Understanding of Commercial Documents
Post Contract Management
Claims and Dispute Resolution

Thousands of further issues can be discussed under each section. However, this piece of work only provides a basic guideline that is useful for industry practice as well as for the preparation of the Assessment of Professional Competence of various Professional Bodies, which represents the built environment.

The Standards Forms of Contracts do not always provide straightforward solutions to all the practical issues being encountered, and therefore, the parties might need to go for negotiation and some sort of compromise. The issues that the parties cannot resolve themselves require third-party intervention by means of Alternative Dispute Resolution mechanisms or litigation. For the sake of discussion, mostly FIDIC Standard Contracts and the UK Case Laws are used in this book. Thus, the users should focus on the concept and the principles rather than merely memorizing the Clauses, Case Laws and the contractual positions discussed in this book. With the understanding of such principles, the professionals who deal with the

contractual issues in their real life should scrutinize their respective contracts and the legal systems under which their contracts are governed.

Since the FIDIC Standard Forms of Contracts are referred to for the sake of discussion in many places, the wording of 'Employer' is used to denote the client of the project. Also, the wording 'Engineer' is used to denote the entity (consultant) who administrates the contract on behalf of the Employer.

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Section 1: General Understanding of Contract Law

1. Can a verbal agreement be treated as a legal contract?

The main purpose of the legal system is to protect the public but not to punish them. But, of course, if someone breaches the law, must face the consequences. Otherwise, cannot maintain the system and protect the public. Therefore, the law is more interested in giving life to the parties' agreements than ignoring them merely because of the unavailability of the written contract.

Therefore, the verbal contracts are still legally enforceable in some instances if the following conditions are met.

- there must be a promise by a party (the first party)
- there must be a consequent action by other (second) party based on/following the above promise
- the second party's such action must be known by the first party (the second party must make

aware the first party that he is taking action based on the first party's verbal promise)

- there must be a loss for the second party if the first party breaches its promise

Let's discuss with the support of an example. Say, one client made a promise to a contractor that a particular project would be awarded to him. Based on the verbal promise, the contractor mobilized resources (purchasing equipment, recruiting staff, obtaining a loan and so on). The client was aware of the contractor's actions. Suddenly, the client informed the contractor that he had changed his mind and the project would not be executed. Because of such an unexpected decision, the contractor incurred a loss. Consider, the contractor could not utilize such resources on other projects and incurred financial costs for the browning of capital. In this case, the innocent party (the contractor) can approach the public court for compensation for breach of the verbal contract. The burden of proof rests with the claimant (the contractor), and therefore, he must prove the existence of verbal promise, consequent actions, the client's awareness, and the losses he suffered. Proving these facts is difficult without written correspondents

transpired in this regard. That is why parties are strictly advised to form the contracts in writing to avoid future hassles.

2. What are the elements of a valid Contract?

Offer, Acceptance, and Consideration. These 3 elements must be there in a contract to be valid.

In addition to these 3 core criteria, the following requirements also be met.

- Possibility – The contract performance must be possible to execute. The parties cannot enter into a contract to perform impossible tasks. If the impossibility arises after the point of contract, the contract shall be terminated under the concept of termination by frustration. (See question No.7)
- Legality – Though the parties are free to adopt terms and conditions of the contracts at their discretion, such contract provisions shall not be against or violate the Country Law. For example, I cannot sign a contract in Sri Lanka for the supply of heroin as possession and usage of this drug is illegal in Sri Lanka as of today, and

therefore, such agreement is not a valid contract.

- Capacity – A Contract to be valid, it must be formed with the person who holds the legal capacity in terms of age and mental ability. In this context, capacity means the legal ability to enter into a valid contract. Generally, the contracts formed with minors, too older adults who lack self-consciousness, the person who consumed alcohol or drugs, and mentally ill persons are voidable.

In addition, in every contract, there must be a meeting of minds on all relevant points. In other words, the parties must understand and mutually agree on all contract terms.

3. What are Implied Terms in a Contract?

Unlike the expressed terms, which are clearly expressed in the contract, the implied terms are not explicitly stated in the contract, but the law assumes they exist. The implied terms have the same standings as the expressed terms and are legally enforceable.

If there are discrepancies and ambiguities in a contract, exploring the implied terms and the parties' real intention is vital to finding the solutions to the contractual issues.

4. Can be a Counteroffer treated as Acceptance?

Counteroffer shall not be treated as acceptance. Upon a counteroffer, the offeree to the original offer becomes Offeror (of the counteroffer), and the Offeror to the original offer becomes the offeree (to the counteroffer).

Offeror – One who makes an offer

Offeree - A person to whom an offer is made

5. What is Consideration?

Consideration is the exchange of Benefits. For example, say, Party A gives a mobile phone to Party B for a certain amount. This is a Contract (sales contract). However, if Party A gives a mobile phone to Party B free of charge, it is a gift, not a contract.

In construction contracts, the contractors build the projects according to the clients' requirements insisted

in the contract documents in return for the payments made to them.

6. When a contract forms? Is signing the contract necessary?

A valid contract is formed at the time of acceptance of an offer. Therefore, the parties' failure to formally sign the agreement does not necessarily release them from contractual obligations. For example, the contract is formed in the construction industry once the employer issues the Letter of Acceptance to a selected Tenderer.

7. What is the Concept of Termination of Contract by Frustration? In which circumstances a contract can be terminated by Frustration?

A contract shall be terminated by motive of frustration where an unforeseen or unforeseeable event occurs after the contract formation that makes the agreed performance of the contract impossible or radically different from the intended scope. It should be noted that the word impossible used here does not simply denote the one type of frustration that is "Impossible" (non-occurrence of the event). But it indicates that a

particular contract cannot be executed due to legal issues, or impracticability or destruction of the subject matter or performance is made radically different, leading to greater difficulties and financial losses to contract parties.

Once a contract is successfully argued for frustration, the contract is automatically terminated at the point of frustration. However, the contract is not void ("from the beginning"); only future obligations are discharged.

Some theorists define frustration as, in short, if successfully argued, is an excuse for failure to perform. So, the question that the doctrine of frustration is fair or leads to unjust outcomes is getting more potent as a contract party may try to get the advantage for their fault, say error in budgeting, with the factual support of frustration.

The doctrine of frustration cannot be simply applied to a contract, but the court carefully evaluates the existence of the following conditions.

Must be Unforeseeable Event

As the first step to successfully argue for frustration, we must validate that the event that made contract

performance impossible or radically changed the method is not reasonably foreseeable by the contracting party. If it could be foreseen at the time of contract formation and, however, unexpected by the party, who seek frustration cannot successfully argue. For Example, in Construction projects, experience contractors are expected to consider all possible risks that could be reasonably foreseeable.

Must not be the fault of one of the parties

The change in nature of the project should not be the fault of one party. If so, there is no debate for the doctrine of frustration whether it is unfair or not. A party cannot self-introduce facts, which leads to frustration and may seek contractual obligations relief. Those instances shall be treated under the breach of contract or negligence category, and completely different remedies are applicable for such instances.

Frustration does not apply if there is express provision in the contract

If a contract anticipates the event in question and deals with it, the contract will not become frustrated if the event occurs. This again goes to the root of the concept

of frustration as applying only to unforeseen instances as discussed above. This means that even the nature and the environment of the contract changed dramatically, the doctrine of frustration cannot be applied. The party affected by the dramatic change in nature of the contract (not the party's fault) has to face an unfair situation. Sometimes this is viewed as a question of the allocation of risk between the parties. If the sub-clauses of the contract specifically talk about the application of the frustration, then the parties more tend to allocate more risk allowance/ contingency. Especially in construction contracts, the percentages of the risk allowance vary with contract clauses (Condition of Contract) and risk involvement in accordance with the well-known concept "Risk is the Premium". Generally, if a contract specifically speaks about such events and relevant remedial mechanisms, the Court refuses to frustrate the Contract.

8. What is the purpose of the bid bond?

The client (or consultant on behalf of the client) spends time and energy to evaluate the various offers received and selects an appropriate contractor. In case, after selection, the selected bidder changes his mind and decides not to undertake the particular project, the

client has to repeat the selection process, and the project may get delayed. Therefore, to compensate the cost of admiration and loss because of the delay, the bid bonds are generally required by the client.

9. When will be the bid bond returned to the bidders?

The bid bonds of unsuccessful bidders will be returned when the client selects a suitable contractor. The bid bond of the selected contractor will be released after he submits the performance bond.

The terminology of 'bidder/tenderer' and 'contractor' both are used here. Because, until awarding a contract, a bidder/tenderer cannot be denoted as 'contractor'.

10. Suppose a contractor withdraws its offer soon after the letter of acceptance is issued, but a formal agreement is not signed. What are the possible options available for the client to compensate his loss, if any?

Superficially, the bid bond is one option available to protect the client in case of withdrawal of offer before awarding of contract or until submission of

Performance Security. But, if no bid bond is available or assume that the damages are more than the bid bond value (probably that is the client's mistake in calculating the bid bond value), then the client may proceed with the claim on the legal platform. However, he should remember that the Burden of Proof for the alleged loss rests with him (party asserting a positive fact will bear the burden of proving that fact).

Since the client has already accepted the Tenderer's Offer by issuing the Letter of Acceptance, the valid contract has already been formed (assume all other requirements are met). Therefore, the client may be able to claim damages such as loss of time for revisiting the tenders or re-tendering and for other administrative procedures, the cost associated with the time loss (but it should not be too remote. Law does not allow "chain of effect"), cost of abortive work/effort, etc.

However, exact Price difference between the accepted offer and the second-lowest offer (or another suitable offer) shall NOT be claimed because the said contractor has no control over other Tenderers' Prices (Offers). Therefore, no ground to sue the additional cost that the client will incur because of the high prices offered by

other Tenderers (no Privity of Contract exists). Further, the contractor is not liable beyond his contractual obligations.

When the case goes to the Court, the Court will evaluate the client's position in each situation, like what if the said contractor had not participated in the Tender, what if he accepted the contract and what if the contractor refused the contract. In this case, client positions are the same in both scenarios. In other words, the client would have selected another suitable contractor if this said contractor had not participated in the Tender. Said contractor didn't influence the Prices of other Tenders.

So, in summary, the client can encash the bid bond or proceed with the claim on the legal platform to sue the damages mentioned above, but not the Price difference between the accepted offer and the second-lowest offer (or another suitable offer).

11. Is the Letter of Intent a legal document to form a valid contract?

Superficially, the answer is 'No'. Though LOI is not a legal document to form a valid contract, parties are

advised to include payment terms and conditions and the dispute resolution mechanism within the LOI. If so, in case of discontinuity of the contract, i.e., the client chooses to stop the construction works, the contractor can get paid for the work done up to the date. In such a situation, the LOI acts as the legal document to resolve the issue but not to form a valid contract.

12. What is the purpose of the Condition of Contracts in a construction contract?

The purpose of the Conditions of Contracts is to administrate the Post Contract matters. The Conditions of Contracts set out the parties' rights and obligations and administrative procedures.

13. Why are Standard Forms of Contracts recommended over the Bespoke Contracts?

The Standard Forms of Contracts are drafted in a fair manner by allocating risk among the contract parties in a reasonable way. These are tested versions and, therefore, can be easily adopted by all users across the world.

14. What are the Standard Forms of Contracts widely used in the construction industry?

- FIDIC Standard Form of Contracts - It is called as FIDIC Rainbow version as there are many Forms of Contracts such as Red, Yellow, Green, Silver, White etc., available for different purposes such as to administrate Traditional method projects, Design & Build projects, small value projects, Turnkey projects and Consultancy Service agreement etc. International Federation of Consulting Engineers publishes FIDIC Standard Forms of Contracts.
- NEC (New Engineering Contract) - Published by Institution of Civil Engineers (ICE), UK
- JCT Contracts – published by Joint Contracts Tribunal

There are many Editions from each publisher.

15. What is a Bespoke Contract?

- These are not tested contracts and are not globally applicable. Generally, drafted not in a fair manner. The risks are not allocated among

contract parties in a reasonable way. Suitable for specific countries or projects only. However, the Authorities who have published these kinds of contracts for their projects get feedback at the end of the projects for continuous improvement.

- Since the risks are high for contractors in Bespoke Contracts, the bidders tend to quote comparatively high rates for the project formed by Bespoke Conditions of Contracts.

16. What are the contents of a typical Contract Document?

It is a typical list. There may be variations.

Not in the priority order. Priority order may vary from contract to contract as stipulated within it.

- Contract Agreement
- Pre-Tender Clarification
- Post Tender Clarification
- Letter of Acceptance
- Performance Bond
- Form of Tender
- Instruction to Tenderer
- Scope of Work

- General Conditions of Contract
- Particular Conditions of Contract
- Appendix to Tender
- Bonds and Insurance
- General Specification
- Project Specification
- Drawings
- Preambles and BOQ
- Site Data, Geotechnical investigation Reports etc.

17. What is the priority order of documents per the FIDIC 2017 Red Book?

- (a) the Contract Agreement
- (b) the Letter of Acceptance
- (c) the Letter of Tender
- (d) the Particular Conditions Part A – Contract Data
- (e) the Particular Conditions Part B – Special Provisions
- (f) these General Conditions
- (g) the Specification
- (h) the Drawings
- (i) the Schedules

- (j) the JV Undertaking (if the Contractor is a JV) and
- (k) any other documents forming part of the Contract

18. If the Engineer/Consultant revokes his determination in a Back-to-back contract, how does it affect the claim settlement between the main contractor and the subcontractor?

Generally, the Employer prefers single point contract and, therefore, forms the contract with the Main Contractor (under Traditional and Design & Build Procurement routes. Setup under Construction Management path is different). Thus, in general, no contractual relationship exists between the Employer and the Subcontractor unless otherwise any novation agreement is formed between the parties.

The concept of 'back-to-back contract' enables the Main Contractor to reflect the Main Contract terms & conditions in the Subcontract in full or part, especially the obligations related to Payments, Completion Date(s), Damages, Claims and Dispute Resolution procedures.

THEORETICALLY speaking, if a back-to-back Subcontract exactly reflects the Main Contract (at least, some sections), a determination under the Main Contract and/or Subcontract may affect each other. Because, theoretically, the Determinations are made in accordance with the Contract Provisions. But, in practice, the solutions for contractual problems are not straightforward always. Therefore, some sort of compromises and sacrifices by the parties are required. The determination may vary from project to project, parties to parties, jurisdictions to jurisdictions. So, in practice, an acceptable resolution by the Main Contract parties may not be acceptable by the Subcontract parties or vice versa.

If the Main Contractor's reason to reject the Engineer's determination is purely based on the Contract Provisions and if the Main Contract and the Subcontract are identical (at least, aspects related to current issue), then the Subcontractor can pursue the same from the Main Contractor based on the identical Subcontract Provisions. On the other hand, if the Subcontractor's assessment is purely based on the Contract Provisions and if the Main Contract and the Subcontract are identical (or some sections identical),

then the Main Contractor can pursue the same from the Employer based on the identical Main Contract Provisions, but NOT because of the back-to-back contract or reason he already made settlement with the Subcontractor. In the Employer's point of view, the Main Contractor's settlement with the Subcontractor in a back-to-back contract matters nothing.

19. What is Contractual Claim?

This is the common type of claim where parties put forward claims against each other based on the provisions available in the contracts. If a party fails to fulfil the obligations stipulated in the contract, the other party has rights for relief and, therefore, seeks compensation for losses and damages. The contractual procedures such as issuing notice within the specified time frame, impact mitigation measures, maintaining the contemporary records, etc., should be followed to persuade a Contractual Claim successfully.

20. What is General Claim/Legal Claim?

If the parties are not in the position to pursue relief in the contractual ground, they may seek under the country's general law. In Contractual Claims, the parties' entitlements are decided based on the

contractual provisions. However, that does not limit a party's entitlement and may approach the public court for some relief on the country's legal platform. For example, if a contract does not include a Delay Damage clause for late completion of the project due to the contractor's fault, still the employer can get compensated under the general damages outside the contract provisions.

21. What is Ex-Gratia Claim?

This is a relief considered by the employer on a quantum merit basis. In this case, the contractor does not have any Contractual Background or Legal Ground to claim his actual expenditure due to his fault or neutral event. But the employer may pay/share a certain portion of the contractor's loss based on the relationship among the parties and fair deal basis.

22. Who is a Named Subcontractor?

The client includes a list of subcontractors within the contract. The main contractor is not required to get prior approval from the client to appoint a subcontractor who is included in such a list.

23. Who is Nominated Subcontractor?

Sometimes, the employer nominates a few subcontractors for particular scopes, especially for scopes where specialized service is required. Such subcontractors nominated by the employer are called 'Nominated Subcontractors'. Though nominated subcontractors are nominated by the employer, the contractor is responsible for the performance of the nominated subcontractor and consequences. The concept that the main contractor is responsible for the nominated subcontractors' performance is based on the principle that the main contractor gets a chance to object to the employer's nomination at the beginning. The contractor can raise a reasonable objection by explaining the valid reasons why the subcontractor nominated by the employer is not acceptable. The reason for rejection might be, but not limited to, a lack of necessary competence, resources, and financial strength. Also, the main contractor shall raise an objection if the subcontract agreement fails to adequately indemnify the contractor against all obligations and liabilities arising from the consequences of the subcontractor's poor performance.

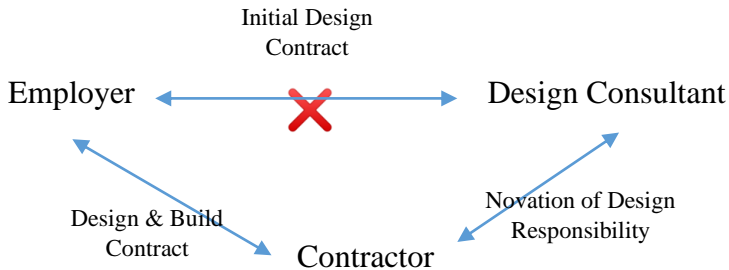
24. Domestic Subcontractor

These are the subcontractors selected by the main contractor at their discretion. However, prior approval is required from the employer/engineer when appointing these subcontractors to ensure the quality of service by them and avoid future hazels.

25. Explain the concept of Novation and the legal consequences of the parties' Liabilities

Novation is all about the substitution of the contract parties through legal agreements. In simple terms, a party to a contract transfers its rights and obligations to a new party with the consent of the other contract party.

The novation agreements are adopted by the employers in the construction industry to ensure the quality of the project through the initial design by a professional design firm and to incorporate the buildability by novating the design responsibility to a contractor who is expert in construction and aware of the practical issues that may arise during actual construction.



In summary, a novation agreement discharges the initial design contract between the employer (**the outgoing party**) and the designer (**the continuing party**) and forms a new contract, in terms of design responsibility, between the contractor (**the incoming party**) and designer.

However, dealing with parties' liabilities during pre-novation and the post novation is not straightforward when a breach of contract arises. The designer owes a duty of care under the initial contract (pre-novation) with the employer and is expected to apply reasonable skill and care in its initial design tasks. In the generic view of the tort law, if a party owes a duty of care to another party and it breaches, then the party will be liable for any losses incurred as a consequence of such breach. So, it is clear that a designer owes pre-novation

liabilities to the employer under the initial design contract.

However, it should be noted that obligations performed prior to the novation were performed by the designer for the benefit of the employer, not the contractor. Therefore, the liability of the designer for the performance of the pre-novation obligations must be assessed against the designer's duty owed to the employer; because the contractor was not a party to the original contract before the novation agreement. Generally, in a novation agreement, the continuing party is obligated to owe a duty to the new party whatsoever agreed to owe to the outgoing party under the original contract.

On the other hand, if the contractor agrees to bear the consequences of any deficiency in the initial design by the design consultant, then the contractor must do risk pricing. In other words, the contractor is not entitled to the additional cost to meet the employer's **initial** requirements, which the designer failed to address in his initial design. However, any other additional requirements imposed by the employer

will be pursued through the usual variation procedures.

In the famous *Blyth & Blyth* case, the developer engaged one of the designers called Blyth & Blyth Limited to design the structural works, and the design contract was novated to the contractor after the initial design. This contract was based on the fixed lump sum price, including an allowance for any errors in the design. Even though the contractor implemented changes and incurred additional costs to satisfy the employer's original requirements, because of deficiencies in the design, the court refused to grant any additional cost to the contractor. The contractor argued that after the novation agreement, the word 'Employer' should be considered as the contractor, and the design consultant owed liabilities. However, the contractor was not entitled to claim additional costs caused by the breach of duties owed by the design consultant to the employer prior to the novation, as the contractor agreed to bear the cost of design deficiencies.

The parties' real intention might be to discharge the designer's whole pre-novation liabilities. However, in

the absence of such clear express terms, the relevant portion of rectification costs incurred due to design fault should be borne by the designer or partially shared. The contradictions between the parties' real intention and the terms of a novation agreement lead to unnecessary dispute among the parties when determining the parties' liabilities later on. Further, it is important to draft the agreement with a clause clearly stating the replacement of the employer's rights over the consultant (under the original agreement) with the contractor's rights and the position of liabilities during the pre and post novation period. The designer should warrant the obligations owed to the employer during pre-novation and should not warrant additional obligations to the contractor retrospectively.

In summary, if there is no express term in which the contractor agrees to undertake the full responsibility to bear loss due to the designer's breach in pre-novation liability, the designer is liable for consequences.

Section 2: Project Appraisal

26. What is a Project Appraisal?

Project Appraisal is the systematic process of evaluating the financial, technical and legal feasibilities of various project options at the inception stage and making an investment decision based on the analysis done. It is obvious that a client would prefer a project with the best financial return. However, required technology and other resources should be available to proceed with the selected option. Furthermore, the project should pass the government approval procedures, and therefore, it should be legally compatible.

In the case of public projects, the Government entities should carry out a cost-benefit analysis to provide better infrastructure and public building facilities for the Citizens by properly utilizing the limited resource available.

In simple terms, we do quick appraisals before making decisions in our day-to-day life. For Example, consider, you visit a restaurant during your office lunch break and decide your lunch within a few seconds by

analyzing several factors such as what you had for breakfast, your health condition, your budget, food availability, waiting period, what you are going to have for the night (any free delicious dinner with friends😊) and so on. However, unlike our simple day-to-day evaluation, appraisal for a construction project requires tools, techniques, significant effort and time.

27. Why do we need to perform Project Appraisal?

The construction projects involve high risks because of their unique nature. Therefore, should check the feasibilities at the inception stage and select the most suitable option to minimize the risks on later stages and get the optimum return on investment. The return on investment does not simply mean the financial benefit, but all other benefits expected from a project.

28. What are the unique characteristics of the Construction Industry?

- Multiple Parties' Involvement (Client, Consultant, Contractor, Subcontractors, Suppliers, Investors, Banks, Insurance

Companies, Government Bodies, General Public/Neighbors, etc.)

- High Capital Involvement
- Government Intervention
 - As Client for Public Sector Projects
 - Through Government Rules & Regulations
- Close interaction with Public (impact neighbors and the general public, especially during the construction of public infrastructures in busy cities)
- Unique Nature of each and every Projects

29. How does the nature of the two construction projects differ?

The nature of the project varies with

- Site location & ground conditions
- Time (affects the political, economic, social & legal environments. So cost and risks varies)
- Duration (projects with a longer duration generally involve high-risk factors)

- Client and other Contract Parties
- Scope (Design, Specification, Quality requirements)
- Condition of Contract
- Geographical area

30. What are the financial methods available to perform a Project Appraisal?

Payback Method

Average Rate of Return

Discounted Cash Flow Techniques

31. What is Payback Period Method?

The period required to earn back the initial investment is called as Payback Period. Project with a shorter payback period is recommended over the longer one. The longer you wait for receiving the initial investment, the higher the risk you hold. The political, economic, social & legal environments may change over the time.

32. Calculate the Payback Periods for the below Projects and recommend the best option using the Payback Period Method only.

| Project | Initial Investment | Net Income | | | |
|---------|--------------------|---------------|---------------|---------------|---------------|
| | | End of Year 1 | End of Year 2 | End of Year 3 | End of Year 4 |
| A | 100 Mn | 20 | 30 | 20 | 40 |
| B | 100 Mn | 20 | 40 | 40 | 10 |

Calculation

Project A

| Time | Net Income | Cumulative Net Income |
|---------------|------------|-----------------------|
| End of Year 1 | 20 | 20 |
| End of Year 2 | 30 | 50 |
| End of Year 3 | 20 | 70 |
| End of Year 4 | 40 | 110 |

The initial investment amount of 100 Mn for Project A can be earned in the 4th year. At the end of 3rd year, the total net income is 70 Mn, and another 30 Mn is required to reach the initial investment amount. The

net income of the 4th year is 40 Mn. Proportionately, we can say **3.75** years is required to recover the 100 Mn of initial Investment.

Project B

| Time | Net Income | Cumulative Net Income |
|---------------|------------|-----------------------|
| End of Year 1 | 20 | 20 |
| End of Year 2 | 40 | 60 |
| End of Year 3 | 40 | 100 |
| End of Year 4 | 10 | 110 |

The initial investment of 100 Mn earned at the end of 3rd year and, therefore, the payback period is **3**.

Project B is recommended as the payback period is shorter than Project A.

The drawback of this method is the time value of the money is not considered. Because of the inflation, the value of the money at initial investment stage is not equal to the value of income generated during the different periods. In the inflationary economic system, the value of money depreciates with time, and therefore, income generated throughout the project life

cycle must be brought to a certain point of time to compare with the initial amount invested at the beginning.

33. What is Average Rate of Return Method?

Under this method, the total net earnings after taxes are divided by the total number of years to find the ‘average annual income’, and such average figure is divided by the initial investment.

$$\text{ARR} = \text{Average Annual Income} / \text{Initial Investment}$$

34. Calculate the Average Rate of Return for the example given in the previous question?

| Project | Initial Investment | Net Income | | | | Total Net Income | Average Income |
|---------|--------------------|---------------|---------------|---------------|---------------|------------------|----------------|
| | | End of Year 1 | End of Year 2 | End of Year 3 | End of Year 4 | | |
| A | 100 Mn | 20 | 30 | 20 | 40 | 110 | $110/4 = 27.5$ |
| B | 100 Mn | 20 | 40 | 40 | 10 | 110 | $110/4 = 27.5$ |

$$\text{ARR} = 27.5/100 = 0.275 = 27.5 \% \text{ for both options.}$$

The time value of the money is ignored in this method too.

35. What is Discounted Cashflow Method?

The series of cashflow should be brought to a point of time to compare the real profitability of the investment options. For example, if Discount Rate / Interest Rate is 10%, below is the real value of a series of incomes generated over the 4 years period.

- PV = $A / (1+i)^n$
- PV = Present Value
- A = Amount in a future time
- i = Discount/ Interest rate
- n = number of years

Project A

| Time | Net Income | PV |
|---------------|------------|------------------------|
| End of Year 1 | 20 | $20/(1+0.1)^1 = 18.18$ |
| End of Year 2 | 30 | $30/(1+0.1)^2 = 24.79$ |
| End of Year 3 | 20 | $20/(1+0.1)^3 = 15.03$ |
| End of Year 4 | 40 | $20/(1+0.1)^4 = 27.32$ |
| Total | | 85.32 Mn |

So, Project A is not advisable as the initial investment at the current value is higher than the expected incomes over the 4 years brought to the current value.

Project B

| Time | Net Income | PV |
|---------------|------------|------------------------|
| End of Year 1 | 20 | $20/(1+0.1)^1 = 18.18$ |
| End of Year 2 | 40 | $40/(1+0.1)^2 = 33.06$ |
| End of Year 3 | 40 | $40/(1+0.1)^3 = 30.05$ |
| End of Year 4 | 10 | $10/(1+0.1)^4 = 6.83$ |
| Total | | 88.12 Mn |

Also, Project B is not advisable as the initial investment at the current value is higher than the expected incomes over the 4 years brought to the current value, but better than Project A as the income pattern is better than Project A though the total income is equal.

36. What are the factors to be considered in decision-making for a government project?

Since the main purpose of the government projects are to provide better facilities for its citizen and the government use the public fund for such projects, the decision to choose a project must be justified by proper reasons. Therefore, the following aspects should be considered for appraisal of government projects.

- Social Benefit
- Expenditure

- Political environment
- Comply with environmental responsibilities

Cost-benefit analysis is developed to assist in decision-making for government projects.

37. What is Cost-Benefit Analysis?

In this approach, the cost/expenditure is compared with the benefits which could be provided to the public through a project rather than focusing on the monetary return through such investment.

1. Identify the range of realistic projects to fulfil the objectives such as
 - to provide better infrastructure to citizens
 - to provide better health care facilities to citizens
 - to provide better socio-cultural facilities to citizens
 - to reduce unemployment
 - to reduce congestion in the city centre, etc.
2. Determine financial costs of each option
3. Determine benefits of each option

4. Present results to decision-makers

It is a time-consuming and complex process.

38. What is Opportunity Cost?

All resources, including financial resources, are limited. Therefore, when a company make the decision on investment in a particular project, they avoid other projects as the company has limited resources. In such a case, the estimated return from other alternative investments that the company decided not to move forward is known as the opportunity cost.

Section 3: Pre-Tender Cost Management

39. What is the Purpose of Preliminary Estimate?

The preliminary estimation techniques are used at the early stage of the project life cycle to tentatively establish the project's cost. Therefore, through the preliminary estimate, clients can get a rough idea about the financial commitments at the early stage of the project. Also, the preliminary estimate enables the designer to design within the available budget in a controlled manner.

40. What are the Price Components of a Cost estimate?

Construction cost

Preliminary

OH & P

Contingency

Assumptions

Basis of estimation

Exclusion, if any (Land cost, legal fee, Authority fees – connection charges)

41. What is meant by Price Contingency?

Contingency is a sum of money allocated within the estimate to cover the costs associated with unknown future events. The percentage of allowance deduces gradually with the development of the design. It is also called Risk allowance.

42. What is Budget?

Budget is the total expenditure authorized by the client for a project.

43. What is Cost Limit?

Cost Limit is the overall estimated cost of a project. Once a Cost Limit is set for a project, it cannot be exceeded without the client's approval.

44. What are Cost Targets?

Cost Targets are the estimated costs of each element/part of a project (e.g., Substructure, Superstructure, Finishes, Services). The Cost Targets can be adjusted along with the design development without affecting the Cost Limit.

45. What is Cost Planning?

Cost Planning is a systematic process carried out at the beginning of the project to estimate the Project Cost, i.e., Cost Limit and the Expenditure Pattern, i.e., Cost Targets (the cost of various elements and when to be spent). For example, the cost associated with constructing a substructure occurs at the early stage of the project, but the cost of finishes at a later stage.

46. What are the Preliminary Estimation Techniques you are aware of?

- Conference method
- Financial methods
- Unit method
- Superficial area method
- Cube method
- Elemental method
- Approximate quantity method

47. What is Conference Method Cost Estimate?

- Under this method, the cost limit is set based on the collective view of a group of individuals.

- The group must have relevant experience in estimating similar projects for the best results.
- This method is used when historical cost data are not available or appropriate.

48. What is Financial Method Cost Estimate?

In this method, the maximum amount that can be spent on an investment project is decided based on the return expected over the period of time. In this method, the income from rental and the outgoings (maintenance, repairs, management etc.) shall be considered to calculate the return on investment. The allowance must be made for non-usable / non-rentable floor areas. Based on the net income expected from the investment, the cost limit shall be fixed, and the design should be developed in a controlled manner within the established cost limit. It should be noted that the time value of money must be taken into consideration when determining the budget. Because, in the inflationary economic system, the value of money depreciates with time, and therefore, income generated throughout the project life cycle must be brought to a certain point of time to compare with the initial amount invested at the beginning.

49. What is Unit Method Cost Estimate?

In this method, the cost of a new project is derived using the 'cost per functional unit' of the past project. For example, the cost per Functional Unit of a school project shall be calculated by dividing the total cost of the past project by the number of students. Subsequently, the estimated cost of the current project shall be calculated by multiplying the 'cost per unit by the number of students of the current project.

Example:

Construction cost of a school project completed already = 100 Mn

Number of students = 100

So, cost per functional unit = $100 \text{ Mn}/100 = 1$
Mn per student

Number of students in the new project = 150

So, estimated construction cost of new school =
 $150 \times 1 \text{ Mn} = 150 \text{ Mn}$

In addition, the adjustments for Time, Location and Special Requirements need to be done as the cost varies with these factors. The Political, Economic, Social, and Legal environments change with Time and,

therefore, impact the market condition. This is a very rough estimate and can be used at the early stage when the design information is not available, but the client's basic requirements are known such as a school to handle X numbers of students, a 5-star stand hotel with Y numbers of rooms, a hospital with Z numbers of beds, etc.

50. What is Superficial Area Method Cost Estimate?

Same as the Unit method, but instead of 'cost per functional unit', the cost per area of the past project shall be considered to derive the tentative cost of the new project. Say, if the total construction cost of a project completed in the past is 100 Mn and the Gross Internal Floor Area is 100 m², the cost per area is 1 Mn. So, for a current project with an area of 150 m², the construction cost estimated using this method would be 150 Mn. This is also a rough estimate and can be used at the early stage when the outline design/ total area of the building is available.

The adjustments for Time, Location and Special Requirements need to be done for this method too as the cost varies with these factors.

51. What is Cube Method Cost Estimate?

Instead of area, the volume of the building shall be considered under this method. To calculate the volume, more details are required, and therefore, further developed design is required for this method than the Superficial Area Method. The estimate is more accurate than the previous methods as the height of the building is taken into account in this method.

The adjustments for Time, Location and Special Requirements need to be done for this method too as the cost varies with these factors.

52. What is Elemental Method Cost Estimate?

Only the total construction cost, i.e., Cost Limit, can be predicted through all the above methods. The Cost Targets (cost of various components/elements of the building) cannot be predicted using the methods discussed above. In the elemental method, the cost of each element shall be predicted using past records. Instead of comparing the total cost of a past project, in this method, the cost of each element, such as substructure, frames (column & beam), Internal & External Walls, Finishes, etc., shall be considered to calculate the elemental unit cost. Subsequently, using

such elemental unit costs and the elemental quantities of the future project, the cost of each element shall be forecasted. For this method, at least, schematic design is required as quantities for each element are used.

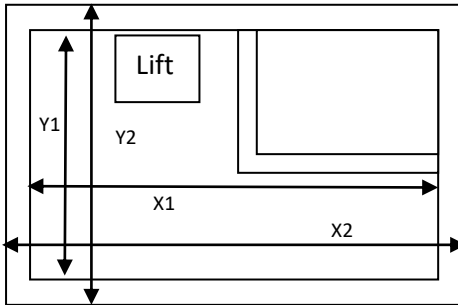
53. What are the Factors to be adjusted while using Historical Cost Data?

The historical data is subject to adjustment for the time and location factors. The cost of construction varies with time. Also, the cost of resources varies with project location. Therefore, adjustments must be made for time and location when using the historical cost data, which are obtained from a project executed during a different time period and at different geographical locations.

Further, adjustment for any special features included in the current project compared with the old project which data is used needs to be done.

54. What is GIFA?

Gross Internal Floor Area is the total area covered by the Internal Surface of the External Walls of a Building. Therefore, the area occupied by the external perimeter walls is not included in the GIFA. In the below image, $GIFA = X1 \times Y1$



55. What is GEFA?

Gross External Floor Area is the total area covered by the External Surface of the External Walls of a Building. Therefore, the area occupied by the external perimeter walls also is included in the GEFA. In the above image, GIFA = $X2 \times Y2$

56. What is NIFA?

Net Internal Floor Area is the net area covered by the internal surface of the External Walls of a Building, excluding non-rentable areas such as areas of the stairwells, lift areas, and areas occupied by the internal partition walls.

57. What are the sources of Unit Rates?

The Unit Rates can be built up from the 1st Principle, i.e., calculating the material, labour and equipment

(including small tools) consumption/ usage for completion of one unit of particular work. This is the fundamental method to build up the rates for construction activities. The inputs of different categories of labours, materials, and equipment for particular item shall be considered based on the industrial norms and the company past productivity records. Further, the cost data shall be applied to inputs of labours, materials, and equipment and consequently, the cost per unit shall be calculated. Appropriate allowance for the material wastage should be made to the material quantities. In addition to the above direct cost, the cost of site office overheads which are not included in the preliminary bills, the head office overhead and the company's expected profit percentage should be added.

Also, the unit rates can be determined using the quotations obtained from the current market.

Generally, contracting and consultancy companies maintain a database for the rates based on past project records.

58. What is the purpose of the standard method of measurements?

The purpose of the use of the standard method of measurement is to ensure the consistency in the measurement principles throughout the industry among the contract parties, which enables the bidders to price the works in line with the employers' requirements and avoid unnecessary disputes during the post-contract stage in relation to the valuation of work done. It describes the method of measurement, inclusion and exclusion of cost components within a work item.

59. List out a few Standard Method of Measurement documents in use in the construction industry.

- SMM7
 - for Building Projects
 - Published by RICS (Royal Institution of Chartered Surveyors)
 - It is not in use now – It is more complicated and sets out very detailed

measurement rules. Therefore, it consumes more time for measurement.

- The New Rules of Measurement (NRM) replaced the SMM7
- NRM (New Rules of Measurement)
 - for Building Projects
 - Published by RICS
 - NRM 1 – for Cost Planning purpose
 - NRM 2 – for Detailed Measurement (replacement of SMM7)
 - NRM 3 – for Rehabilitation / Maintenance Works
- CESMM 3 (Civil Engineering Standard Method of Measurement, 3rd Edition)
 - for Infrastructure/Civil Engineering Projects
 - Published by Institution of Civil Engineers, UK (ICE)
 - Latest Edition is CESMM 4

- Major difference in CESMM4 compared with CESMM3 is that CESMM4 is applicable for all Standard Forms of Contracts.

60. Can CESMM3 be used for Contracts administrated by other than NEC Standard Form of Contracts?

CESMM3 is designed for construction projects administrated by the NEC Form of Contracts.

But in practice, the CESMM3 is used for other Standard Forms of Contracts and Bespoke Contracts. In such cases, Pricing Preamble shall specify the adopted Standard Method of Measurement. Example: “even though the Standard form of Contract is FIDIC 99 Red Book, the adopted Method of Measurement is CESMM 3”

IF we use CESMM3 for Contracts formed by the NEC, then no separate Pricing Preamble is required if there is no deviation from CESMM3 Measurement Principles.

CESMM 4 can be used for any Form of Contract. Therefore, if a Contract is formed based on FIDIC, JCT or other Bespoke Contract Forms and adopt CESMM4

as Principles of Measurement, separate Pricing Preamble is not required. However, any deviation in the Measurement Principle from the Standard Method of Measurement shall be stated in the Pricing Preamble.

61. What are the main aspects the CESMM3 focuses on?

- how work is to be divided into separate items in the Bill of Quantities
- the information to be given in item descriptions
- the units in which the quantities to be measured
- how the work is to be measured for the purpose of calculating quantities
- Inclusion and exclusion of cost components

62. What is the structure of CESMM3?

There are 26 Classes (A to Z), and each class has 7 sections/columns - 1st division, 2nd division, 3rd division, Measurement rule, Definition rule, Coverage rule, and Additional Description rule. There is a maximum of 8 items in the 1st or 2nd, or 3rd division. Any new

item shall be numbered as '9' for the CESMM reference in the BOQ.

The Simple Building Works Incidental to Civil Engineering Structure, which is not available to measure under other work classes, shall be measured under Class Z.

63. What CESMM3 insists in terms of writing the BOQ description?

CESMM3 insists on avoiding lengthy but comprehensive Descriptions, which must provide enough details to a Bidder to understand the scope and price accordingly. Descriptions should identify the component of the Works and not the tasks to be carried out by the Contractor.

64. How do you use the Class Codes in CESMM3?

For example, the Code H 1 3 6 identifies an item as explained below.

- class H - precast concrete
- 1 in first division - beams

- 3 in second division - length 7-10 m
- 6 in third division - mass 5-10 t
- The symbol * indicates that all the items in a division are applicable. Example: H 1 3* means the group of code numbers from H 1 3 **1** to H 1 3 **8**.
- '0' indicates none of the items in the specific division is applicable.
- If any Additional Description Rule is applicable, it shall be written as [Class] [1stDivision] [2ndDivision] [3rdDivision]. **A** (number)

It should be noted that CESMM references are provided in the BOQ just as a guideline to the Bidders to easily trace out the relevant items in the CESMM. Since the CESMM reference does not form any contractual nature, any errors in the CESMM reference do not relieve the contractor from his Contractual obligations.

65. How do you use the Measurement range?

“A hyphen between two dimensions means a range of dimensions which includes all dimensions exceeding

that preceding the hyphen but not exceeding that following the hyphen.” Confusing??? See below.

For example, if the size of pipework mentioned in the BOQ is 100 – 200 mm, the 100 mm diameter pipe shall not be measured under this item. It should be measured under the previous category (most probably pipe diameter not exceeding 100mm category). So, in this category, pipe diameter from 100.000001 mm to 200 mm shall be measured. Not 200.0001 mm – it should be under the next category.

In Summary, if the range is A to B, A should be in the previous category, and B should be in this category.

Section 4: Tendering

66. What do you understand by “Tendering” in the construction industry context?

As discussed earlier, the construction projects involve high risk due to their unique nature, high capital involvement and multiple parties' involvement. Therefore, not only a proper feasibility study but the proper procedure also should be followed to select an appropriate contractor. Such the selection process is referred to as Tendering. The process includes, but is not limited to, deciding the suitable tendering method, listing and prequalifying the potential bidders, preparation of tender documents, establishing submission procedures, tender evaluation and up to formalizing the contract.

67. List the major types of tendering methods

- Open Tender/ Competitive Tender
- Selective Tender
 - Single Stage Selective Tender
 - Two Stage Selective Tender
- Negotiated Tender

68. What is Open Tendering?

Under this method, the invitation to tender is published on the public media, generally in newspapers. Regardless of size or capability, any contractor may apply for the tender documents and submit their offers. Invitation to tender carries brief details of the proposed work's location, type, scale, and scope. The suitable contractors shall be selected through the competition based on their financial and technical submissions. The evaluation criteria, including weightage for technical and commercial parts, are generally included in the tender document.

69. What are the major advantages of Open Tendering?

The key feature of Open Tender is competitiveness. So,

- The employer can get the best offer in terms of finance.
- Since the opportunity is open, chances for new companies to enter into the market. Allowing newcomers, who have great potential, eventually positively influence the country's development.

- Unlike selective tender, less chance for favouritism as opportunity is open.

70. What are the disadvantages of Open Tendering?

Though the employer gets the best offer in terms of finance through high competition, there is no guarantee that the lowest tender can successfully complete the project and, therefore, may fall short in meeting the quality requirements.

Further, it requires more effort and time for tendering process as the number of tenders are high, and consequently, the cost of the tendering process is high.

71. What is two envelop tender submission?

In this process, the tenderers are required to submit Technical and Financial proposals separately in two envelopes. The Financial offer will be assessed if the Tender is successful in the technical submission. This approach is adopted to avoid unnecessary effort and time, as there is no point in evaluating the financial offer of a bidder who doesn't express technical capability.

72. What is single envelop tender submission?

The financial and technical offers are submitted together, and both shall be assessed parallel by respective departments in accordance with the evaluation criteria.

73. What is Single Stage Selective Tendering?

Under this method, the client or consultant, on behalf of the client, compiles a list of the preferred contracting firms for the proposed project based on their prequalification and invites them for tendering. Consequently, the contracting firms who wish to participate would collect the bidding documents and submit their offers, all in accordance with the procedures set out within the tender documents. From the submitted offers, one suitable bidder would be selected. In summary, all the tendering procedures are the same as open tender except that the tender documents are issued to a few chosen tenderers, which is not the case in open tendering.

74. What are the advantages of single stage selective tender?

When discussing Open Tendering, our concerns were about the participation of incapable tenderers and the high time, effort & cost of the tendering process. So, the advantages of the selective tendering method should address these two concerns. Therefore, the answer to this question is as follows.

- It ensures that only capable and selected firms submit tenders and have high certainty in completing a project as intended.
- Since the number of participants is less, the process of selecting the suitable contractor is faster and therefore, the cost of the tender process is less.

75. What are the disadvantages of this method?

See advantages of Open Tendering method. What we have mentioned:

the employer gets the best financial offer,

the new players get the opportunity to get into the market, and

less chance for favouritism as the opportunity is open.

In the Selective Tendering method, since the competition is limited, offers are generally slightly higher than the Open Tendering method. Also, since contracting firms are shortlisted based on past records, new players have less opportunity to enter the market. Also, there is a chance of favouritism as personal interest may influence the shortlisting process.

76. What is Two Stage Selective Tender?

To get the benefits of competition and to bring the contractor's expertise and practical knowledge into design development, this Two Stage Selective Tendering is used.

In the 1st stage, a suitable contractor is selected through a limited competition, the same as the Selective Tendering Method above. But, unlike Selective Tendering documents, only sketch drawings or limited details are provided by the employer and the tenderers in return, submit the following documents, but not limited to,

- ADHOC Schedule of rates (Rates for major items without quantities) – Since the design is not completed and the Quantiles are not available, the bidders shall offer their rates for major items without quantities.
- Detail breakdown of the preliminaries
- Construction program
- Construction methodology
- Overhead and Profit percentage
- Available plant and machinery to execute the particular project

In the 2nd stage, the selected tender from the first stage will be used in this stage to develop the design and construction methodology. Upon completing the entire design and the tender documents, the employer shall negotiate the final price based on the final items developed in Stage 2. If the negotiation goes well, the same contractor will continue the work or else will go for another contractor. The compensation for the 1st contractor for the service he provided in terms of design development shall be paid.

77. What is Negotiated Tender?

In this method, only one contractor is approached by the client based on past experience or reputation in the market. As a result, the competition is fully eliminated, which will almost inevitably lead to a higher price. On completion of the design, the contract sum will be negotiated, and an agreement will be made between the client and the contractor.

78. What are the objectives of the Tender Documents?

Superficially, the purpose of tender documents is to select a suitable contractor based on the technical and financial offers. So, the tender documents should provide all necessary information and act as a basis for the preparation of such proper technical and financial offers. Therefore, we can say that the purposes of tender documents are;

- To define the scope and standard of work
- To outline the post-contract cost management procedures, including payment terms, variation and claim procedures, and dispute management

- To specify the rights and obligations of the contract parties
- To identify the risks that the contractor is expected to include within the tender price

79. Is there any possibility for retendering? If so, why?

Though the professional team spend vast amount of time on capturing a client's requirements, carrying out feasibility study, and develop tender documents, sometime, the scope needs to undergo a significant change because of a significant change in the client's requirements and changes in statutory requirement by government authorities. Therefore, evaluating the technical and financial offers submitted by the bidders based on the original scope is not possible and meaningless. Therefore, revision of tender documents and retendering are required.

80. What are the factors to be considered for prequalification?

Prequalification is the process of evaluating the capabilities of the contractors to make a decision whether to shortlist them to invite for tendering or

award a contract. The following aspects are considered during the prequalification process.

- Financial Position - Using the Audited Financial Reports, the financial position of a company can be assessed. Various Accounting Ratios shall be used for this purpose.
- Quality of Human Resource - Skills, Experiences, and Qualifications
- Details of Plant and Machinery
- Trade License and other governmental certification and registrations
- Past Experiences
- Current Workload

81. How to use Accounting Ratios to assess a company's financial position and performance?

There are many Accounting Ratios to assess a company's liquidity, profitability, efficiency and investment potential. A few key ratios are discussed

below, which are generally used for the prequalification process.

Current Ratio = Current Assets / Current Liabilities

This Ratio is used to evaluate the liquidity of a company. It indicates a company's ability to meet its short-term liabilities with its short-term assets. If the value of current assets is more than the value of current liabilities, then the liquidity wise company is in a good position and able to manage the cash flow. Suppose the total current liability is more than current assets, the company's cash flow is in trouble. A company may have good, fixed assets, but if current liabilities are more than current assets, then its liquidity is low as it difficult to convert the fixed assets into cash for instant needs.

Therefore, during the prequalification process, companies with current ratios of more than 1 ($\text{Current Assets} / \text{Current Liabilities} > 1$) are preferred as those companies can effectively manage their payments and credits of suppliers, subcontractors and own staff and labour which eventually impact successful completion of the projects.

Gross Profit Ratio and Net Profit Ratio

$$\mathbf{Gross\ Margin = Gross\ Profit / Revenue}$$

$$\mathbf{Operating\ Margin = Operating\ Profit / Revenue}$$

By evaluating the gross margin and operating margin, we can assess a company's overhead cost. For example, if a company has good gross profit and low operating profit, that means the company's administration cost is high. Therefore, such a construction company's overhead cost is high.

For the prequalification and shortlisting purposes, we don't need to much worry about the efficiency and investment ratios such as

$$Total\ Asset\ Turnover = (Revenue) / (Average\ Total\ Assets)$$

$$Return\ on\ Equity = (Net\ Income) / (Average\ Shareholders'\ Equity)$$

$$Earnings\ per\ Share = Net\ Income\ available\ to\ Shareholder / Nr\ of\ Outstanding\ Shares$$

Which are used to assess the efficiency and return to the shareholders and make investment decisions accordingly.

82. What is the content of a typical Tender Document?

- Form of Tender
- Instruction to Tenderer
- Scope of Work
- Particular Condition of Contract
- General Condition of Contract
- Appendix to tender
- Specimens (Forms for Bonds and Guarantees)
- Project Specification
- General Specification
- Drawings
- Preambles and BOQ
- Site Data, Geotechnical investigation Reports

83. What are the additional documents included in a typical Contract Document?

In addition to the above documents, the following documents are included in a typical contract document set.

- Contract Agreement
- LOA
- Post Tender Clarification
- Pre-Tender Clarification
- Performance Bond
- Master Program

84. What are the documents the tenders should submit with their offer generally?

Technical Package

- Experience
- Financial Information
- Resources (Human & Physical)
- Execution Plan and Method statements
- Technical qualification
- Program

Financial Package

- Completed and signed Form of Tender
- Bills of Quantities (fully priced)
- Priced Qualifications
- Bid Bond

85. What are things a tender evaluation Team should check at first glance after receiving an Offer?

- Check whether the tenders have valid Trade Licenses to operate within the country where the project is undertaken.
- Check whether all pages of tender documents are signed and stamped by the Authorized signatory
- Availability of Tender Bond (Bid Bond)
- Filled Form of Tender

86. What is the content of a typical Tender Evaluation Report?

- Introduction
- Details of the tenders

- Number of tenderers invited
 - Number of tenders returned
 - Tender submission and opening information
- Completeness of tender - check whether tenders have complied with the Instruction to Tenderers
- Detail Evaluation
 - Like to Like Comparison - Comparison with the Pre-tender estimate and all other the received Offers
 - Check arithmetical errors
 - Unpriced items
- Observations and qualification
 - Unusual rates – too high or too low
 - Front Loading and back Loading
- Summary - with and without arithmetical errors
- Recommendations

87. Summarize the Tendering process?

- **Pre-qualification phase:**

In this phase, the employer sets out the selection criteria and requests the potential tenderers to submit their details such as Technical capabilities, Financial details, Human and physical resources, past experience, current workload, etc.

- **Tender Invitation Phase**

In this phase, the short-listed tenderers are invited to participate in a tender.

- **Tender Clarification and Addenda Phase**

The Tenderers raise the Queries (if any) during this phase, and the employer is obligated to respond to those queries with the required information. The response to a tenderer's query should be distributed to all the tenderers to ensure equal opportunity. Otherwise, some information may not be available for a few tenderers and, therefore, cannot expect a consistent basis to evaluate the tenders.

- **The Bid Submission**

The tenderers should submit their offers/bids before the deadline along with the required documents.

- **Tender Opening and Post Tender Clarification Phase**

In this phase, the employer opens and evaluates the Offer/Bids and may seek further clarification from the tenderers regarding their Offers if necessary.

- **The Award and formalization of Contract**

In this phase, the employer issues the 'Letter of Acceptance' to the successful bidder and signs an agreement to execute the works.

88. How do you evaluate a design and build tender?

The evaluation of Design & Build bid is complicated as the various design proposals of the bidders, along with the commercial aspects, need to be evaluated. A design and build tender evaluation is carried out based on pre-determined evaluation criteria given to the bidders with the tender documents. That criterion is made

based on the weightage to price, design, specification, human resources, financial capacity, subcontractors, and method of construction.

89. What do you do if a few un-priced items are in the lowest tender?

Generally, the Instruction to Tenderer specifies the mechanism to deal with the unpriced items. The evaluation team may apply rates from their internal pre-tender estimate or lowest rates or highest rate, or average rate from other bids for comparison purposes. If a bidder's intention is to include the cost of an item within another BOQ item, they should mention it as 'included' to avoid confusion. Leaving blank (unpriced) is not an advisable way as there is no clear indication whether the bidder already included such cost in their offer or not. Also, during the post-contract stage, it might create a dispute.

90. How do you deal with arithmetical errors in tenders?

Through post-tender clarifications, the tenders should be notified about the genuine errors and get confirmation from the bidders. Based on the bidder's

confirmation, the offer shall be revised (because of correction of arithmetical errors), or the initial offer amount shall be maintained.

Even if it is a lump sum contract where parties get bound with the final contract sum, it is advisable to clarify with the bidders about any errors in building up such contract sum at the tender stage to avoid future hassles.

91. If there are major qualifications with the cheaper cost submitted by a bidder, how do you deal with it?

Generally, the Instruction to Tender specifies whether the bidders are allowed to submit their offers with qualifications or such deviation from the specifications and drawings given in the tender disqualifies the offers.

If Instruction to Tender allows the bidders to submit their bids with the qualifications, and if the proposal submitted by a bidder is technically acceptable, such proposal should be circulated among other bidders and get a price for it. Someone else may offer a lower price for such a technical proposal than the initially proposed bidder.

92. The lowest tender is a good contractor, and its offer is significantly lower than other offers and the pre-tender estimate; what would be your advice on this?

If this is the case, we first need to ensure that there is no arithmetical error in the offer.

It is possible that some market players are in the position to offer the best prices because of their unique approaches. For example, they may have a better supply chain and credit facilities to obtain materials at the cheapest cost. They may have efficient technology to deliver the project at a lower cost but with the required quality. Further, their overhead cost to a specific project might be less as they might be sharing such costs with many running projects at a time and efficient management approach. Therefore, if a firm has a good reputation, resources, and financial position, confirm such lowest offer is reasonable to deliver the project at the expected standard and award the contract. To ensure whether the offer is enough to complete the project, we can verify the rates of major items by checking the rate breakdowns.

93. If all offers received are significantly higher than the pre-tender estimate, what would be your advice on this?

If all the offers received through a high competitive tendering are significantly higher than the internal pre-tender estimate, it means something wrong in our estimation; most probably, our estimate failed to reflect the current market prices. So, as the first step, we need to check what went wrong in our estimation and spot the specific sections where the submitted offers deviate much from our estimate.

If the budget is restricted, check whether there are any possibilities for value engineering to reduce the contract sum. But, if the time is limited and the value engineering process needs significant time, check the possibilities to include some portion of work in the Provisional Sum section. The decision can be made at a later stage whether to execute such works or redesign them within a lesser budget.

94. How you will avoid disputes in the future, during tender stage?

Appropriate measures to avoid potentials disputes must be taken from the first day. That's why, as discussed earlier, proper appraisals should be done before making an investment decision and choosing the viable option—further, the proper measures to be taken during the pre-tender stage are as follows.

- Adopt a suitable Contract Procurement method.
- Use Standard Forms of Contracts that are drafted in a careful manner by sharing risks among the parties in a reasonable way.
- Prepare the risk-balanced tender documents.
- Allow reasonable time to prepare quality tender documents without ambiguities and discrepancies.
- Ensure proper communication between various disciplines and prepare a coordinated, comprehensive document by capturing the client's requirements.
- Provide proper answers for tender queries to all tenderers.

- Award the contract to a capable contractor rather merely based on the lowest offer.

95. By evaluating the audited financial reports submitted with the Tender, you found that the working capitals of all the tenders are not good. What is your advice?

The cash flow is denoted as the blood of the construction industry. If the cash flow statement of a tenderer is not attractive, and the tenderer has good reputation and past records, you may consider selecting such tenderer by boosting cash flow through advance payments and material on site/ off site payments.

Section 5: Procurement

96. What is Contract Procurement?

Contract Procurement is the approach in which the way a specific project is completed. In simple terms, we can say it represents the working arrangement. For example, suppose a client decides to build a hotel, the contract procurement answers the questions on how to get the completed hotel building, who designs, who constructs it, what are the rights and obligations of the parties, and so on.

97. What are the types of Procurement methods available?

- Traditional Path
- Design & Build Path
- Management Path
 - Management Contracting
 - Construction Management
- Design & Manage Path

98. What is Traditional Method?

In this method, the client bears the design responsibility, and the contractor constructs the project in compliance with the design provided.

The clients usually engage consultants to complete the designs, prepare tender documents, and then choose the main contractor. It is the most commonly used procurement path.

The traditional procurement path can be divided into two methods as sequential method and the accelerated method.

99. What is the Sequential Method Traditional Procurement path?

This is the normal traditional method. In this method, the employer completes the design and issues comprehensive tender documents so that the bidders provide their offers based on the information received. Then, the successful contractor is awarded the contract and commences the construction. Since the design and construction are done in sequence, it is referred to as the sequential method.

100. What is the Accelerated Method Traditional Procurement path?

In this method, the employer issues partially completed design and the selected contractor becomes part of design team. The successful contractor assists the design team for the completion of the design and consequently commences the construction. As the time period is less for this method as only partially completed design is used for tendering process, this method is called as the accelerated method.

101. What are the Advantages of the Traditional path?

- Since design is developed by the client's consultant and the client gets involved with the design development, there is a high possibility of capturing the client's requirements accurately.
- Since the client's consultant develops the design, we can implement cost control strategies and develop the design within the budget by ensuring value for the client's money.
- Since the design is completed at the time of tender, cost certainty is high in this method. As

the client's representatives control the design, managing variations is easier than design & build path.

102. What are the disadvantages of the Traditional path?

- Comparatively longer overall duration as design, documentation, tendering, and construction are done sequentially.
- Since design and construction responsibilities rest with the client and contractor, there may be disputes, and parties may blame each other for any failure.
- The contractor's practical experience cannot be incorporated into the Design as contractors do not take part in the design process.

103. How do you categorize the Contract based on the payment methods?

Lump Sum Contracts

Measurement Contracts

Cost Reimbursement Contracts

104. What is a lump sum contract?

In a lump sum contract, the parties are bonded with the contract price, which is derived based on the scope. A BOQ with detailed quantities is not required for a lump sum contract. Even if there is a BOQ included in the lump sum contract, the contractor is obligated to complete the agreed scope at the contract sum irrespective of quantities and items specified in the BOQ, and such BOQ shall be used for progress payment purposes. If there is no variation to the scope, the final contract sum shall be equal to the accepted contract sum at the beginning.

105. What is remeasurement contract?

In this type of contract, the quantities given in the BOQ are approximate and shall be remeasured as per the actual work done. So, the accepted contract sum at the beginning may not be equal to the final contract sum as the employer bears the quantity risk in this type of contract.

106. Compare Lump Sum contract and Remeasurement contract

- a. In remeasurement contracts, the parties are bound with unit rates of the BOQ, not with the total contract price. The given contract price, at the time of contract formation, is just an approximate figure. The contract price shall be adjusted as per actual work performed eventually.
- b. In lump sum contracts, the parties are bound by the contract price - the contractor is obligated to complete the entire scope of work identified in drawings and specifications within the agreed contract price. In other words, in the lump sum contract, the Quantity Risk is with the contractor.
- c. But in the remeasurement contract, the Quantity Risk is with the employer – employer/consultant needs to certify the quantity as per drawing/work done even the BOQ shows a lesser quantity. The contractor deserves the right to get paid for the items which are shown (expressively identified) in the

drawings, but not measured as separate items, or related costs are not covered under any of the BOQ items (simply a measurement error).

Note: However, a miscellaneous item which is to be included within another item shall NOT be paid separately. The coverage rules of Method of Measurement and Pricing Preambles need to be consulted.

107. What is cost reimbursement contract?

In this type, the actual cost of labour, plant, materials and any other cost shall be reimbursed. On top of such costs, a fee shall be paid to the contractor for his service. Since actual cost and a fee are paid in this type of contract, it is also called the “Cost – Plus” contract.

108. What is Prime Cost?

The prime cost is the actual cost a contractor spends for labour, plant, materials, and other goods and services to carry out the construction works. So, in cost-reimbursement contracts, the prime cost shall be reimbursed together with a fee.

109. What are the subcategories of cost-reimbursement contracts?

Cost plus fixed fee

Cost plus percentage fee

Cost plus fluctuating fee

110. What is a cost-plus fixed fee contract?

The fee paid to the contractor is a fixed sum, which normally does not vary with the total prime cost but is based on the estimate of the total cost.

Example: The estimated prime cost of a project is 100 Mn, and the agreed fee for the contractor is 10 Mn. This fee remains the same even if the actual prime cost is more or less than the initially estimated cost, i.e., 100 Mn.

Note: The prime cost shall be tentatively established based on the available project information and the past data of a similar kind of project to drive a reasonable fee that avoids extremely high or low fees and ultimately benefits both parties.

111. What is a cost-plus percentage fee contract?

In a cost-plus fixed fee contract, the fee amount is fixed. But in the cost-plus percentage fee contract, the percentage of the fee on the prime cost is fixed. The parties fix a fee percentage at the beginning of the contract, not the fee amount.

Example: Agreed fee is 10% of the actual cost.

Therefore,

If Actual Cost is 50 Mn – Fee is 5 Mn

If Actual Cost is 100 Mn – Fee is 10 Mn

If Actual Cost is 150 Mn – Fee is 15 Mn

112. What is the advantage of the cost-plus percentage fee type contract compared with the cost-plus fixed fee contract?

Since the fee is fixed in the cost-plus fixed fee contract, the parties should accurately estimate the value of prime cost to determine such a fixed fee. Otherwise, if the actual prime cost varies significantly from the estimated prime cost, the already fixed fee amount

would not reflect the actual fee of the service provided and, therefore, may lead to disputes. The cost-plus percentage fee approach eliminates this practical issue.

113. What is the disadvantage of the cost-plus percentage fee type contract?

Since the value of the contractor's fee is proportionately vagaries with the actual cost, the contractor may try to increase the project cost through unnecessary expenses.

114. Why cost-plus fixed fee contract is not preferable?

Even though the contractor may not intentionally increase the actual cost, as in the case of a cost-plus percentage fee contract, he doesn't have any motive to eliminate unnecessary costs. In other words, there is no incentive to the contractor to cut down the project cost. Since the fee is fixed, the contractor would receive the agreed fee irrespective of the prime cost value.

115. What is a cost-plus fluctuating fee?

In this type, neither fee nor percentage of the fee is fixed. Instead, the percentage varies with the value of

the prime cost. Logically, such a relationship between the percentage of the fee and the prime cost should be inverse, right?

The target cost contract is also one type of cost-plus fluctuating fee contract. If the total cost is less than an agreed sum (target cost), the fee shall be increased (a bonus). The fee shall be reduced if the total cost is higher than the target cost (Penalty). It is also referred to as gain (bonus) and pain (penalty). The parties shall agree on the percentage of pain and gain at the beginning of the contract.

116. What is the advantage of cost-plus fluctuating fee?

Since the relationship between the fee percentage and the prime cost is inverse, there is a motive for the contractor to cut down unnecessary costs and ensure value for client's money.

117. What is a Guaranteed Maximum Price Contract?

This is a type of target cost contract. Agreed guaranteed maximum price cannot be exceeded. Any

savings on the guaranteed maximum price would be shared between the contractor and employer.

118. What are the practical issues with the Guaranteed Maximum Price Contracts?

First, it is difficult to set a realistic, Guaranteed Maximum Price. Further, such an established target should be revised in case of variation in the scope.

119. What is Design & Build Procurement Path?

Unlike the traditional method, in Design & Build Procurement Path, the contractor is responsible for the design and the construction of the project.

120. What are the key documents to be included in the Design & Build Contract to define the project scope?

Since the design is not completed at the time of tender, defining the scope is critical in the Design & Build contract for the success of the project. Therefore, the following key documents are included in the Design & Build contracts to properly communicate the client's

requirements and ensure the intended functional benefits of the project.

- a. The client's brief - summary of what the client wants under this project
- b. Performance Specification – how should the completed project function
- c. The quality control and assurance procedures – procedures to ensure the successful completion of the project as intended

121. What are the advantages of the Design & Build Procurement path?

Since single point responsibility is the key aspect of the Design & Build path, the contractor is solely accountable for failures due to both design and construction.

Compared with the traditional method procurement route, the Design & Build path is speedy as design and construction can be overlapped.

In this method, the contractor's practical knowledge is captured into the design that eventually benefits the clients if proper quality control procedures are followed.

The cost certainty is high as design & build projects are usually awarded on a lump-sum basis rather than remeasurement.

122. Why is remeasurement payment type not advisable for Design & Build contract?

Since the quantity risk is with the employer, i.e., the contractor shall be paid as per the actual quantities regardless of any quantities included in the BOQ in remeasurement contract, the employer's risk is very high as the design is not finalized at the time of tender and the employer has no idea about the quantities/extent of the works. Therefore, to pass such risks to the contractor, in the employer's point of view, it is not advisable to go for the remeasurement payment method for the Design & Build contract.

123. What are the disadvantages of the Design & Build Procurement path?

First, there is a risk of failing to capture the employer's requirements by the Design & Build contractor.

As the employer has a lack of control over the design development process, difficult to handle variations to the scopes, and therefore, the costs of variations are high.

Again, since the design control is with the contractor, there is a risk of falling short in meeting the quality requirements.

124. What is Management Contracting Procurement Path?

This is a procurement method with 100% subcontracting. The management contractor is appointed on a fee basis to coordinate the works and provide common facilities so that the package contractors execute their respective scopes. The management contractors do not perform any construction works, solely managing the construction process. In this method, the client forms a contractual relationship with the Management Contractor and the Management Contractor with various package contractors.

125. What are the key features of the Management Contracting?

Since the whole work is handled in many trade packages in the management contracting method, the actual work on-site of the packages whose designs are already completed can be started early. So, such overlapping of design and construction can significantly reduce the total time required.

Another highlight of this method is that there is high flexibility to engage packages contractors who are experts in different areas so that it is much more suitable for complex projects with various disciplines of work. For example, to develop a city consisting of roads, various types of wet and dry utilities, hotels, commercial buildings, hospitals, and other public buildings, including sociocultural and religious buildings. So, many package contractors can be appointed for various types of scopes.

126. What is the main drawback of the Management Contracting approach?

Since the design is not completely finalized before commencing works at the site and dealing with as

many packages, the client has less cost certainty and is not sure about the total financial commitment at the early stage.

127. What is Construction Management Procurement Path?

This path is the same as Management Contracting, but the client signs direct contract agreements with various package contractors.

128. What are the disadvantages of Construction Management Procurement Path compared with Contracting Management?

The client has the additional burden of dealing with many package contractors as the client has direct contractual relationships with them.

129. What is Design and Manage Path?

In this method, the management contractor, in addition to the responsibility for the construction process (coordination and administration of construction process undertaken by packages contractors), takes design responsibility too.

130. What is Public Private Partnership?

Since Construction Projects require high capital, the government may sometimes go for the PPP approach. In this approach, a private entity bids to construct a public facility, such as Highways, Ports, Power Plants, etc., by investing their capital and anticipating a return on investment for a certain period of time. For example, the investor is allowed to charge a fee (through toll gates) from the road users for a certain period to recover the capital spent on the construction of such highway, including profit. At the end of the day, the construction company that invested gets a certain profit, and the government provides an infrastructure facility to its citizens without touching the government treasury.

Section 6: Understanding of Pricing Documents

131. What are the purposes of Bill of Quantities?

- As the Scope is summarised and presented under different work classes in a table format and logical manner, the BOQ enables bidders to prepare tender sum (offer) efficiently and accurately
- Can be used to develop the construction program
- A BOQ provides a basis for the valuation of Interim Payments
- Basis for valuation of Variations

132. What are the Types of BOQ in use in Construction Industry?

- Firm Bill of Quantities (to obtain a lump-sum price for a fully designed project). If No variation or Claims, the initial Contract Value would be equal to Final Contract Sum at the end of the Project.

- Approximate Bill of Quantities (used for remeasurement contracts). Although the measured quantities are approximate, the descriptions of work items should not be amended in the approximate bill of quantities.

133. What are the major sections/ parts of a standard BOQ?

List of Principle Quantities

Pricing Preambles

Preliminary & Measured Work Items

Day Work Schedules

Rate Breakdown of each BOQ Items

134. What is the purpose of ‘List of Principal Quantities’?

A list of principal components of the works with their estimated quantities shall be provided to assist the tenderers in quickly assessing the work. Once received a tender, the contracting firm will have a quick look at the List of Principal Quantities and get a rough idea about the project. Then, based on their resource availability, current workload, financial requirements,

and any other constraints, they decide whether to bid for that particular project or not. If management decides to bid for such a project, the tendering department will have to study thousands of pages of BOQ in detail along with other contract documents for accurate pricing.

135. What do you mean by Preliminaries in a BOQ?

The contractor's costs that cannot be directly attributable to a specific measured work shall be listed under the Preliminary Bill section. Generally, preliminaries in the BOQ include the cost of administering a project and providing general plant, site staff, facilities, site-based services and other items which cannot be included in the unit rate of a particular measured work. For example, the cost of a site office cannot be allocated under a particular measured work as it is shared for the completion of the whole project.

136. What are the categories of Preliminaries?

Give examples for each?

The Preliminary items can be categorized into the following groups based on their purpose.

Contractual Requirements – The requirements insisted in the Conditions of Contract to protect the Construal rights of the Employer.

Ex: Bonds & Guarantees, Insurances

Specific Requirements - the requirements specified by the Employer

Ex: Employer's and Engineer's facilities, testing of materials, testing of works, temporary works – traffic diversion, temporary access roads, project sign board, photographs.

Method Related Charges - This includes items related to the tenderer's intended method of executing the Works.

Ex: contractor's facilities, site transport, plants (ex. concrete mixing plant).

137. How do you categorise the Preliminary Items based on the way the cost happens?

Preliminary items can be categorized in the following groups based on the way the cost happens.

Cost Related Item – Ex: Erection of Site Office. This is a fixed cost depending on the Employer's requirements, i.e., size, type, and the facilities to be included in the Site Office.

Time-Related Item – Ex: Maintenance of Site Office (running cost). This cost depends on the duration of the project. Generally, the unit of measurement is 'Month'. Longer the project duration higher the maintenance cost.

138. How do you classify Preliminary Items based on method of payment?

Single Payment Item – This type of Item shall be carried out once, and payment shall be made once. No running cost involves with these types of items.

Ex. The provision of temporary access roads where maintenance is not required.

Combined Payment Item – Site Offices, Vehicle for Employer’s and Engineer’s use, and Telephone are examples of the combined Payment Item. These items involve the initial cost to set up the office/ buy a vehicle/ get a telephone connection, and the monthly expenditure/ running cost.

139. What is the use of the Day Work Schedule?

The Day Work schedules are used to quantify the varied works which cannot be measured using the Standard Method of Measurement. Generally, BOQ includes a list of equipment, materials, and human resources. The contractor is required to price for such resources. Generally, incidental Variation works are quantified using the Day Work rates.

140. What is the purpose of Rate Breakdown of BOQ items?

Generally, the contracts insist the tenderers provide rate breakdown for their unit rates. However, in practice, the tenderers seldom provide their breakdown at the tender stage. The purpose of such rate breakdown is to use those rates to build up new rates

when variation occurs. For example, during the project progression, the Engineer wants to vary the type of cement (which has been specified in the contract specification) to be used for the concrete. In such a scenario, the contractor may come up with a new high rate. To avoid such dispute, the original rate breakdown submitted by the Contractor (if any) at the Tender stage can be used as a basis for driving new rates. The Engineer will have to remove the cost of cement specified in the contract and replace it with the new one instructed by him.

141. What is the significance of Pricing Preambles?

The Pricing Preamble is the vital part of the BOQ, which provides a guideline for the Tenders to build up the accurate offer. The Pricing Preambles specify the inclusion and exclusion of costs within the unit rates. Also, it states the method of measurement that has been adopted in the preparation of each work item.

142. What is mark up?

The Markup is the combination of Overhead and Profit. Overhead includes Site Overhead and Head Office

Overhead. Any costs, which could be directly related to the operation of a particular site but could not be identified directly to the permanent works, are considered as site overhead. Generally, most of the Site Overheads are included in the Preliminary Bill.

Head Office Overhead is the cost of running the Head Office such as Office Rent, Utility Bills, Salary of Head Office Staff, Stationaries, etc. Therefore, a Tender will have to add a percentage for Head Office Overhead and the Profit in addition to the direct cost of the work items. In the gross pricing method, the OHP is included within the unit rates; therefore, the contractor's Overhead and Profit percentage cannot be identified by the Employer/Engineer during the tender evaluation. In the net pricing method, the unit rates include only the direct cost of each item, and the contractor's Markup is added separately, most probably in the grand summary. However, even for the gross pricing method, the overhead and the profit percentage are stated in the contract to deal with the variation and provisional sum items. So, whenever a work item is valued using the actual direct cost, the already specified markup percentage shall be applied on top of it.

143. How will you recover Head Office Overhead?

Generally, the total Head Office Overhead for a period of time shall be distributed among the numbers of projects proportionately to the value and the duration of the projects.

For example, Head Office Overhead of a company is 10 Mn, and such company undertakes equal values of 5 different projects at the moment, 2 Mn of Head Office Overhead shall be recovered through each project, i.e., Head Office Overhead will be included in the Project Cost in addition to the Preliminaries (includes Site Overheads), Direct Cost of Permanent Works, and Profit. It should be noted that if the Project values vary, the portion of Head Office Overhead allocated for each project also varies proportionately.

144. How will you recover Site Office Overhead?

Generally, site office overheads are included in the Preliminary Bill and claimed based on the Payment method, i.e., Time Related Items or Cost Related Items. If Preliminary Bill does not include any of the site office

overhead item, the contractor should include it within the unit rates.

Examples: Temporary facilities, utility services, site offices and office equipment. Site fences & hoardings, expenses on permits and salaries of supervisors.

145. What are the factors to be considered while pricing of Preliminaries?

Size and Duration of the Project, availability of Utilities facilities (Electricity, Telephone, Water), Access condition to Site, Contractual Requirements, Employer's Specified requirement.

146. What is Provisional Sum?

'Provisional Sum' is generally used to describe a sum of money provided in the contract document (by Employer) in relation to future works where design is not completed at the time of contract formation or for the works that need to be executed by a specialist subcontractor.

147. What are the 2 types of Provisional Sum?

A Defined Provisional Sum is an amount mentioned in the Tender BOQ by the Engineer/Employer for the

Works which scope is not fully defined, or the design is not completed and for the works that need to be executed by a specialist subcontractor.

An Undefined Provisional Sum is an amount mentioned in the BOQ by the client for clients' future requirements, but at the time of tendering, no any idea about the scope. Therefore, the contractor cannot estimate the Preliminary and Time required for the works related to the undefined provisional sum.

148. How will you deal with preliminaries and construction program for Defined Provisional Sum?

For Defined Provisional Sum, tenderers shall price for preliminaries and allocate time for construction of such provisional sum items within their tender submission as the nature of the works included in the Defined Provisional Sum is known, and therefore, the tenderers can estimate the costs of the preliminary items and the construction duration of Provisional Sum work.

149. How will you deal with preliminaries and construction program for Undefined Provisional Sum?

As the nature of the Undefined Provisional Sum work is unknown, the tenderers are not required to include the cost of preliminary items and construction duration associated with this type of provisional sum within their offers. If the Undefined Provisional Sums are executed, the valuation should include direct expenses, cost of preliminary, head office overhead and profit. If the works fall in the critical path, the project duration needs to be adjusted, and the contractor is entitled to a prolongation cost claim.

150. What is PC sum?

Prime Cost Sum is the allowance made by the Consultant (on behalf of the Employer) for works or material to be performed/supplied by the nominated parties by the Employer. In case it is for nominated works, the main Contractor is expected to add mark up and attendance costs in addition to the allocated amount (prime cost) in the BOQ by the Consultant for works to be performed by the nominated

subcontractors. In due course, the Contract Sum shall be adjusted based on the actual cost of these works.

In case the PC Sum is for the supply of materials, the expected supply price of the material shall be specified in the BOQ description by the Consultant. Accordingly, the Contractor should build up the unit rate for the particular works considering the price of the material specified. If the price of the material is changed during the actual supply, the unit rate for the work is to be adjusted. The method of adjustment for the remeasurement contract and the lumpsum contract is different. See the below example for a better understanding.

| Description | Unit | Qty | Rate (priced by the Contractor based on the material price promised by the Employer) | Amount |
|--|------|-----|--|--------|
| Supply and Installation of Fiber Optic Cables. (cable Ducts measured separately). Fiber Optic Cables shall be supplied by Client at USD 10.00 per meter | m | 100 | 20 | 2000 |

Suppose the Employer is not able to supply material at USD 10/m, and new price of the material is USD 12, and actual Quantity is 110 m:

If remeasurement contract

| Description | Unit | Qty | Rate (priced by the Contractor based on the material price promised by the Employer) | Amount |
|---|--------------------|----------------|--|-----------------|
| Supply and Installation of Fiber Optic Cables. (Cable Ducts measured separately). Fiber Optic Cables shall be supplied by Client to Site at USD 10.00 per meter | m | 100 | 20 | 2000 |
| Adjustment | | | | |
| Actual Cost of Cable | 12 | | | |
| Add Damage/Waste (assume 5%) | 0.6 | | | |
| Subtotal 1 | <u>12.6</u> | | | |
| Less PC rate | 10 | | | |
| Difference | <u>2.6</u> | | | |
| Add: OH&P (assume 10%) | 0.26 | | | |
| Total Addition | <u>2.86</u> | | | |
| | | 110 | 20+2.86 | 2,514.60 |

If Lumpsum Contract:

| Description | Unit | Qty | Rate (priced by the Contractor based on the material price promised by the Employer) | Amount |
|---|--------------------|-----|--|------------------------|
| Supply and Installation of Fiber Optic Cables. (cable Ducts measured separately). Fiber Optic Cables shall be supplied by Client to Site at USD 10.00 per meter | m | 100 | 20 | 2000 |
| <u>Adjustment</u> | | | | |
| Actual Cost of Cable | 12 | | | |
| Add Damage/Waste (assume 5%) | 0.6 | | | |
| Subtotal 1 | <u>12.6</u> | | | |
| Less PC rate | 10 | | | |
| Difference | <u>2.6</u> | | | |
| Add: OH&P (assume 10%) | 0.26 | | | |
| Total Addition | <u>2.86</u> | | | |
| | | 110 | 2.86 | <u>314.60</u> |
| | | | | <u>2,314.60</u> |

Why a different approach?

| Remeasurement | Lumpsum |
|--|--|
| <p>Actual Qty x New Rate: $110 \times 22.86 =$ 2,514.60</p> | <p>BOQ Qty x Original Rate: $100 \times 20 =$ 2,000</p> <p>BOQ Qty x Additional Cost = $100 \times 2.86 =$ 286</p> <p>Qty deference x Additional Cost = $10 \times 2.86 =$ 28.8</p> <p>Total = 2,314.60</p> <p>What not considered: Qty deference x Original Rate = $10 \times 20 = 200$</p> <p>Because it is lumpsum contract. The Contractor should have adjusted the rate or included somewhere for the quantity error</p> |

- I. In remeasurement contracts, the parties are bound with unit rates in the BOQ, not with the total contract price. The given contract price, at the time of contract formation, is just an approximate figure. The contract price shall be adjusted as per the actual work performed eventually.
- II. In lump-sum contracts, the parties are bound by the contract price - the contractor is obligated to complete the entire scope of work identified in

drawings and specifications within the agreed contract price. In other words, the **Quantity Risk** is with the contractor.

- III. But in the remeasurement contract, the Quantity Risk is with the employer and therefore, the contractor shall get paid for the quantities as per drawing/work done at the site even the BOQ shows a lesser quantity. The contractor has the right to get paid for the items which are shown (expressively identified) in the drawings but not measured as separate items, or related costs are not covered under any of the BOQ items as per the measurement rules (simply a measurement error).

Well, from the above discussion, it is clear that quantity correction is not permitted in the lump sum contract unless otherwise, any variations instruction is issued.

As the quantity risk rests with the contractor in a lump sum contract, he must price for the scope included in the contract, i.e., as specified in the specification and drawings, irrespective of the accurateness of the BOQ. The BOQ is just a guideline for progress payments.

In practice, if the quantities given in the BOQ are wrong, the contractor adjusts his rates to cover the cost. In the above-given example, the contractor should have increased his unit rate by 1.1 times as the quantity mentioned in the BOQ is 1.1 times lesser than the actual quantity required to complete the scope.

So, in a lump sum contract, it is considered that the contractor has adequately priced to complete the entire scope of works irrespective of items and the quantities mentioned in the BOQ. Therefore, when making the rate adjustment above, only the difference in the material cost (2.86 USD) shall be considered for the actual qty. The additional quantity of 10 m shall not be multiplied by the original rate (~~10 m x 20 USD~~) as it is a lump sum contract. That is why the difference between the two methods is USD 200 (10 x 20).

Why is the additional cost of 2.86 considered for 110 m, not 100 m, even though it is a Lump sum contract? Because the contractor did not get the chance to make a rate adjustment for this additional cost of 2.86 at the time of tender, the actual quantity of 110 m should be considered.

Section 7: Post Contract Management

151. Why are Interim Payments vital for construction projects?

- High Capital Involvement in Construction Projects
- Positive Cash flow is important to achieve desired project goals

Compared with the cost of a single manufacturing industry product which is produced in the factory environment in high numbers, generally, the cost of each construction project is significantly high. Therefore, it is difficult to manage the construction expenses by small, medium and even large-scale contractors, depending on the value of construction works, without a proper cash inflow.

Therefore, the proper payment mechanism and positive cash flow are important for contractors to purchase required materials on time, pay wages to their staff & labours, make payments to subcontractors / suppliers, and successfully manage the project. Therefore, Cash Flow is denoted as the “Life Blood” of the construction industry.

152. What are the contractor's costs?

Site Direct Cost

- a. Site Labours
- b. Materials
- c. Contractor's Equipment

Site Indirect Cost

- d. Site staffs
- e. Site Facilities

Preliminaries

Head Office Overhead

Financial Cost

153. What constitutes Head Office Overhead?

- Salary of Head Office Staff including Management Team
- Expenses related to Recruitment, Training and Development
- Head office Rent and Maintenance
- Insurance (Excludes insurances related to a particular project, which shall be covered in the project cost, most probably under the Preliminary Bill in the BOQ)
- Utility Bills
- Depreciation of company assets

- Furniture and equipment
- Stationaries for administration
- Travel expenses
- Professional fees
- Auditing expenses
- Advertising and marketing
- Interest on company borrowings (except project financing)
- Bad debt
- Expenses for entertainment
- Contributions to social supports programs
- Idle resources (except contract related - which shall be dealt with under Idling Cost Claim if entitled)

154. How do you process an Interim Valuation Certificate?

The below list is just typical based on the general industrial practice. You may not follow all the steps as your contracts may not have such provisions.

- a) Check the 'Appendix to Tender' whether the minimum amount is achieved by the

contractor to submit an Interim Valuation.

- b) Check for the valuation period in the 'Appendix to Tender'. Generally, the contracts insist on processing an Interim Valuation monthly basis. But the parties can agree on the valuation period.
- c) Calculate the value of measured Works and Preliminary Bill items
- d) Calculate the price Fluctuation if applicable
- e) Apply Retention as stipulated in the Contract
- f) Advance payment and Advance payment Recovery if any
- g) If a provision is available in the contract, you certify material on-site and off-site payments (see next question for further understanding)
- h) Add or Deduct the Contractor's Claim, Employer's Claim, if any

i) Deduct Previously Certified Amount

155. How will you certify Material On-Site payment?

- As the first step, check whether the contract includes a provision for material on-site payment.
- Check the List of Materials listed in the Appendix to Tender. In general, the Material On-Site payment is allowed only for a few selected cost significant items. Material On-Site Payment is a type of Advance Payment to boost the contractor's Cash Flow. Therefore, there is no sense in paying for all the materials available on site, which costs are insignificant, but the administration of such payment is complicated if paying for such hundreds of items.
- Verify the quantity available at the site on the cut-off date of the interim payment application, mostly end of each month, based on the delivery notes, store logs, and site records.

- Confirm that the materials available at the site are fit for use based on the approved Material Inspection Reports.
- Ensure that the quantity you certify does not exceed the required quantity to complete the rest of the works.
- Apply the % stated in 'Appendix to Tender' on the Rates of Materials listed. If the Material Prices are not fixed in the contract, determine the Price of each material based on the Invoice value. But ensure determining a reasonable amount considering the BOQ rates, which are for works items including Material, Labour, Equipment, Wastage, Overhead and Profit.

156. How will you certify Material Off-Site payment?

- First of all, the contract should allow material off-site payments
- Check the List of Materials listed in the Appendix to the Tender

- Make sure the contractor submits a Vesting Certificate for the materials which they claim for Material Off-Site Payment.
- As the Contractor's All Risk insurance policy does not cover off-site materials, make sure the contractor submits Insurance for the materials which they claim for Material Off-Site Payment
- Clearly marked and separated from other materials
- Factory inspection certificate - Instead of a Material Inspection Report, which is required for material on-site payment, the Factory Inspection Certificate is required to ensure the materials are fit for use.

157. Why do you need separate Insurance for Material Off-Site?

Since the Contractor's All Risk Insurance does not cover the Materials available outside the site premises, separate insurance is required to protect the employer in the worst-case scenario. Since the employer pays for the materials not yet mobilized to the site, it is a risk for the employer if any accident happens at the factory

warehouse or while transporting. Therefore, separate insurance is required to transfer such risk to the Insurance Company.

158. What is Vesting Certificate?

Since the employer pays for the materials which are still in the factory warehouse, those materials should be treated as the employer's property. Therefore, a vesting certificate is issued to transfer the ownership of the materials. If so, in case the supplier becomes bankrupt, such materials shall be treated as the employer's property, and therefore, those materials shall not be considered for the allocation of assets when setting off debts.

159. What is Bankruptcy?

Bankruptcy is the situation when a company's total liabilities are more than the total assets. Unlike insolvency, bankruptcy is a serious issue, and most likely, that is the end of a company. In case of bankruptcy, the authorized governmental body set off the creditors with the remaining assets in accordance with the legal and accounting procedures.

160. What is insolvency?

Insolvency is a situation when the total current liability is higher than the total current assets of an entity. However, there are fixed Assets available with the company which value is higher than the total liabilities. Therefore, during the course of business, the situation may change, and the management can achieve the current asset to current liability ratio to a favorable figure. Further, the current liabilities can be settled off by encashing the fixed assets in the worst-case scenario.

Though insolvency is not a serious issue, unlike bankruptcy, a company's solvency is taken into account when making business decisions as positive cash flow and working capitals are essential for the business's success.

161. The contractor claimed the 'material on-site' payment for the materials required for construction after 15 months. Will you pay right now or not?

The contractor sometime purchases materials so earlier than the time actually those are required for

construction at the site. The reasons might be to avoid any price escalation in the future and avoid issues in the supply chain that might eventually affect the delivery of the project on time.

Though the material on-site/off-site payments are a kind of advance payment and shall be recovered in due course, and the certified amount shall be zero at the end, paying such advance so early may cause the employer to incur financial costs or opportunity costs. If the project is self-financed by the employer, such payment for materials on-site/off-site so early could have been used for other investment purposes (opportunity cost). If the employer borrows the capital from outside, the employer incurs the cost of borrowing (financial cost).

It should be noted that also the contractor faces the same scenarios as the employer faces when the contractor purchases the so earlier than actually required. If the contractor's real intention is to avoid any drastic price escalation in the future and to avoid issues in the supply chain, then it is reasonable to expect the employer to give a hand to collaboratively achieve the project's goals. Therefore, it is fair and

reasonable to pay for such materials purchased so early. However, if the contractor tries to get benefits at the cost of the employer by using long credit facilities offered by the suppliers, why should the employer make such payment so early.

In any situation, the expiry dates of the material should be checked and ensure the materials delivered to the site so early are suitable for use after several months down the track.

I had an impression that the Cement bags have a long expiration period as even the packed food items have a longer consumable period. Therefore, I blindly certified cement bags for material on-site payment without consulting our Project Material Engineer. Later, I was advised that most of the Cement brands produced in Sri Lanka have a 3-month expiry period and all the materials I certified were expired already. So, before you make any decisions that require input from outside your competencies, always get proper advice from the respective professionals to make a reasoned decision.

162. What is the purpose of Retention?

Despite the high level of care taken in terms of design, materials and workmanship, defects are common in construction projects. It is natural for employers to wish to be protected against the costs incurred due to any defects that arise in a construction project. The Standard Forms of Contracts insist on the application of retention money on the Contractor's payment to deal with any defects that emerge within a specific period called the Defects Notification Period. But, sometimes, the Contractors are reluctant to attend the defective works within a reasonable time. If so, for example, under the provision of sub-clauses 7.6 [*Remedial Work*] and 11.4 [*Failure to Remedy Defects*] of FIDIC 99 Red Book, if the Contractor fails to comply with the Engineer's Instruction to rectify the Works, the Employer is entitled to rectify such defects by himself or appoint a third party for such task. The cost incurred by the Employer shall be deducted from the retention money held.

Generally, half of the retention shall be released at Practical Completion / Taking-over Certificate, and the other half shall be released after the end of the Defect Liability Period, and defects are rectified at the

satisfaction of the Engineer, and the Performance Certificate is issued.

Now the question is, why half of the retention is released before the direct liability period? If so, the above-mentioned purpose of the retention is not logical. Since the half retention is released, it acts as an incentive to the Contractor to complete the project on time and get such a portion of the money soon.

163. What is the purpose of the Performance Guarantee?

Most of the contracts insist the contractor submit a guarantee to ensure their performance and protect the employer in case of any worst-case scenario. The bid bond shall be returned to the selected contractor upon submission of the performance guarantee as the employer can utilize such guarantee to cover his cost if the contractor withdraws their offer. As per the FIDIC 99 Red Book, the performance guarantee shall be released within 21 days from the issuance of the performance certificate, which is the document the Engineer issues confirming that the project is completed in accordance with the contract and certifying the Contractor's performance. Such

performance certificate shall be issued within 28 days from rectification of defects. So, if the contractor delays the rectification of defects at the end of the defect liability period, the issuance of the performance certificate gets delayed and, consequently, the release of the performance guarantee too.

164. Why might a variation occur?

Basically, 3 main groups of reasons for variation to the initially agreed scope. The first one is the changes in the client's requirements. It is human nature. The clients may change their minds at the mid of the project, and therefore, the scope needs to be changed. Enhancement of design features, as requested or agreed by the client, also can be included in this group.

Another category of the reason is technical impossibility/impracticality. The design may need to be altered as the initial design might not be continued because of the practical issues or site conditions, including unforeseeable ground conditions. Also, variations due to incomplete design at the tender stage can be considered under this category.

Another reason is that changes in the government legislation and other external factors, which force the project team to alter the scope.

165. Shall approval of revised program be treated as approval of Extension of Time?

Irrespective of the contractor's entitlement for EOT or to adjust the intermediate milestones (without affecting the project completion date), in case of any slippage from the previously agreed program, the contractor must submit the revised one incorporating the anticipated effects of events and the recovery plans if possible. The revised programs do not always necessarily alter the milestone dates or project completion date but simply vary from the previously agreed program in terms of the order, duration and timing of activities. In the absence of such an approved revised program, the engineer may not be able to discharge his duties at the appropriate time to enable you to comply with your revised program.

The engineer's approval of your revised program does not contractually entitle the contractor to EOT or consequent cost claims or escape from the contractor's liabilities. Because in the employer's/engineer's point

of view, the core purposes of the program are to arrange their resources and attend inspections and tastings based on the program.

166. What are the consequences of taking over a project?

If the contractor completes the works in accordance with the requirements specified in the contract, the engineer issues the taking over certificates. In practice, at the time of taking over the project by the employer, there are minor outstanding works and snag lists. Therefore, it is called substantial completion. That means the project is ready for intended beneficial use by the employer, and therefore, the employer takes over it with the minor outstanding works and snag lists which the contractor must complete during the defect liability period. Generally, all construction contracts include a defect liability period. Therefore, at the time when the taking over certificate is issued, the defect notification period commences.

Also, as the care of the works shall be transferred to the employer, it is advisable to take property insurance. However, it should be noted that the contractor is still responsible for the works undertaken by him during

the defect liability period. That is why the contracts insist on maintaining the Contractor's All Risk policy even for the defect liability period. However, if you check such insurance policy in-depth, you can find that it has two sections: insurance during construction and defect liability periods. Because the risks during these two periods are different and therefore, the premium amount to be paid by the contractor to the insurance provider is different.

Further, generally, 50% of the retention money (or a portion of retention money in case of taking over a section of a project) shall be released at the time of taking over the works.

167. What is a concurrent delay?

If the contractor's delay events and the employer's delay events happen parallel, it is called concurrent delay. In other words, the employer's actions that impact the project progress (delay the works) and the contractor's actions that impact the project progress (delay the works) happen at the same time.

The FIDIC Standard Forms of Contracts do not discuss the concurrent delay and how to deal with it. However,

the 'delay and disruption protocol' issued by the society of construction law is used as guidance by the industry professionals to deal with the claims associated with the concurrent delay. As per the society of construction law protocol, in case of concurrent delay by the employer and the contractor, the parties are not entitled to Cost.

It should be noted that in case of concurrent delay by the employer and the contractor, the employer and the contractor would have incurred additional Costs if the other party had not made a mistake/ caused delay. For example, the employer should have paid for the contractor's Claim if there was only a delay by the employer's side, and the contractor should have paid Delay Damages if there was only a delay by the contractor. The basic concept of the Law is that a culpable party cannot hide their own fault under the other party's fault. Therefore, the employer shall not apply Delay Damages for the contractor's delay when the employer's delay is in parallel. On the other hand, the contractor shall not claim any Cost when the contractor's delay is in parallel.

168. What is the purpose of cost reports?

The purpose of submitting a cost report is for an employer to get an idea of the anticipated final value of the project. The cost report includes variations, claims, payment log, additional money to deal with the risks and addition/omission for the changes in the quantities in case of the remeasurement contract. Therefore, based on such a cost report, the employer can decide whether to add more variations, omit part of the scope, change the design, or make arrangements for additional funds.

169. What is Cost Value Reconciliation?

Cost Value Reconciliation is a Cost Monitoring tool that compares the contractor's Cost spent up to a specific time with the Value of Work completed. The Value shall be calculated by quantifying the work done up to date using the rates available in the BOQ. For cost calculation, all the Costs related to materials, labour, equipment, administration, etc., shall be considered. Based on the Cost and Value comparison, the Management is able to check the labour productivity and material usage. If the Cost is higher than the Value, or the actual Cost is higher than the estimated

Cost, the Management should focus on the optimum usage of resources. If it is established that the productivity and material wastage is at a reasonable level, then the project team should raise the matter to the Tendering Department, which enables them to quote accurate rates for future projects.

In summary, the CVC is used to compare project profitability against forecasted figures and to monitor project performance in terms of labour, plant & equipment and material costs against original tender figures.

170. What are the contents of a typical Cost Report?

Again, below is the typical list based on the industry practice. You may add more particulars to a Cost Report if such additional information is beneficial in your case.

- Project Particulars
- Contract Sum
- Approved Variations and Claims
- Anticipated Variations and Claims
- Any other Loss and Expenses

- Anticipated Final Account
- Potential Risks and budget allocation
- Cash Flow/ “S” curve
- Reason for change with the previous report

Section 8: Claims and Dispute Resolution

171. How do you see the Global Claim in the Context of the Construction Industry?

Generally, in construction projects, both the contractor and the employer put forward claims against each other. The 'Claim' can be defined as a demand assertion by one of the parties seeking a matter of right, payment of money, or other relief relating to a contract. Since the burden of substantiation always rests with the party who makes claims, claiming party must adequately substantiate such claims by identifying the claim events (causes of the claim), the consequence of such events (impacts on time, cost, and other rights) and the contractual entitlement.

From the contractor's point of view, he shall link the employer's actions or any other events which are beyond the contractor's control (the events listed under the Employer's Risk or Force Majeure clauses in most of the Standard Contracts Forms) with the consequences of such events.

The concept 'Global Claim' comes into the scene whenever such a link cannot be established for a particular event and consequence of such an event. The Society of Construction Law Protocol defines as "a global claim is one in which the Contractor seeks compensation for a group of Employer Risk Events but does not or cannot demonstrate a direct link between the loss incurred and the individual Employer Risk Events."

We should understand that 'impossibility or impracticability to individually quantify the impacts of each event' differs from 'a party's failure to identify the claim events, maintain the contemporary records, establish the contractual entitlement, and determine the impacts.' The first one requires the necessity of Global Claim, but the second one is the result of poor contract administration.

Therefore, the Global Claim is **NOT** a mechanism which allows parties to a contract, most probably at the end of the project, to mutually agree on the extent of the claim in case of failure to meet the notice requirements, maintain the contemporary records, and failure to justify the contractual entitlement. But, in practice, the

contractors get advantages/get compensated for their poor contract administration by means of the wrong understanding of the concept of Global Claim.

In general, the claims are not permitted under the contract on the basis of “global” as the contract requires substantiating the claim by identifying/linking the effect (loss & expense) with a relevant event (cause). On the Common Law platform, if the cause and effect cannot be related, such a claim would fail due to lack of causation. But, it does not mean that the events which lead to losses and expenses hold no legal grounds to pursue a claim. If the ‘Global Claim’ is the only available mechanism to compensate the contractor, the Courts may accept it.

Since the Engineer/Project Manager/Contract Administrator (depending on the Form of Contract used – FIDIC/NEC/JCT) struggles to determine the Global Claims, generally, the disputes arise with regard to entitlement as well as quantification. Therefore, the parties take the matter to Arbitration or public Court.

Few Principles which must be considered when dealing with the Global Claim

- i. The Claimant must prove the facts and balance of probability of the loss and expense incurred
- ii. The Contractor must satisfy the contractual requirements (condition precedents). Otherwise, the claim will be disqualified.
- iii. The concept of Global Claims is not wrong under the Law, but there are additional difficulties in establishing 'causation.'
- iv. There are no requirements for Court to verify the actual cost attributable to individual loss-causing events, instead can be practicably determined. That is why the industry identifies the Global Claim as a vehicle to recover the loss and expense without having no adequate proof.
- v. Proper allowance to be made for the losses and expenses incurred due to the contractor's, i.e., claimant's cause of actions.
- vi. Exclude the amount which can be linked explicitly with the particular cause. (claim can be dealt under standard claim procedures).

Even though under the concept of Global Claim, the contractor is not required to identify the actual delay or disruption, or financial impact caused by each of the individual events, the contractor must establish that the 'events' individually give contractual entitlement to pursue the claims.

172. What are the practical issues with the Global Claim?

In practice, the contractors use the Global Claim as a platform for their benefit and try to compensate the losses and expenses incurred by their own cause of actions and/or deficiencies in tender pricing. Another downside of the Global Claim is that the Engineer or Arbitration panel or Court must to undergo a long exercise to establish the contractual entitlement rather than quantification of the claim. Further, the test for establishing the link between cause and effect is subjective rather than objective. Therefore, a Global Claim must be scrutinized based on the particular scenario of the case together with some general principles as discussed earlier.

Besides, in some instances on the legal platform, the contractor can be successful, even if he fails to comply

with the timescale to issue 'Notice' if he adequately proves that individual events were not significant enough to serve such notice at the time of their occurrence. This approach may be prejudicial to the employer as no opportunity/alarm was served to take appropriate measures to mitigate the causes and the effects.

In summary, since the claims are common in the construction industry because of its unique nature, it is advisable to adopt the Global Claim up to some extent to reasonably compensate the contractors' losses and expenses to achieve a win-win situation that benefits both parties concerning successful completion of construction projects.

173. What are the Claim Mechanisms available to deal with Latent Defects?

Despite the high level of care taken in terms of design, materials and workmanship, defects are common in construction projects. It is natural for employers to wish to be protected against the costs incurred due to any defects that arise in a construction project. The standard forms of contracts insist on the application of retention money on the contractor's payment to deal

with any defects that emerge within a specific period called the Defects Notification/Liability Period.

There is an implied contractual term whereby contractors within the construction industry are required to deliver projects that comply with the standards and descriptions contained in the construction contractual agreement. Failure to deliver structures that are up to the required standards, for instance, constitutes defective work and amounts to a breach of contract. Generally, the most appropriate legal remedy against a contractor who presents defective work is to claim damages. In exceptional circumstances, however, the aggrieved party can be granted equitable remedies, implying that the breaching party could be required to perform the obligation as promised, as opposed to paying damages. For this reason, construction contracts often grant employers some power for a limited time to recall the contractor to the site after the project has 'practically completed' to remedy any defects that are apparent in the contractor's work. However, compared with the lifetime of the construction products, generally, the Defects Notification Period stated in the contract is very short.

It is worth mentioning that even after the expiry of the Defects Notification Period, the liability of the contractor does not necessarily end there. If an employer identifies latent defects after the expiry of the rectification period, they are advised to notify the contractor of the same. So, in such a situation, warranty, insurance, and application of common law are necessary requirements.

It is essential to understand the difference between a patent defect and a latent defect. A patent defect can be defined as a defect that is visible or can be identified through reasonable inspection, probably before the completion of the project or during the Defects Notification Period. However, a latent defect is a defect that is not possible to discover through reasonable examination before the expiry of the Defects Notification Period.

Time limitation to pursue a Latent Defect Claim

The below discussion is based on English jurisdiction. There are identical or diverse provisions in other jurisdictions that need to be consulted thoroughly when dealing with the latent defects under a specific contract.

The Limitation Act 1980, UK, imposes time limitations on the claimant's entitlement to sue for damages arising from defective works. Accordingly, an innocent party can bring action against a company when damages arise from a breach of a simple contract within six years from the date of such a breach happening. For damages arising related to a contract formed as a deeds agreement, the innocent party can file the claims at court within 12 years from the date when the cause of action occurred. In case of difficulties in establishing the actual point of the breach that occurred, the Common Law Cases recognize the date of practical completion for defective work performed. It is worth mentioning that the time starts from the date of the breach of contract, not from the date on which the breach is discovered. However, in contrast, under tort law, the clock for six-year period starts from the date the damage has been suffered, which might not be the same as the date on which the negligence was committed.

Besides the above provisions, the Latent Defect Act 1986, UK, applies the time limitation to deal with claims that arise from a latent defect. The provisions of the Latent Defect Act 1986 extend the period of

limitation by three more years for claims arising under the tort of negligence. Accordingly, under the Latent Defect Act, a claimant has an additional three years to bring a claim when unable to raise within six years from when the damage was actually suffered because of unawareness of such tortious damages.

Despite the parameters stipulated in the relevant jurisdictions, parties are free to agree on limitation periods. However, if the agreed period is shorter than the provision available in the said Limitation Act, such an agreement could be subject to a test of reasonableness under the Unfair Contract Terms Act 1977. This is why, whenever dealing with a latent defect, parties must scrutinize the relevant legal provisions under relevant jurisdictions, in addition to the contract provisions, to determine their entitlements.

174. How can an end-user pursue a claim arising from latent defects?

In circumstances where the employer (of the construction contract) is not the occupant of the property, such new third-party end-users face difficulties in suing for damages that arise because of

latent defects. Since no direct contractual relationship exists between such end-users and the contractor, pursuing a claim under pure contractual grounds is difficult.

As per the RICS guidance notes on ‘defects and rectifications’, the most common route to pursue claims with reference to a latent defect is a contractual remedy in the law of contract. In the absence of a direct contractual relationship, the collateral warranty mechanism and law of tort provide room to protect end-users concerning latent defect damages.

Collateral Warranty

It is common practice in the construction industry to issue a collateral warranty to ease the claims made by the third-party end-users. A collateral warranty enables end-users to enjoy the contractual benefits guaranteed in a contract. The collateral warranty mechanism provides an extended contractual matrix for parties who were not directly involved in the process of construction activities but came into the scene as end-users, funders, purchasers, and tenants. However, a contractor is not required to warrant beyond the extent agreed in the original contract. Therefore,

consequent losses suffered due to a latent defect cannot be claimed under a collateral warranty. This is why the application of tort law is unavoidable to claim consequent losses irrespective of the presence of collateral warranty.

Claim under the law of tort

Another platform on which end users can pursue latent defects damage is the law of tort. In a contract, a party is required to deliver the service, to the extent of the agreed scope, with reasonable skill and care. Further, under UK common law, the standard of care expected from a professional organization or person is greater than the ordinary one. Therefore, first of all, tests for a 'reasonable person' are essential to determine the standard of care and skill expected from a party. Consequently, the 'reasonable steps' taken by a party should be explored to determine whether reasonable care and skill were applied by such a party to deliver the service agreed in a contract.

It is imperative to note that the absence of privity of contract in English law does not discharge any of the parties' liability in construction contracts. This implies that the liability of a party for defects is not limited to

the contracting parties inter se. There may be third parties with an acquired interest in the project, and they have the right to claim for damages or to be indemnified for breach of contract. In the Supreme Court of Indiana US State case *Barnes v. Mac Brown & Co.*, the court held that the plaintiff was entitled to sue for the defect in the structure he occupied even though he was not the owner of the property. However, negligence claims under tort law are difficult in the absence of a direct contractual relationship.

Decennial Liability Insurance

In some civil law countries, especially in Middle Eastern countries, Decennial Liability Insurance is an extensively used by-law that was initially derived from the French Civil Code. Decennial Liability Insurance is issued jointly by the Contractor and the Designer/Architect/Engineer to guarantee against structural collapse or flaws that become a sufficient threat to the strength and safety of the structure within the decennial liability period; generally, this is 10 years from the date the project is accepted. However, the shorter and more extended periods also are in practice in some jurisdictions. Further, the time limitation to

file a case from the date the defect manifested and the date the parties became aware varies from jurisdiction to jurisdiction. Also, the extent of the damages insured varies with the jurisdiction.

The concept of insurance is broad, and therefore a dedicated comprehensive study is advisable for further understanding of the insurance mechanism.

Above is a brief discussion on latent defects, which aims to initiate further exploration of the possible claim mechanisms available for contract parties and third-party end-users to compensate for damages pertinent to latent defects in construction projects. Based on the basic ideas discussed above, parties who make latent defect claims must scrutinize the contractual and legal provisions applicable under related jurisdictions to determine their entitlements and succeed with their claims.

175. Is a contractor entitled for compensation for Loss of Profit for Termination of Contract or Omission of the Scope of Work?

The contracting firms bid for new projects with the anticipation of gaining profits. Before responding to a

tender, the contracting firms carefully analyse the particular project requirements along with their resource availability, current workload, financial requirements, and any other constraints. Based on the analysis, they tender for a number of projects by sacrificing the/ at the cost of other tenders, which are not decided to move forward. Therefore, if the employer terminates a contract or omits a portion of the scope of work, the contractor loses the opportunity to gain the intended profit, which is built into the value of the omitted scope or terminated contract. In other words, the contractor would have gained the intended profit if he had completed a particular project or had he undertaken another project.

In the *Ellis-Don v. The Parking Authority of Toronto (1978)* case, the Court held that “if a contractor is entitled to damages for loss of income to cover head office overheads, why should he not also be entitled to damages for loss of income that would result in normal profit.”

The FIDIC 2017 Red and Yellow Books (RB and YB) clearly permit a claim for loss of profit in case of

- I. the omission of works which is to be carried out by other third parties

Clause 13.3.1 c articulates, “if the Parties have agreed to the omission of any work which is to be carried out by others, the Contractor’s proposal may also include the amount of any loss of profit and other losses and damages suffered (or to be suffered) by the Contractor as a result of the omission”.

- II. Termination of contract by the Contractor (Cl. 16.2) (The Contractor’s decision to terminate the contract because of the causes attributable to the employer)

Clause 16.4 [*Payment on Termination*] articulates that “after termination under Sub-Clause 16.2 [*Termination by Contractor*], the Employer shall promptly pay the Contractor the amount of any loss of profit or other losses and damages suffered by the Contractor as a result of this termination” (subject to satisfy the condition precedents under clause 20.2).

III. Termination for employer's convenience (Cl. 15.5)

Clause 15.6 [*Valuation after Termination for Employer's Convenience*] says that “after termination under Sub-Clause 15.5 [*Termination for Employer's Convenience*] the Contractor shall, as soon as practicable, submit detailed supporting particulars of the amount of any loss of profit or other losses and damages suffered by the Contractor as a result of this termination.”

Position under FIDIC 99

- I. FIDIC 99 versions of these books do not allow room for loss of profit claim for omission under the variation clause. The reason might be that the omission of the scope of work with the intention to execute the works by others is not permitted under the 99 versions.
- II. However, claiming the loss of profit in case of termination of the contract by the Contractor (Cl. 16.2) is permitted. Clause 16.4 [*Payment on Termination*] of FIDIC 99 RB and YB expresses

the same position as clause 16.4 of the 2017 edition.

- III. The payment after termination for employer's convenience under FIDIC 99 edition is articulated under Clause 19.6 [*Optional Termination, Payment and Release*], in which the loss of profit is not touched and therefore clamming of loss of profit for termination of the contract for employer's convenience (Cl 15.5) under FIDIC 99 RB and YB is not possible.

The major difference between 99 and 2017 editions related to this subject is, 99 editions do not permit the employer to omit part of the scope or terminate the contract for convenience with the intention to execute works by others, but 2017 editions do. So, it can be summarized that if the employer omits the work or terminates the contract with the intention to award it to another third party, the employer owes liability to pay loss of profit to the original contractor. This principle can be reinforced with the support of case laws. In the UK case of *Amec Building Ltd v. Cadmus Investment Co Ltd (1996)*, the appeal Court confirmed the arbitral award of loss of profit for the omitted scope

of work, which was carried out by a third party. The Court held that Amec were entitled to be compensated for the loss of profit.

On the other hand, if a contract is worded in a like manner to FIDIC 99 RB or YB, recovering the loss of profit is not straightforward in case of termination of the contract, which will NOT be completed using any other third party contractors. In such circumstances, the contractor may seek public Court intervention to succeed in a loss of profit claim. In the case of *Victoria Laundry (Windsor) Ltd v. Newman Industries Ltd (1949)*, the Court stated that the contractor must prove the loss of profit, and such profit must not be far higher than the normally expected level. The Court also held that an exceptionally high profit, which might have been earned on another project (the project that was dropped to undertake the current project), could be claimed if the employer was aware of such opportunity cost at the time contract was formed. However, the common law position is not clear in case of the omission of the scope, which is NOT to be executed using any other third-party contractors. Since FIDIC 99 versions include provisions for variation, including omission, the contractor has no hope for claiming

damages for breach. I repeat again, for the sake of clarity, that the contractor is entitled to loss of profit in case of omission of work that is to be executed using any other third party contractors as clearly specified in the FIDIC 2017 versions of RB and YB and the Court decision of the Amec Building Ltd case.

The JCT contract forms do not use the wording of 'loss of profit'; instead use the wording of 'direct loss.' The clauses related to the valuation of termination allow claiming the direct losses. Clause 8.12 of the SBD/Q 2016 allows direct loss in case of termination of the contract by the contractor because of the employer's default, insolvency of the employer, the Architect/Contract Administrator's instruction to suspend the work, force majeure events and the actions of the government which affect the project execution. The Court held in the *Wraight Ltd V. PH & T Holdings (1968)* case that the wording of direct losses should be interpreted as the inclusion of gross profit. Therefore, based on the Wraight case, the contracts formed based on the terms alike JCT shall be entitled to claim of loss of profit.

176. What are the common grounds for the Employer's Claims?

The employer's claim options available under the FIDIC 99 Red Book is discussed here. Readers need to focus on the ideologies and circumstances which entitle or may entitle an employer to raise claims and protect his interest. The FIDIC 99 Red Book clauses referred to in this answer do not matter much, but the fundamental concepts do.

Since FIDIC 99 Red Book is a Standard Form of Contract, it sets out the post-contract administrative procedures in a fair and reasonable manner by apportioning the Risks among contract parties. Accordingly, it provides room not only for the contractor's claims but also setouts the procedures for the employer's claims. Sub-clause 2.5 of the FIDIC 99 Red Book provides the room for the employer's claim. As per this sub-clause, the employer shall serve a Notice of claim as soon as practicable. Unlike the contractor's claim under sub-clause 20.1, procedures for the employer's claim do not articulate such any specific time limit for issuance of 'Notice' and submission of detailed justification. However, the latest

version, i.e., FIDIC 2017, insists that both parties should issue a Notice of claim as soon as practicable and no later than 28 days after the claiming party became aware or should have become aware of the event or circumstance.

Even though the employer's claims are managed under sub-clause 2.5, there are several clauses/ sub-clauses which give rights to Employer claims under the FIDIC 99 Red Book, as discussed below.

(i) **The Contractor use the Employer's Facilities and Free issue of Materials**

In practice, sometimes, the Contractor uses the Employer's services such as Electricity, Water, and the Employer's Equipment. In such situations, the Employer is not required to issue the Notice of Claim. Further, in some contracts, the Employer supplies the construction materials fully or partly. Also, in such a situation, the Notice of Claim is not required. As per the FIDIC 99 Red Book, the Employer is not required to serve notice for payment related to sub-clauses 4.19 [*Electricity, Water and Gas*] and 4.20 [*Employer Equipment and Free issue material*].

The primary purpose of the Notice of Claim is to alert the contract parties about the potential claims; therefore, the responsible party can take necessary actions in advance. For that reason, a Notice is not essential for this category of Claim as the Contractor is well aware of his own action, i.e., usage of the Employer's facilities and the free issue of materials.

(ii) **Repetitive Effort by the Employer because of the Contractor's cause of action**

If the Contractor's Workmanship, Plant, and Materials fail to meet the quality requirements insisted in the contract, then the Contractor must rectify the shortfalls until it meets the required standard, and therefore, the Engineer need to repeat the test and inspections. Because of such a repetition of tests and inspections, the Employer needs to compensate the Engineer for the additional effort, which is not originally accounted for in the consultancy service agreement. Also, the Employer may incur additional costs for his added administration.

The FIDIC 99 Red Book provides a platform to raise the claim related to the above-discussed issue. As per clause 7.5 [*Rejection*], the Employer shall issue claim

notice for recovery of the cost associated with the repeated examination, inspection, and testing of Plant, Material, and Workmanship due to the Contractor's fault/ cause of action.

(iii) **The Contractor's failure to Rectify the Defects**

The Contractor is obligated to discharge contractual obligations. One of the obligations is complying with quality standards insisted on in the contract. The Contractor is expected to complete a project at the required standard by satisfying the Client's requirements communicated in the agreed contract. Therefore, if any of the Contractor's work fails to meet the requirements, he is liable to rectify it at his own cost. But, sometimes, the Contractors are reluctant to attend the defective works within a reasonable time. If so, under the provision of sub-clauses 7.6 [*Remedial Work*] and 11.4 [*Failure to Remedy Defects*], if the Contractor fails to comply with the Engineer's Instruction to rectify the Works, the Employer is entitled to rectify such defects by himself or appoint a third party for such task. The cost incurred by the Employer shall be back charged from the Contractor.

It should be noted that if the defect is significant enough to deny the Employer to enjoy the benefit of the whole or major part of the work, the Employer grasps the right to terminate the contract if he wishes to do so. The claims associated with the Termination of a Contract have been discussed in a later section below.

(iv) **The Contractor's failure to meet the Completion date other than excusable reasons**

As mentioned above, the Contractor is not only obligated to fulfil the quality requirements but also obligated to complete the whole of the Works, and each Section (if any), within the Time for Completion. However, the Contractor is entitled to an Extension of Time for Completion for the delay events which are attributable to the Employer (such as Variations and any delay, impediment or prevention) and the delay causing events that are beyond the Contractor's control, generally unforeseeable acts of nature, governmental actions, and political and social unrest. Other than those excusable delays, if the Contractor failed to meet the completion date of the whole work or the dates of the sections, the Employer is entitled for

recovery of damages caused by the late completion. The sub-clause 8.7 [*Delay Damages*] of FIDIC 99 Red Book provides the platform to claim delay damages if the Contractor fails to comply with sub-clause 8.2 [*Time for Completion*] due to inexcusable delay.

The purpose of the Delay Damage Clause is to provide an idea to the Contractor about the sum payable to the Employer in case of delay in completion. Proving actual loss suffered by the innocent party is not only difficult but also expensive. Therefore, the adoption of a delay damage clause is less expensive and minimizes the dispute among the parties. Generally, the amount per day delay and the maximum limit of the delay damages shall be mentioned in the contract itself.

In addition to compensation available under the delay damage clause, the Employer may be entitled to general damages too. It is a general understanding that if a party breaches a contract, the other party is able to recover the loss in respect of the breach. To assess the compensation amount, the Courts consider what would be sufficient for the innocent party to hold the same position if the contract had not been breached. Since this process of proving the actual loss suffered is

difficult, it is always advisable to include a clause for delay damages and the predetermined genuine estimate of the expected loss in case of any delay. However, the absence of the Delay Damage clause does not release the contract breaching party from its obligation to compensate the innocent party.

(v) **Failure to meet the intended function/ benefit of the Project or Section**

The completed project should serve the intended purpose. Generally, the project can be handed over to the Employer with minor outstanding works and defects which do not substantially affect the use of the project. The sub-clause 9.4 sets out the mechanism for the Employer's claim by means of reduction of Contract Price if the Contractor's work fails to meet the intended function/ benefit of the Project or Section.

The sub-clause 9.4 [*Failure to Pass Tests on Completion*] articulates that if the Works, or a Section, fail to pass the Tests on Completion repeated under Sub-Clause 9.3 [*Retesting*], the Engineer shall be entitled to:

- a) order further repetition of Tests on Completion under

- b) if the failure deprives the Employer of substantially the whole benefit of the Works or Section, reject the Works or Section (as the case may be), in which event the Employer shall have the same remedies as are provided in sub-paragraph (c) of Sub-Clause 11.4 [*Failure to Remedy Defects*]; or (We have discussed about this clause before)

- c) issue a Taking-Over Certificate, if the Employer so requests

In the event of Sub-paragraph (c), the Contractor shall proceed in accordance with all other obligations under the Contract, and the Contract Price shall be reduced by such amounts as shall be appropriate to cover the reduced value to the Employer as a result of this failure.

In simple words, if the Contractor's work fails to serve the intended purpose of the project, the Contract Price shall be reduced by the value equal to the drop in value for the Employer.

Though the Contractor is allowed to hand over the project with minor outstanding works and snags, the

Contractor is obligated to complete those pending works and rectify the defects during the Defect Notification Period. Sometimes the defect might be significant enough to deny the Employer enjoying the benefit of the whole or major part of the work. That is the basis that the sub-clause 11.3 [*Extension of Defects Notification Period*] articulates that the Employer may extend the 'Defects Notification Period' for the Work or Section if the Work or Section cannot be used for their intended purposes due to significant defects. However, as per the FIDIC 99 RB, the Defect Notification Period cannot be extended by more than 2 years.

(vi) Termination of Contract (because of Contractor's default) and associated Claims

The sub-clause 15.2 [*Termination by Employer*] lists out the circumstances which entitle the Employer to choose the termination option. This sub-clause articulates in detail about the Contractor's failures, Notice requirements, and the time frames. I have summarized the circumstance which entitles the Employer to go for the termination option. You are advised to study your respective contracts to determine

the entitlements in your case. Below is general guidance.

- a) The Contractor fails to comply with the contract obligations even after the Engineer's Notice to Correct
- b) Contractor's unwillingness to continue the contract
- c) Unreasonable delay in the Construction program
- d) Failure to attend the remedial work
- e) Subcontracting the whole of the work (100 % subcontracting is prohibited under the FIDIC 99 RB, but you need to check your particular contract to determine the entitlements)
- f) The Contractor becomes bankrupt or insolvent
- g) The Contractor gives bribes, illegal gifts, and commission to any person to show favor or disfavor in relation to the contract activities.

The sub-paragraph 15.4 (c) provides mechanisms for the Employer's claim in case of termination by the Employer. An Employer can claim losses and damages

incurred by him because of the termination of contract due to any of the Contractor's faults identified above.

(vii) **Work beyond the Normal Working Hours**

Generally, the contract itself specifies the standard working hours and rest days. Therefore, the Contractor plans the construction program taking into consideration of such restrictions. However, in practice, the contractors may propose to work on-site beyond the normal working hours and days to expedite progress and mitigate their own delay. If so, the Engineer MAY give consent for working outside the normal hours and on holidays while not overstepping the country's legal obligations. As a result, the Employer and the Engineer's personnel are required to work outside the normal working hours. If so, the Employer shall recover the additional cost incurred, such as overtime salaries of the Employer's and Engineer's personnel and any other administrative costs from the Contractor. The FIDIC 8.6 [*Rate of Progress*] provides room for such an Employer's claim associated with the Contractor's proposal to increase the working hours.

These are the general circumstances that may entitle an employer to put forward the claims. However, the determination of entitlement varies from case to case. Therefore, professionals who raise the claims should scrutinize their respective contracts and the legal systems under which their contracts are governed.

177. Can the contractor pass the full amount claimed by the Employer to a Subcontractor in relation to delay in particular subcontract scope?

For the sake of discussion, FIDIC 2011 Conditions of Subcontract and the UK case laws are used here.

The subcontractor has a contractual obligation to complete the scope agreed under the subcontract agreement within the time specified. Accordingly, the main contractor is entitled to claim damages against the subcontractor for late completion of subcontract work. This claim amount may include the main contractor's own cost, the claim amount from the Employer in respect of particular subcontract scope, and other amounts liable for other subcontractors who have suffered as a result of the particular subcontractor's late completion.

Sub-clause 3.4 [*Employer's Claims in connection with the Main Contract*] of FIDIC 2011 Conditions of Subcontract stipulates the subcontractor's obligation regarding Employer's Claims against the main contractor. It specifies that "If the Contractor receives from the Employer or the Engineer any notice and particulars of an Employer's claim which concerns the Subcontractor, the Contractor shall immediately send a copy to the Subcontractor...".

Further, as the main contractor, when formalizing the subcontract agreement, shares with subcontractors the details and potential liabilities of the main contract, the subcontractor cannot argue that amount included in the subcontract against the Liquidated damages were outside their contemplation. In the *M.J. Gleeson plc v. Taylor Woodrow Construction Ltd (1989)* case, Taylor Woodrow, a management contractor, entered a subcontract with Gleeson. The management contract included the liquidated damages at the rate of £400 per day delay, and same was included in the subcontract too. In the event of late completion by Gleeson, Taylor Woodrow attempted to claim £36,400 for liquidated damages and £95,360 in respect of 'set-off' claims from other subcontractors whose works were impacted due

to the late finish of Gleeson's subcontract scope. Gleeson argued that liquidated damage at the rate of £400 per day delay is high and unenforceable. However, the court held that Taylor Woodrow is entitled to liquidated damages as mentioned in the contract, but not for the 'set-off' claim. Judge Davies said that "on the evidence before me, therefore, Taylor Woodrow's course of action against Gleeson in respect of set-offs is for the delay in completion. It follows that it is included in the set-off for liquidated damages, and to allow it to stand would result in what can be metaphorically described as a double deduction".

In view of the above, the main contractor can apply Sub-clause 8.7 [*Subcontract Damages for Delay*] to levy claim damages due to late completion of subcontract works. Therefore, the main contractor should take into account of main contractor's own cost, claim amount from the Employer, and other amounts liable to other subcontractors when determining the Delay Damage amount at the time of forming the subcontract agreement.

Further, in *M.J. Gleeson plc v. Taylor Woodrow Construction Ltd (1989)* case, though the Court

permitted to apply a high amount included in the Liquidated Damage clause, based on the definition of Liquidated Damage, the subcontract can challenge and establish that the amount included in the contract is not a pre-estimated genuine amount of actual loss and therefore it is not a Liquidated Damage clause, but a Penalty. But in *M.J. Gleeson plc v. Taylor Woodrow Construction Ltd (1989)* case, even though LD amount specified in the subcontract is significant compared with the subcontract value since the main Contractor suffered a high loss due to late completion of a particular subcontract work and 'set-off' claims from other subcontractors, the amount included in the LD clause might be interpreted as a genuine reflection of actual loss

178. Can the Main Contractor claim from Subcontractor more than the amount available under LD?

Based on the UK case law decisions, generally, the innocent party is not entitled to recovery of general or unliquidated damages more than the amount available under liquidated damages. In the case of *Rapid Building v. Ealing Family Housing (1984)*, Lord Justice

Lloyd said that “Counsel has argued that although the liquidated damages clause has ceased for the reasons I have mentioned earlier, to be applicable, nevertheless the defendants will not be entitled to recover more than the amount they would have recovered under Clause 22 if Clause 22 had continued to be applicable. . . .”.

Further, in the old English case *Cellulose Acetate* (1925), the court held that even pre-estimated liquidated damages included in the contract are too low, which is not a genuine estimate of potential loss, still limits the innocent party to claim any delay damages up to the amount of liquidated damages specified in the contract.

179. What is the mechanism available for main contractor or the employer if Delay Damage clause is not available in a contract?

It is a general understanding that if a party breaches a contract, the other party is able to recover the loss in respect of the breach. To assess the compensation amount, the courts consider what would be sufficient for the innocent party to hold the same position if the contract had not been breached. Since this process of proving the actual loss suffered is difficult, it is always

advisable to include a clause for Liquidated Damage. However, the absence of the Liquidated Damage clause does not release the contract breaching party from its obligation to compensate the innocent party.

The Court of Appeal in *J-Corp v Mladenis* case held that the innocent party is still entitled to recovery of losses through the general damages concept even though the liability of the wrongdoer is 'Nil' under the Liquidated Damages clause. One of the clauses - "Commencement, Completion and Delays", under the contract states that J-Corp needs to pay "Nil Dollars" per day for delay in the completion of the project. The J-corp failed to complete the project as scheduled, and parties entered into a dispute about whether the house owner was entitled for recovery of damages owing to delayed completion. The Mladenis argument was that only liquidated damages that were specified as "NIL", and the contract did not limit the amount of general damages that could be claimed. The Court held that "Clear words are needed to rebut the presumption that a contracting party does not intend to abandon any remedies for breach of contract arising by operation of law". In this case, the Court concluded that since there was no clear provision that denied the employer from

claiming general damages for delay, the words “NIL liquidated damages” prevented the employer from claiming under Liquidated damages but could claim for general damages.

In the case of *Silent Vector Pty Ltd t/as Sizer Builders v Squarcini (2008)*, the Court held that “N/A” meant that the entire liquidated damages clause was “Not to Apply” but that the developer remained entitled to general damages for the delay. Further, in the Australian case of *Baese v Bracken*, the Court determined that setting liquidated damages to “NIL” was not an exhaustive statement regarding an entitlement to delay damages.

In another case of *Adapt Constructions Pty Ltd v Whittaker [2015] ACTSC 188*, the Court held that a construction contract formed using standard form leaves the amount for liquidated damages for delay in completion does not prevent the innocent party to recover recovering unliquidated damages at common law.

In view of the above case decisions, it can be summarized that unless otherwise, the parties intended to exclude the right to unliquidated damages at common law in clear contract terms, the exclusion of

liquidated damage clause in a contract simply does not limit the right to general damages at common law.

In *Temloc Ltd v Errill Properties Ltd*, the contract included a clause related to 'Damages for Non-completion' where the parties agreed to Nil amount for 'liquidated and ascertained damages. The Court held that "parties had come to an exhaustive agreement as to the damages payable by the Contractor in the event of failure to complete the work on time. That agreement was that there should be no damages of any sort for delayed completion".

So, based on the discussed case laws, if a subcontract agreement includes a Liquidated Damage clause, the main Contractor's position to go beyond the amount specified in the contract even if it is not enough to cover the actual losses is difficult. However, if the LD clause is not applicable, the main Contractor can pursue claims under the general damage.

180. Is the Contractor entitled to an Extension of Time if the quantities given in the BOQ failed to reflect the actual scope at the site?

Under the regime of the sub-clause 8.4 (a) of FIDIC 99 Red Book, the Contractor may be entitled to an EOT against the 'SUBSTANTIAL change in the quantities' and other 'Variations'. However, the identical clause in the 99 Yellow Book, where design responsibility lays with the Contractor, does not recognize the 'substantial change in quantities' as an event to raise an EOT claim. (To avoid the potential argument on wording 'Substantial', the 2017 Red Book articulates the limit of quantity change to 10% or more to raise an EOT claim).

What does FIDIC 99 Red Book refer to by the wording 'substantial increase in the quantities'? The 'substantial increase in the quantities' stands for the difference between the Estimated Quantity provided by the Employer at the time of tender and the actual quantity to be executed at the site but does NOT refer to the increase in the quantities due to the scope changes instructed through the Variations.

To avoid the above ambiguity, 2017 Red Book relates the 'ESTIMATED quantities available in the BOQ' with the 'actual quantities to be carried out'.

Why are different principles insisted under Red Book and Yellow Book? Since in the Design & Build contract, the Contractor involves with the Design activities and spends a considerably longer duration for tendering procedures than in the traditional contract, the Contractor is expected to be aware of the actual nature and extent of the works, irrespective of the quantities presented in the BOQ. So, the Contractor is not excused for the unawareness of the extent of the work. The Contractor is expected to take into account of the Time Risk at the time of tender. On the other hand, as the design is carried out by the Employer/Engineer in the Traditional contract, it is unfair to expect the Contractor to uncover the quantity inaccuracy within a short tender period (especially for the Remeasurement Contract where the parties form the contract based on the unit rates).

Under the law, the Contractor cannot be penalized for the inaccuracy of the BOQ produced by the Employer/Engineer who was involved with the project

design from the beginning and spent a long time understanding the project. (Unless otherwise, the contract expresses the type of procurement and the associated risks – Ex. In Lump Sum Contract, quantity risk rests with the Contractor).

Therefore, based on the FIDIC clauses, it can be interpreted that the Contractor is entitled to an EOT in the case the actual quantities vary from the Estimated BOQ quantities provided by the Employer if the design responsibility does NOT rest with the Contractor.

181. How can a contractor prove his reduced efficiency with valid contemporary records?

The contractor bids with the anticipation to execute the works in accordance with their internal productivity norms as well as in compliance with the contract particulars such as working hours, Health and Safety regulations, quality norms and other specified requirements. The changes in such aspects during the post-contract stage lead to a drop in productivity than expected at the time of tender. To successfully pursue the additional cost incurred due to the loss of productivity, the contractor must establish the difference between the planned and the actual

productivities. The actual productivity can be justified through the actual data gathered during the execution. However, proof for intended productivity is always subjective and debatable - the burden of proof rests with the contractor. To avoid such post contract arguments, generally, the tender document includes a section for the detailed rate breakdown for each unit rate. But in practice, the tenderers seldom provide such details at the beginning.

182. How to deal with a practical situation when a verbal instruction to vary the work is directly issued to the subcontractor by the employer?

As the construction projects involve massive works and include specialized works, the contractors generally engage subcontractors for the execution of part of the scope, or the contract itself insists on the engagement of subcontractors for specialized works. In such situations, the standard Forms of Contracts do not encourage direct instruction to the subcontractor by the employer or by any other authorized party. But in practice, Engineer's or Employer's agents may directly

deal with the subcontractors to speed up the process, in fact, which is not a wise practice.

The FIDIC forms of contracts insist on the issuance of instruction to vary the permanent work in writing whenever practicable for effective post-contract administration and to avoid unnecessary disputes between parties. Further, these contracts do not encourage the Employer's direct instruction and the Employer agent's improper interference. Instead, it insists that the authorized party shall issue the variation instruction, generally the Engineer, in compliance with the delegated protocol under the contract.

The FIDIC 99 Red Book and the FIDIC Conditions of Subcontract for Construction 2011 Edition are used for the below discussion. The sub-clause 13.1 [*Right to Vary*] of the 99 RB articulates that "Variations may be initiated by the Engineer at any time prior to issuing the Taking-Over Certificate for the Works, either by an instruction or by request for the Contractor to submit a proposal".

Sub-clause 3.3 [*Engineer's Instruction*] clearly emphasizes that "the Contractor shall only take

instructions from the Engineer or from an assistant to whom the appropriate authority has been delegated under this Clause.” Moreover, this sub-clause stipulates that the Engineer’s instructions shall be given in writing whenever practicable.

Variation Procedure under FIDIC Conditions for Subcontract 2011 Ed

The sub-clause 3.1 [*Contractor’s instruction*] of Conditions of Subcontract insists that “the Subcontractor shall take instructions only from the Contractor’s Subcontract Representative who shall have the like authority in relation to the Subcontract Works to give instructions.....”

On the other hand, the sub-clause 2.3 [*Instruction and Determination under Main Contract*] of Conditions of Subcontract provides room for the Employer’s and/or Engineer’s direct instruction to the Subcontractor. This sub-clause articulates that “If the Subcontractor shall receive any direct instructions from the Employer or the Engineer:

(i) he shall immediately inform the Contractor's Subcontract Representative and shall supply him with a copy of direct instruction if given in writing; and

(ii) he shall have no obligation to comply with any such direct instruction unless and until has been confirmed in writing as a Contractor's instruction."

In view of the above-identified sub-clauses; there are a few points to be noted;

1. Variation instruction shall be issued by Engineer.
2. Variation instruction shall be issued to the (main) Contractor.
3. The Contractor shall not vary the permanent works without the Engineer's instruction.
4. The Engineer's instructions shall be given in writing whenever practical.
5. The Subcontractor must receive instruction from the main Contractor only.

The Subcontractor must implement the variation instruction if they received instruction from the main

Contractor with whom they have a contractual relationship. Therefore, if such confirmation from the main Contractor is not available, then the Subcontractor should not execute the changes instructed by the Employer, which constitutes a breach of contract on the pure contractual platform.

Nevertheless, FIDIC 99 Red Book provides room under sub-clause 3.3 for verbal instruction, which is to be confirmed/rejected by the Engineer in writing within two working days upon the Contractor's request for confirmation of verbal instruction.

However, as the Employer and the Contractor are parties to the contract, they may vary the conditions as per their preference. If the Employer wants to give direct instruction, the contract between the parties should allow this arrangement irrespective of provisions available under the Standard Conditions of Contract such as FIDIC, JTC, NEC, etc. Otherwise, if the Employer directly issued instruction and the Contractor accepted, it is likely that a fresh contract has been formed between parties for this particular instructed scope of work. The Engineer shall not include the cost and time impact of this instructed

works until the Engineer confirms as Variation. As an alternative, the Employer shall directly pay the Contractor for the work instructed directly. However, if the instructed works have a time impact, which ultimately affects the Time for Completion of the project, then the situation is more complicated as these instructed works impact the sequence and timing of execution of the original scope. Further, in case the Employer contends that the instruction was never given, then the Contractor is in breach of the Contract situation and obligated to modify the Works in compliance with the original Contract documents and pay Delay damages, if any.

183. In the above scenario, if the Subcontractor executed the varied works without the written confirmation by the Engineer and subsequently by the Main Contractor, what is the alternative solution rather than simply rejecting the Subcontractor's claim?

As discussed above, based on the pure provisions of FIDIC 99 Red Book and Conditions for Subcontract 2011 Ed, the subcontractor's and consequently, the

main contractor's position is weak to be compensated for the varied work implemented. However, still, the contractors can seek relief on the common law platform. For the sake of discussion, let's see how the UK common law approaches this matter.

In the Court of Appeal Case *Ministry of Defense v Scott Wilson Kirkpatrick*, the Court held that oral instruction is sufficient to construct as a variation. Ministry of Defense hired a Contractor for roof work at its dockyard. As per the contract specification, the roof tiles shall be fixed using 9-inch nails. During the construction, the Employer's supervision consultant verbally agreed with the Contractor to use the four-inch nail to fix the roof tiles. Ultimately, the parties found a defect in the roof, and the Employer argued that the Contractor failed to comply with contract specifications, and therefore the Contractor is liable for the damage. However, the Contractor argued that the work was carried out in accordance with the supervision officer's variation instruction. The contract between the Ministry of Defense v Scott Wilson Kirkpatrick included the following clause.

“7(2) All supervision officer’s instructions shall be given in writing in the manner prescribed by the Authority. If any of the supervision officer’s instructions issued orally have not been confirmed in writing by him such confirmation shall be given upon reasonable request...”

The court decision was based on the second sentence of the above clause, which allows oral instruction. The court held that the contract allowed instructions to be given orally, such that the verbal direction to change the nails amounted to a valid contract variation.

It should be noted that the above sub-clause 7(2) carries an identical interpretation as sub-clause 3.3 of FIDIC 99 Red Book. This sub-clause provides room for verbal instruction, which shall be confirmed and/or rejected by the Engineer in writing upon the Contractor’s request for confirmation of verbal instruction.

Since sub-clause states that instructions shall be given in writing **whenever practicable**, it impliedly contemplates that they may also be given orally. Therefore, a verbal instruction for a project contracted under the FIDIC 99 Red Book is sufficient to construct as a variation.

In the *Redheugh Construction Ltd. v Coyne Contracting Ltd. and British Columbia Building Corporation (1997)* case, the Employer instructed the Subcontractor's project manager at the site to undertake changes to the contract scope. Even though the Subcontractor did not request for and/or receive written confirmation as insisted on the contract, the Subcontractor was entitled to payment for the extra work. The court of instance and appeal court held that, in this case, the condition precedent had been waived by the Employer's conduct as the Employer issued verbal instruction.

On the other hand, there are cases in which the court refused to grant the entitlements because of the absence of Claims Notice by the Contractor. For example, in the *City Inn v Shepherd Construction Limited (2003)*, the Contractor lost the right to an entitlement for an extension of time because of the noncompliance with the condition precedent. The court held that the Contractor's failure to comply with the notice requirement should be considered a breach of contract, and therefore, the Contractor was liable for liquidated damages. The court held the same strict position as regards to 'Notice Requirement' in the recent cases of *Steria Ltd v. Sigma Wireless*

Communications Ltd (2007) and *Ayrshire Ltd v. South Ayrshire Council (2009)*.

Even though the court has held a strict position as regards to 'Notice Requirement' in the above-mentioned cases, based on the court decision for *Redheugh Construction Ltd. v Coyne Contracting Ltd. and British Columbia Building Corporation*, we can say that, in case of direct verbal instruction, the claimant holds high chance to succeed in the case on the principle that **“the condition precedent become void by the Employer’s conduct, i.e., direct verbal instruction to the subcontractor”**. However, since the party who raises the claims bears the burden of proof, it is always advisable to receive instruction in writing to avoid last-minute hazels.

Contradictory, the Employer may put forward his argument that if Contractor had served Notice of Claim, the Employer would have cancelled the instruction to vary the permanent work, which would eventually avoid the Cost and Time Claims. Therefore, in summary, a verbal instruction could be or could not be constructed as a formal instruction depending on the

circumstances. The chain of causation plays a vital role in such determination.

184. Does the contractor really lose the entitlement to claim if he fails to serve a notice of claim within the time limit specified in the contract?

Usually, the Conditions of Contract specify a time limit to issue the Notice of Claim. For example, Sub-clause 20.1 of FIDIC 99 insists on issuing Claim Notice as soon as practicable and not later than 28 days from the date the Contractor becomes aware (or should have become aware) of the event/circumstance. Otherwise, the Contractor loses the rights of claim on pure contractual ground. However, the setup is different in FIDIC87, where the Contractor's loss of rights in the absence of such claim notice is not expressly articulated. It impliedly entitles the rights of claim considering the timescale requirements just as a directory for effective administration but not mandatory. But, under FIDIC99, the sub-clause 20.1 clearly articulates that if the Contractor fails to serve notice within the time frame, the Employer shall be

discharged from all liabilities in connection with such claim.

The intention of the experts who drafted this clause is to narrow down the Contractor's excuses for not serving Notices on time and to avoid last-minute hassles. The current wording/setup encourages the Contractor to put reasonable effort to identify the Events and the Impacts soon. Therefore, a contractor must serve notice regardless of the strength of the event (critical or not), which may or may not entitle the claim.

Contradictorily, on the legal platform, the Contractor may be successful, even if he fails to comply with the timescale if he adequately proves that event wasn't significant enough to issue such notice. Further, if the Contractor proves that his notice would not have made any impact on the Employer's position, i.e., the Employer would have incurred additional cost in both situations if the Contractor **had issued** a notice of claim, and if he **had not**, the court might not refuse the Contractor's entitlement for claim merely because of failure to serve a notice.

185. Usually, the Condition of Contracts insists the contractor to take necessary measures to mitigate the impacts to the employer in case of any delay events even those are beyond the contractor's control. Does it mean the contractor should take such necessary measures at its own cost?

The Society of Construction Law, Delay & Disruption Protocol, 2017 says, “the contractor has a duty to mitigate the effect on its works of Employer Risk Event.....THE DUTY TO MITIGATE DOES NOT EXTEND TO REQUIRE THE CONTRACTOR TO ADD EXTRA RESOURCES OR TO WORK OUTSIDE ITS PLANNED WORKING HOURS”.

The FIDIC 99 & 2017 rainbow versions do not insist recovery program by default but insist for the revised program capturing the effect of delay events (both are two different aspects). A **revised program** is necessary for administration purposes; plan the remaining works and execute accordingly. But the purpose of the **recovery program** is to avoid or minimize the impact of the delay events on the project completion date.

So, if the employer instructs the contractor for the acceleration of works, the contractor is entitled to claim additional costs associated with the acceleration of works. Therefore, the contractor shall prepare a recovery program and justify their effort in the recovery of delays caused by the events which are beyond the contractor's control. The contractor may submit the following claims depending on the actual scenario.

- I. Acceleration Claim
- II. Extension of Time for Completion in case the 100% recovery is not possible
- III. Prolongation Cost Claim for the extended project duration

It should be noted that in case of delay by the contractor, there are 2 options; late completion of the project and pay delay damages or accelerate the works at the contractor's cost and pay the employer's claim for working beyond normal working hours and additional administrative/supervision costs.

186. What is a Dispute?

Generally, the terminology "Dispute" refers to short term/early-stage disagreement between parties

regarding some issues, which can be resolved through various Dispute Resolution Mechanisms.

Another interesting definition for dispute is “rejection of rejection” First time I heard this new definition in a CPD event. I couldn’t exactly remember the resource person to give him credit here. Why did he refer to dispute as “rejection of rejection”?.

Say the Contractor submits a Claim. If Engineer agrees with what the Contractor requested, then there is no dispute. If the Engineer **refuses to accept** the Contractor’s Claim **as it was submitted without any adjustment**, and if the Contractor accepts the Engineer’s determination, then there is no dispute yet, even though there is one rejection by the Engineer. But, if the Contractor rejects the Engineer’s determination, then there is a dispute because the Contractor rejected the Engineer’s rejection.

187. What is Conflict?

Generally, the terminology ‘Conflict’ refers to long term disagreement between people on their understanding. The ‘Conflict’ comprises a number of disputes rather than a disagreement in a specific matter. As conflict is

the difference in matters of understanding, human needs and long-running events, it is hard to resolve. An example of conflict is the issues between ethnic groups or religious groups.

188. How do you avoid disputes at the post-contract stage?

In simple words, parties must fulfill their respective obligations as insisted in the contract so that in return can enjoy the rights under the contract and avoid liabilities. So, proper contract administration is required.

189. Factors to be considered when selecting Dispute Resolution Mechanism?

Cost-effectiveness: It is apparent that parties prefer the mechanism with the least cost (while satisfying other aspects listed below).

Speediness: Of course, no one like a Dispute Resolution Mechanism that takes years.

Confidentiality: It is important to keep the matters among parties rather than leak them to competitors and the public.

Enforceability: Enforceability is important if a party refuses to obey the decision made through a Dispute Resolution Mechanism.

Business relationship: Parties prefer a friendly collaborative approach keeping in mind long term business relations rather than fighting for temporary relief.

190. What is negotiation?

The specialty of the Negotiation compared with other ADR methods is that there is no third-party involvement in the Negotiation, and the disputed parties themselves try to settle the disputes. The real intention of the negotiation mechanism is to achieve a 'win-win' situation.

Negotiation can be divided into two categories based on its intention called 'Dispute Negotiation', which focuses on settling past facts and 'Transaction Negotiation', which focuses on reaching an agreement for future issues.

Also, Negotiation can be divided into types based on the strategic approaches to Negotiation called 'competitive

or positional' negotiation and 'integrative or problem-solving' negotiation.

In the competitive negotiation approach, one party is forced to accept the other party's demand due to the high bargaining power of the opponent and pressure.

The 'integrative' / 'problem-solving' Negotiation focuses on the common interest of the parties. Therefore, the Negotiation is benefited from a complete discussion of each participant's perspective and interests.

191. How do you see win-win situation?

As discussed earlier, the construction projects involve high risk due to their unique nature, high capital involvement and multiple parties' involvement.

Therefore, there is a high chance for Variations, Claims and Disputes among parties. Though there are many Standard Forms of Contracts are in use that provide guidance on how to administrate the contracts and mechanisms to deal with Variation, Claims and Disputes; still, parties need to go for some sort of compromise as those standard templates do not always provide readymade answers for the practical issues being encountered during the day-to-day life in the

construction industry. In practice, the solutions for contractual problems are not straightforward always. Therefore, some sort of compromises and sacrifices by the parties is required. Therefore, if the contract does not provide a strict contractual remedy for an issue when deriving such determinations, parties must consider the best possible win-win solutions considering all parties' interests.

192. What is Mediation?

Both parties appoint an independent third party as the mediator. The mediator then discusses individually with the parties and tries to narrow down the gap in the dispute to reach a conclusion.

193. What is Conciliation

Conciliation is the same as mediation, but the independent third party (the conciliator) gives his opinion of the dispute, but in mediation, the mediator does not give suggestions/options.

194. What is Expert Determination?

Sometimes parties appoint an expert third party for a particular dispute and obtain his determination of the dispute in advance to get an idea about their position.

The public Court also may need the opinion of subject experts as the judicial judges are not experts in technical matters. Also, though the appointed arbitrators are familiar with the construction industry, the arbitration panel may sometimes require experts' opinions in a specific specialized area.

195. What is Arbitration?

This is another dispute resolution method with a legally binding and foreign enforceable nature. However, nowadays, scholars argue that Arbitration is not an ADR method as it undergoes almost identical procedures as the traditional court system, i.e., litigation.

Unlike litigation, the parties are able to choose the venue, arbitrators, timing, and the procedures in the Arbitration. It is a good thing that most of the jurisdictions throughout the world have arbitration law that outlines the legal basis for Arbitration in that jurisdiction.

However, such procedure law itself is not sufficient to move forward with the arbitration process. Parties need to establish Rules themselves or adopt the readymade

Rules published by institutions such as the International Chamber of Commerce, Chartered Institution of Arbitration, UK, etc.

These Rules specify the method of submitting the claims, hearing procedures, level of evidence required, timeline, and other details. Though the Rules are essential to conducting the Arbitration, those shall not overrule the mandatory provisions in the arbitration law of the jurisdiction.

196. What are the main things parties should consider in an arbitration agreement?

- Seat of Arbitration - where the Arbitration process happens. In case the Arbitration process happens in a country, and the parties adopt the Procedural Law of another jurisdiction, the real seat of Arbitration is the land of the Procedural Law adopted.
- Law of Arbitration
- Language of Arbitration
- Number of Arbitrators (Sole Arbitrator or Tribunal)
 - Sole Arbitrator - Both parties can mutually appoint an Arbitrator. If there is any

disagreement, the Local Arbitration Centre will appoint an Arbitrator.

- Tribunal - Each party can appoint one Arbitrator, and 3rd Arbitrator will be appointed mutually. If there is any disagreement, the parties shall approach the Local Arbitration Centre to appoint the 3rd Arbitrator.

197. What are the characteristics of an Arbitral Award?

- It is final and binding.
- It should be logically convincing.
- The award must be clear and unambiguous.
- Only the parties are bonded with the Arbitral award; No one else.
- Any settlement by the parties is superior to the Arbitral Award. Accordingly, parties can mutually agree and resolve the dispute.
- Most of the Procedural Laws insist on Arbitral Award in writing.

198. What are the circumstances that a party can challenge an Arbitration Award?

The challenge of an arbitral award is limited. Otherwise, the core character of the arbitration decision (final and binding) is in question if the arbitral award is always challengeable and not the final one. Therefore, an arbitral award is challengeable if,

- One party can prove that the Arbitration award is biased toward another party as Arbitrators failed to disclose the conflict of interest.
- Both parties have not received equal opportunities during the Arbitration hearing
- The proper procedure is not followed – The violation of the mandate provisions and irregularity of the procedure.

199. How do you handle the Costs of Arbitration?

Generally, costs are awarded to the successful party. That means the losing party should bear the cost of the arbitration process in addition to the amount or remedy insisted in the arbitral award.

The cost includes but is not limited to

- Nonrefundable acceptance fee
- Cost of the venue, including cancellation charges
- Travelling expenses
- Cost of obtaining technical and legal advice if any
- Fees of the arbitrators, institutions and firms which provide advisory services

Each party shall pay a certain portion of the cost in advance. Further, usually, the arbitrators invoice their fee on an interim basis from time to time.

At the end of the process, the total cost shall be borne by the losing party, and therefore, the portion already paid by other party (the winning party) needs to be reimbursed.

200. How are the Arbitration Awards enforced across the jurisdictions?

As mentioned early, arbitration is one of the dispute resolution methods with an intentionally enforceable nature. Most of the jurisdictions have Arbitration Procedural Law and recognize the internalization of the arbitration. In addition, there are many conventions

among the countries in terms of enforcement of commercial arbitral awards across the borders. For example, there are 167 countries in New York Convention as of April 2022, and therefore, the countries can enforce the arbitral awards made in the territory of another contracting state.

Also, the following conventions enable the member countries to implement foreign arbitral awards.

- European Convention on International Commercial Arbitration, 1961
- Washington Convention on the Settlement of Investment Disputes between States and Individuals from other States, 1965
- The Geneva Protocol on Arbitration Clauses 1923 and the Geneva Convention of 1927
- The Amman Arab Convention on Commercial Arbitration 1987 (for Arab Countries)

Thilak Siva is a versatile trainer with extensive cross industry experience in Africa, Middle East and Indian subcontinent regions in consultancy and contracting contexts. He has trained multinational professionals. He is a trained Assessor and Mentor for Assessment of Professional Competences for Built Environment Professional Bodies



Accomplishment in a field at the cost of other aspects of life is not a complete success. Remarkable achievements in our field, which can be any, for the benefit of the society and of course for our personal benefits, without sacrificing 1. PHYSICAL & MENTAL HEALTH, 2. RELATIONSHIP & FAMILY LIFE, 3. TIME & MONEY FREEDOM, 4. MORALITY & INTEGRITY is completeness. However, how many percent of us are comfortable with such four aspects. Does the person who has financial freedom have good health? Hasn't the person who has everything violated the moralities? Does the person who has everything have caring friends and relatives surrounding him? So, with the limited knowledge of parallel universes, another life, and other phenomena, live this short life and contribute to society's betterment with the ultimate goal of eternal peace of mind.

