Chapter 19
CONSTRUCTION CONTRACTS (IAS –11)

Objective
This objective of this IAS is to provide accounting treatment of contract revenue and cost associated with the construction contracts, particularly the allocation of contract costs and contract revenues over different accounting periods as the construction activity starts and completed in different accounting periods.
Scope
This IAS should be applied in accounting for construction contracts in the financial statements of contractors.
Definitions
Construction contract is a contract specifically negotiated for the construction of an asset or a combination of assets that are closely interrelated or interdependence in terms of their design, technology and function or their ultimate purpose or use.
Fixed price contract is a construction contract in which contractors agrees to a fixed contract price, or a fixed rate per unit of output, which in some cases is subject to cost escalation clauses.
Cost-plus contract is a construction contract in which the contractor is reimbursed for allowable or otherwise defined costs, plus a percentage of these costs or a fixed price.
A contract may be a single contract like construction of a bridge or dam and can be a contract for a series of contracts, which are closely interrelated or interdependent in terms of design, technology or construction. Construction contracts include contracts for rendering of services and destruction/restoration of assets.
Combining and segmenting construction contracts
When a construction contract covers a number of assets, each asset will be treated as separate construction contract when: -
a) Separate proposals have been submitted for each asset
b) Each asset has been subject to separate negotiation and contractor and customer have been able to accept or reject that part of the contract relating to each asset; and
c) The costs and revenues of each asset can be identified
A group of contracts, whether with a single customer or with several costumers shall be treated as a single contract when: -
a) The group of contracts negotiated as a single contract
b) The contracts are so closely interrelated that they are in effect part of a single project with an overall profit margin; and
c) The contracts are performed concurrently or in a continuous sequence
A contract may include an additional asset at the option of the customer, the construction of additional asset shall be treated as a separate construction contract when: -

a) The asset differs significantly in design, technology or function from the asset or assets covered by the original contract; or
b) The price of the asset is negotiated without regard to the original contract price

Contract revenue

Contract revenue includes: -

a) The initial amount of revenue agreed in the contract; and
b) Variations in contract work, claims and incentive payments: -
    i) to the extent that it is probable that they will result in revenue; and
    ii) they are capable of being reliably measured

Contract revenues are measured at the fair value of consideration received or receivable. The contract revenue is affected by a number of uncertainties, which may require the revision of revenue estimates (such as variations in the contract, cost escalation clauses, penalties & claims, incentives etc.)

The variations are included in the revenue when: -

a) it is probable that the customer will approve the variation/amount of revenue arising from variation
b) the amount of revenue can be measured reliably

The claims are included in the revenue only when: -

a) negotiations have reached the advanced stage and it is probable that the customer will accept the claim
b) the amount probable to be accepted by the customer can be measured reliably

Incentive payments are included in the revenue when: -

a) the contract is sufficiently advanced that it is probable that the specified performance standards will be met or exceeded
b) the amount of incentive payments can be measured reliably

Contract costs

Contract costs are: -

a) costs specifically related to the contract
b) general costs attributable to the contract; and
c) such other costs specifically chargeable to the customer under the terms of the contract (administrative costs, development costs etc.)

Examples of specific costs are: -

a) site labor costs, including site supervision;
b) costs of materials used in construction;
c) depreciation of plant and machinery used on the contract;
d) costs of moving plant, equipment and materials to or from the site;
e) costs of hiring plant and equipment
f) costs of design and technical assistance that is directly related to the contract;
g) the estimated costs of rectification and guarantee work, including expected warranty costs; and
h) claims from third parties

The above stated costs will be reduced any incidental income such as from sale of surplus materials, wastes etc.

Examples of general costs are: -

a) insurance;
b) costs of design and technical assistance that are not directly related to a specific contract; and
c) construction overheads

Examples of costs excluded from the contract costs are: -

a) general administrative and development costs for which is reimbursement is not specified in the contract;
b) selling costs;
c) research and development costs for which reimbursement is not specified in the contract; and
d) depreciation of idle plant and machinery that is not used on a particular contract

Recognition of contract revenue and expenses

When the outcome of a construction contract can be measured reliably, contract revenues and associated contract costs will be recognized as revenue and expenses by reference to the stage of completion of the contract at the balance sheet date. Any expected loss on the contract shall be recognized as an expense immediately.

Estimation of outcome of a construction contract

Fixed price contract, the outcome of a fixed price contract can be measured reliably when: -

a) Total contract revenue can be measured reliably
b) The associated economic benefits will flow to the entity
c) Both contract cost to complete and the stage of completion can be measured reliably; and
d) Contract costs are clearly identifiable and measured reliably so that contract costs incurred can be measured reliably

Cost plus contract, the outcome of cost plus contract can be measured reliably when: -

a) The associated economic benefits will flow to the entity; and
b) The contract costs attributable to the contract, whether associated or not specifically reimbursable, can be clearly identified and measured reliably

Recognition of contract revenue under various methods

Contract revenue is generally recognized under the following methods: -

a) The proportion the contract costs incurred for work performed to date bear to the estimated total costs;
b) Survey of work performed; or
c) Completion of physical proportion of the contract work

Following are the steps: -

- Match contract revenue with the contract costs in reaching the stage of completion (costs incurred to date/(costs incurred to date + estimated costs to complete the contract)
- Contracts costs related to future activity should be recognized as an asset and not to be taken in the figure of costs to date such as materials delivered on the site to be used in the future activity unless

specifically purchased for the contract, payments in advance to subcontractors (contract work in progress)

- ❖ The percentage of completion method is to be applied on cumulative basis in each accounting period to the current estimates of contract revenue or contract costs. Any change in the estimate of contract revenue or contract costs is accounted for as change in accounting estimate.
- ❖ If any uncertainty arises about the calculability of any amount already recognized in revenue should be charged as expense rather than deduction from the contract revenue.

When the outcome of a contract can't be estimated reliably: -

a) revenue shall be recognized to the extent of contract costs incurred that is probable will be recoverable; and
b) contract costs shall be recognized as an expense in the period in which they are incurred

Examples of circumstances when the recoverability of the contract may not be probable and contract costs to be recognized as expenses include the contracts: -

a) which are not enforceable;
b) the completion is subject to pending litigation;
c) relating to properties that are likely to be condemned or expropriated;
d) where the customer is unable to meet its obligation; or
e) where the contractor is unable to meet its obligation under the contract

Recognition of expected losses

When it is probable that the contract cost will exceed total contract revenue, the expected loss should be recognized as an expense immediately.

The amount of loss will be recognized irrespective of the following: -

a) whether the work has commenced on the contract;
b) the stage of completion of the contract; and
c) the amount of profits expected to arise on other contracts which are not treated as a single contract

Disclosures

The following disclosures to be made: -

a) the amount of contract revenue recognized during the period;
b) the method used to determine the contract revenue; and
c) the method used to determine the stage of completion;

The following further disclosures to be made for each contract in progress: -

a) the aggregate amount of costs incurred and recognized profits (less recognized losses0 to date;
b) the amount of advances received; and
c) the amount of retentions

An entity shall present: -

a) the gross amount due from customers for contract work as asset, for all contracts where costs incurred plus profit recognized (loss) exceeds the progress billings

(costs incurred to date plus recognized profit less the sum of recognized losses and progress billings)

b) the gross amount due to customers for contract work as liability for all contracts where the progress billings exceeds costs incurred plus profit recognized (loss)
(costs incurred to date plus recognized profit less the sum of recognized losses and progress billings)

Q-1

Remal Enterprises commenced business as building contractors January 1, 1996 with a capital of Rs. 1,000 paid into bank account. The contractor was awarded a contract on March 31, 1996 to construct a Hospital building. The contract price was agreed at Rs. 2,000. It was agreed that the contract should be completed by December 31, 1998

The contractor made following payments in 1996:

	Rs.
Materials purchases	250
Wages	130
Site supervision	100
Lease rentals of hired equipment	26
Mobilization costs in shifting plant, equipment and materials to the construction site	21
Design and technical assistance	3
Other expenses	20
	550

Materials inventory at December 31 1996 amounted to Rs. 50.

During 1996 the contractor billed the customer Rs. 600 against progress billings. Cash received amount to Rs. 500.

At December 31, 1996 it was estimated that further cost to complete this contract would amount to Rs. 1,100.

During 1997 following payments were made

	Rs.
Material purchases	475
Wages	200
Site supervision	100
Lease rentals of hired equipment	26
Sub contractors	20
Other expenses	4
	825
Materials inventory at Dec. 31, 1997	75

During 1997 the contractor billed the customer Rs. 1,100 against progress billings. Cash received from customer in 1997 amounted to Rs. 1,000.

At December 31, 1997 the contractor made a fresh estimate of costs of complete the contract. The latest estimates revealed that further cost of Rs. 300 will be incurred in 1998.

During 1998, the company made following payments:

	Rs.
Materials purchases	165
Wages	150
Site supervision	50
Demobilization	10
	375

Materials un-used was returned to the stores at cost Rs. 100. Progress billing amounted to Rs. 300 and cash received was Rs. 100.

Required:
For the year 1996, 1997 and 1998:

a) Determine percentage completion of contract work.
b) Compute revenues to be recognized.
c) Prepare journal entries
d) Prepare following ledger accounts
    i) Contract work in progress
    ii) Accounts receivable
    iii) Cash
e) Prepare income statement and balance sheet.

Q-2

Following is the data relating to Fine builders who commenced work on a contract from January 1, 19X1.

	Rs.
Contract price	7,500
Costs incurred in 19X1	
Machinery and equipment	700
Wages	1,500
Contract overheads	400
Materials	2,000
Sub contract costs	300

Part of the machinery costing Rs. 200 was unsuited for the work and was sold at a profit of Rs. 50.

The value of the machinery and equipment on December, 31 19X1 was Rs. 400 and the value of materials then on hand was Rs. 300.

In order to calculate the profit made on the contract up to December 31, 19X1 the contractor estimated additional expenditure that would be incurred to complete the job. The profit recognized is that percentage of estimated total profit that incurred costs to date bear to estimated total costs.

Other information

i) The contract would be completed by June 30, 19X2.
ii) The machinery and equipment would have a residual value of Rs. 100 upon the completion of contract.
iii) The cost of the materials required in addition to those in stocks on December 31, 19X1 would be Rs. 1,000 and that further sub contract cost of Rs. 200 would be incurred.
iv) Wages on the contract for six months ending June 30, 19X2 would amount to Rs. 800.
v) Contract overheads will amount to the same sum per month as in the previous year; and
vi) 2.5% of total cost of the contract (excluding this percentage) should be provided for maintenance and contingencies. The charge is made only at end of the contract.

Required

a) Prepare Work in Progress Account for the year ended December 31, 19X1 and show your calculations for the profit to be recognized?
b) Balance sheet extract for the year 19X1?

Q-3

Salman Co has two contracts in progress, the details of which are as follows:

	School (Profitable)	**Club (Loss-making)**

	Rs. '000'	Rs. '000'
Total contract price	300	300
Costs incurred to date	90	150
Estimated costs to completion	135	225
Progress payments invoiced and received	116	11

Required:

Show extract from the income statement and the balance sheet for each contract, assuming that School and Club contracts are 40% complete?

Q-4

Merry view specializes in construction contracts. One of its contracts, with Better Homes, is to build a complex of luxury flats. The price agreed for the contract is Rs.40 million and its scheduled date of completion is 31 December 2002. Details of the contract to 31 March 2001 are:

Commencement date	1 July 2000
Contract costs:	Rs.000
Architects' and surveyors' fees	500
Materials delivered to site	3,100
Direct labor costs	3,500

Overheads are apportioned at 40% of direct labor costs Estimated cost to complete (excluding depreciation – see below) 14,800,000 Plant and machinery used exclusively on the contract cost Rs.3,600,000 on 1 July 2000. At the end of the contract it is expected to be transferred to a different contract at a value of Rs.600,000. Depreciation is to be based on a time apportioned basis.

Inventory of materials on site at 31 March 2001 is Rs.300,000.

Better Homes paid a progress payment of Rs.12,800,000 to Merry view on 31 March 2001.

At 31 March 2002 the details for the construction contract have been summarized as:

Contract costs to date (i.e. since the start of the contract) excluding all depreciation	20,400
Estimated cost to complete (excluding depreciation)	6,600

A further progress payment of Rs.16,200,000 was received on 31 March 2002.

Merry view accrues profit on its construction contracts using the percentage of completion basis as measured by the percentage of the cost to date compared to the total estimated contract cost.

Required:

(a) Prepare extracts of the financial statements of Merry view for the construction contract with Better Homes for:

(i) the year to 31 March 2001;

(ii) the year to 31 March 2002.

Q-5

Linnet is part way through a contract to build a new football stadium at a contracted price of Rs.300 million.

Details of the progress of this contract at 1 April 2003 are shown below:

	Rs. million
Cumulative sales revenue invoiced	150
Cumulative cost of sales to date	112
Profit to date	38

The following information has been extracted from the accounting records at 31 March 2004:

	Rs. million
Total progress payment received for work certified at 29 February 2004	180
Total costs incurred to date (excluding rectification costs below)	195
Rectification costs	17

Linnet has received progress payments of 90% of the work certified at 29 February 2004. Linnet's surveyor has estimated the sales value of the further work completed during March 2004 was Rs.20 million.

At 31 March 2004 the estimated remaining costs to complete the contract were Rs.45 million.

The rectification costs are the costs incurred in widening access roads to the stadium. This was the result of an error by Linnet's architect when he made his initial drawings.

Linnet calculates the percentage of completion of its contracts as the proportion of sales value earned to date compared to the contract price. All estimates can be taken as being reliable.

Required:

Prepare extracts of the financial statements for Linnet for the above contract for the year to 31 March 2004?

Q.6

Mughals Limited, a firm of civil contractors, specializes in construction of highways. They entered into a contract with the National Highway Authority (NHA) in the year 2003 for construction of National Highway covering 1500 kilometers and having 6 lanes. However, it was agreed that work shall commence on February 1, 2004. The agreed price was Rs.3.6 billion. The company closes its accounts on May 31.

On February 1, 2005 the NHA requested the company for extending the highway by adding two further lanes. NHA was of the view that the price of this extension shall be in the same proportion i.e. Rs. 1.2 billion, as there has been no significant increase in costs since the signing of the contract in 2003. However Mughals Limited refused to accept this price. Their board of directors was of the view that their company was in a position to sign another contract if they forego the offer by NHA. After extensive negotiations, the price of the extended work was agreed at Rs. 1.6 billion. It was also agreed that the work on additional lanes will be carried out simultaneously and will be completed on November 30, 2006.

The following data is available in respect of the above contract:

	As at May 31		
	2004	**2005**	**2006**
Original Contract	**Rupees in million**		
Progressive billing to date	800	2,500	3,400
Amount received to date	600	2,400	3,240
Mobilization advance (included in the above)	180	180	180
Actual cost to date	600	2,000	2,680
Value of work certified by NHA	300	2,000	3,300
Profit (latest estimate)	600	900	720
Additional Work			
Progressive billing to date	--	200	1,100

Amount received to date	--	80	800
Mobilization advance (included in the above)	--	80	80
Actual cost to date	--	100	580
Value of work certified by NHA	--	--	1,000
Profit (latest estimate)	--	700	600

There is a clause in the agreement that NHA will pay an early completion bonus of Rs.5.0 million per week. However in case of delay it will levy a penalty of Rs.10.0 million for each week the completion is delayed. In case of the original agreement the company has always been confident that the contract will be completed two weeks ahead of time and was actually completed accordingly. In case of additional work the chances of delay at year-end were considered as:

	2005	**2006**
Delay of two weeks	Possible	Probable
Delay of three weeks	Remote	Possible
Delay of four weeks	--	Remote

Required:

(a) **Discuss whether the contract for additional work shall be treated as a separate contract or a part of the original contract, according to IAS-11 (Construction Contracts)?**

(b) **Prepare extracts of the Income Statement and Balance Sheet of Mughals Limited for the years to May 31, 2005 and 2006 in respect of the above contract along with necessary disclosures regarding treatment of bonus and penalty as discussed above?**

Q.7

Silver Construction Limited (SCL) was incorporated on July 1, 2007 with a share capital of Rs. 500 million. It is involved in the construction of bridges, dams, pipelines, roads etc. During the year ended June 30, 2008, the company commenced work on six contracts, details of which are as follows:

	CONTRACTS					
	I	**II**	**III**	**IV**	**V**	**VI**
	Rupees in millions					
Total contract price	300	375	280	400	270	1,200
Billing up to June 30, 2008	200	110	280	235	205	1,200
Contract cost incurred up to June 30, 2008	248	68	186	246	185	1,175
Estimated further cost to complete	67	221	-	164	15	-

Following additional information is available:

(i) As per terms of Contract IV, the company will receive an additional Rs.40 million if the construction is completed within a period of twelve months from the commencement of the contract. The management feels that there is a 90% probability that it will be able to meet the target.

(ii) An amount of Rs. 16 million was incurred on Contract II on account of a change in design. The company has discussed it with the customer who has informed SCL that the amount is on the higher side and needs to be revised.

Required:

(a) **Make relevant calculations and prepare appropriate extracts to be reflected in the Balance Sheet and Income Statement for the year ended June 30, 2008?**

(b) **Justify your accounting treatment in respect of the additional information provided above?**

Q-8

Modern construction Limited (MCL) was established on July 01, 2008. It had entered into two different contracts up to June 30, 2010 and their progress is as under: -

	Contract A	**Contract B**
Contract start date	1-1-2009	1-9-2009
Work certified and billed up to June 30, 2009	25%	-
Work certified and billed up to June 30, 2010	80%	20%
Work completed but not certified up to June 30, 2010	--	5%
	Rs. (M)	**Rs. (M)**
Contract price	800	400
Cost incurred up to June 30, 2009	180	-
Cost incurred during the year ended June 30, 2010	420	125
Estimated cost to complete on June 30, 2009	500	-
Estimated cost to complete on June 30, 2010	100	270
Un paid bills (gross) as on June 30, 2010	140	-

Other relevant information is as under: -

(i) The company recognizes contract revenue and expenses using % of completion method.

(ii) 10% of contract price had been paid as advance on signing of each contract and is adjustable from the progress payments.

(iii) A progress bill is raised on the basis of work % certified by the consultant. All customers deduct 5% retention money from the progress bills.

(iv) Contract costs incurred during the year do not include:
- Retainer-ship fee amounting to Rs. 2 million paid to the consultant for technical assistance on contracts A and B. 30% of the consultant's time was used on contract A and 70% on contract B.
- Research cost for improving work quality and cost efficiency amounting to Rs. 1.9 million.

(v) The company is required to rectify all the defects during warranty period of one year. It is estimated that rectification costs to be incurred during warranty period would be 5% of the contract price.

Required:

Prepare appropriate extracts to be reflected in the Statement of Financial Position, Income Statement and relevant notes to the accounts for the year ended June 30, 2010 in accordance with IAS 11 (Construction Contracts)?

Q.9

Kamal Associates won first contract of the financial year on April 1, 2001 for destruction of a group of ten buildings of similar size and technical specification for a price of Rs 2 million. The work was to be completed within six months of an award of the contract failing that a penalty of 6% per annum of the contract price would be paid to the customer for the delay.

Following information was available as at June 30, 2001; the date on which Kamal Associates close their financial year. On that date five buildings were demolished.

Site labor Rs 200,000; site supervision Rs 150,000; material used Rs 250,000; depreciation on plant used at site Rs 100,000; general and administration costs Rs 50,000; research and development costs Rs 25,000; selling costs Rs 25,000: Other construction overheads Rs 200,000.

The management of Kamal Associates compared above information with budgeted cost of the contract and was satisfied with performance except that it would require four months to complete the rest of the contract. Due to delay in completion and inflation, cost overrun would be as follows:

Increase in wages of site labor by 10%. Escalation in material cost by 20%. Other construction overhead would increase by 20%. Research and development cost to go down by Rs 5,000.

Subsequent to June 30, 2001 Kamal Associates was notified of a claim of Rs 50,000 from third party for damage done to a building next to the one demolished by Kamal Associates. Kamal Associates accepted the claim.

Required:

Prepare contract account clearly indicating profit earned or loss incurred as at the close of financial year on June 30, 2001 in accordance with IAS 11 Construction Contracts?

Q.10

ABC is a limited liability company mainly engaged in construction of dams and power houses. It has won a contract to construct a dam on River Indus. The contract was awarded to ABC on July 01, 2010 but work could not be started till the end of September 2010.

ABC received mobilization advance equal to 10% of the contract value of Rs. 5,000 million on August 31, 2010. ABC has to complete the dam within 5 years of the signing of the contract. To avoid liquidity problems ABC arranged short term running finance of Rs. 1,000 million @ 19.5% from a local bank on October 15, 2010.

The progress billings raised during the year were Rs. 500 million. The whole amount was received after adjustment of mobilization advance and retention money. The retention money is 10% of the progress billings raised, receivable after three years of successful completion of the dam and mobilization advance will be adjusted equally over five years.

ABC incurred the following cost on the construction of dam

	Rs. (m)
Fee paid to surveyors	200
Raw material used	500
Designing cost incurred	400
Fee paid to consultants	100
Labor and other overheads	150
Total cost	1,350

The expected future cost to complete the contract is Rs. 2,550 millions.

The work certified at the end of June 30, 2011 is Rs. 1,200 millions. ABC uses survey of work performed method for determining stage of completion of contracts.

Total interest cost accrued during the year ended June 30, 2011 was Rs. 120 million.

Required: -

Provide extract of statement of financial position and statement of comprehensive income for year ended June 30, 2011?