12

ACCOUNTS OF ELECTRICITY SUPPLY COMPANIES

(A) Write short notes on:

Question 1

Main features of "Double Accounts" system of presentation of financial information in the case of public utility concern. (5 marks) (Intermediate–May 1995, Nov. 1997 and May 1999)

Answer

Double accounts system is the name given to the system of preparing the final accounts of certain statutory companies formed by special Acts of parliament, usually public utility undertakings (for example Electricity Companies). The double accounts system is not a special method of keeping accounts, rather a special method of presenting accounts which are kept under the normal double entry system. Under this system, separate accounts in respect of capital and revenue are prepared in order to show clearly the capital receipts and the manner in which the amounts thereof have been invested. The final accounts prepared under the double accounts system normally consist of :

(i) Revenue Account

(ii) Net Revenue Account

(iii) Capital Account (Receipts and Expenditure on capital account)

(iv) General Balance Sheet.

The Revenue account is analogous to the Profit & Loss Account of a company with some exceptions. The Net Revenue Account resembles with appropriation portion of the Profit & Loss Account of a company. The Balance Sheet is presented in two parts namely Capital Account and General Balance Sheet. The Capital Account shows the total amount of capital raised and its sources and also the manner and extent to which this capital has been applied in the acquisition of fixed assets for the purpose of carrying on the business. The General balance sheet includes the other items.

The Double accounts system in its pure form does no longer exist but the statements submitted to State Governments by electricity companies generally follow the principle of double accounts system. It may be noted that for presenting accounts to the shareholders, electricity companies normally follow Schedule VI of the Companies Act, 1956.

Question 2

"Receipt and payment on capital account" and "General Balance Sheet" of a public utility.

(5 marks) (Intermediate–May 2000)

Answer

Under the double accounts system, which is followed by a public utility concern, the balance sheet is split into two parts : (a) Receipt and payment on capital account and (b) General Balance Sheet.

The main purpose of the former is to show (i) the total amount of capial raised its sources and (ii) the manner and the extent to which this capital has been applied in the acquisition of fixed assets for the purpose of carrying on the business of the undertaking. It thus discloses the receipt and expenditure on capital account, that is, the receipts from issue of shares, debentures and loans and the expenditure, out of such receipts, on acquisition of and addition to fixed assets. The receipt and expenditure on capital account is shown in a columnar form. There are three money columns : (a) one showing the amount at the commencement of the period; (b) another disclosing the amount received or spent during the period; and (c) the third showing the balance left at the end of the period.

The other part (called general balance sheet) contains other assets and liabilities and the balance of the receipt and expenditure on capital account. It is drawn up in the usual way, showing on the liabilities side–reserves, depreciation fund, current liabilities and other credit balances and total receipts as per capital account, on the assets side–total of expenditure as per capital account, floating assets and other debit balances.

Question 3

Reasonable returns in electricity supply companies. (5 marks)(Intermediate–Nov. 2000)

Answer

The law seeks to prevent an electricity undertaking from earning too high a profit. For this purpose, "reasonable return" has been defined as consisting of :

(a) An yield at the standard rate which is Reserve Bank rate plus two percent on the capital base as defined below;

(b) Income derived from investment except investment made against Contingencies Reserve;

(c) An amount equal to 1/2% on loans advanced by the Electricity Board;

(d) An amount equal to 1/2% on the amounts borrowed from organisations or institutions approved by the State Government;

(e) An amount equal to 1/2% on the amount raised by the issue of debentures;

(f) An amount equal to 1/2% on balance of Development Reserve; and

(g) Such other amounts as may be allowed by the Central Government having regard to the prevailing tax structure in the country.

The term "Capital Base" used above, can be defined as:

(a) the original cost of fixed assets available for use and necessary for the purpose of the undertaking less contributions, if any made by the consumers for construction of service lines and also amounts written off;

(b) the cost of intangible assets;

(c) the original cost of work in progress;

(d) the amount of investments compulsorily made agaisnt contingencies reserve; and

(e) the monthly average of the stores, materials, supplies and cash and bank balances held at the end of each month of the year of account not exceeding in the aggregate an amount equal to one quarter of the expenditure.

Less:

(i) the amount written off or set aside on account of depreciation of fixed assets and amounts written off in respect of intangible assets in the books of the undertaking;

(ii) the amount of any loans advanced by the Board;

(iii) the amount of any loans borrowed from organisations or institutions approved by the State Government;

(iv) the amount of any debentures issued by the licensee;

(v) the amount of security deposits held in cash;

(vi) the amount standing to the credit of the Tariffs and Dividends Control Reserve;

(vii) the amount set apart for the development reserve; and

(viii) the amount carried forward in the accounts of the licensee for distribution to the consumers.

(B) Pratical Questions:

Question 1

Electric Supply Ltd. rebuilt and re-equipped one of their Mains at a Cash Cost of Rs. 40,00,000. The old Mains thus superseded cost Rs. 15,00,000. The capacity of the new Main is double that of the old Main.

Rs. 70,000 was realised from sale of old materials. Four old motors valued at Rs. 2,00,000 salvaged from the old Main were used in the reconstruction. The cost of Labour and Materials is respectively 30% and 25% higher now than when the old Main was built. The proportion of Labour to Materials in the Main then and now is 2 : 3.

Show the Journal entries for recording the above transactions, if accounts are maintained under Double Account System. (8 marks) (Intermediate–Nov. 1999)

Answer

Electric Supply Ltd.
Journal Entries

		Dr. Rs.	Cr. Rs.
New Main Account	Dr.	20,95,000	
Replacement Account	Dr.	19,05,000	
To Bank Account			40,00,000
(Being current cost of replacement charged to replacement account and the balance amount capitalised)			
New Main Account	Dr.	2,00,000	
To Replacement Account			2,00,000
(Being the value of motors salvaged from old main used in the reconstruction of main)			
Bank Account	Dr.	70,000	
To Replacement Account			70,000
(Being the amount realised from sale of old materials credited to replacement account)			
Revenue Account	Dr.	16,35,000	
To Replacement Account			16,35,000
(Being the net current cost of replacement transferred to revenue account)			

Working Notes:

1. Current cost of replacement:

	Cost of existing main Rs.	Increase in cost Rate	Increase in cost Amount Rs.	Current cost Rs.
Materials (3/5 × Rs. 15 lacs)	9,00,000	25%	2,25,000	11,25,000
Labour (2/5 × Rs. 15 lacs)	6,00,000	30%	1,80,000	7,80,000
Estimated current cost for replacement of present main (amount to be charged to replacement account)				19,05,000

2. Additional cost of reconstruction of main (to be capitalised)

Cash cost of re-building new main	40,00,000
Less: Estimated current cost for replacement of existing old main	19,05,000
Additional cost in new main to be capitalised (excluding old motors used	20,95,000

3. Replacement Account

Dr.			Cr.
To Bank A/c	19,05,000	By New Main A/c	2,00,000
		By Bank A/c	70,000
		By Replacement A/c Balancing figure	16,35,000
	19,05,000		19,05,000

Question 2

Power Electric Company decides to replace one of its old plant by an improved plant with larger capacity. The cost of the new plant is Rs. 16,00,000.

Materials and Labour earlier and now are in the ratio of 4 : 6.

Original cost of the old plant is Rs. 3,00,000. Materials cost has gone up by 2½ times and Labour cost by 3 times since then. Old materials worth Rs. 10,000 were used in the construction of the new plant and Rs. 20,000 were realised from the sale of old materials.

Give the necessary Journal Entries for recording the above transactions.

(6 marks) (PE-II–Nov. 2004)

Journal Entries

Particulars		Dr. Amount Rs.	Cr. Amount Rs.
Plant account	Dr.	7,70,000	
To Bank account			7,60,000
To Replacement account			10,000
(Being the additional cost incurred and old materials utilized in new plant)			
Replacement account	Dr.	8,40,000	
To Bank account			8,40,000
(Being the current cost of replacement)			
Bank account	Dr.	20,000	
To Replacement account			20,000
(Being the old materials sold)			
Revenue account	Dr.	8,10,000	
To Replacement account			8,10,000
(Being the balance of replacement account transferred to revenue account)			

Working Note:

Old cost of the plant Rs. 3,00,000:

Material = $3,00,000 \times \frac{4}{10} = 1,20,000$

Labour = $3,00,000 \times \frac{6}{10} = 1,80,000$

		Rs.
Cost of materials increased by 250% = 1,20,000 × 250%		3,00,000
Cost of labour increased by 300% = 1,80,000 × 300%		5,40,000
Current cost of replacing old plant		8,40,000
Less: Sale of old materials	20,000	
Old materials utilized in new plant	10,000	30,000
Amount to be transferred to Revenue account		8,10,000

Cash cost of the new plant	16,00,000*
Add: Old materials utilized	10,000
	16,10,000
Less: Current cost of replacing old plant	8,40,000
Amount to be capitalized	7,70,000

* The cost of new plant has been given as Rs. 16,00,000 in the question. It has been assumed in the above solution that this cost does not include the cost of old materials used in the construction of new plant worth Rs. 10,000.

Question 3

X Electricity Company Limited decides to replace one of its old plants with a modern one in April, 2006. The plant when installed in the year 2000, costed the company Rs.26 lakhs, the components of materials and labour being in the ratio of 7:3. It is ascertained that the cost of labour and materials have risen by 30% and 25% respectively. The cost of new plant is Rs.66 lakhs and in addition old materials worth Rs.92,000 are reused. Old materials worth Rs.1,68,000 are sold. Under double account system compute the following:

(i) The amount to be written off to Revenue A/c.

(ii) The amount to be capitalized.

(iii) Draw up the necessary Journal entries.

(iv) Draw up the Replacement Account. (10 Marks)(PE II – May, 2007)

Answer

(i) Statement showing amount to be written off to Revenue Account

				Rs.
Cost of old plant				26,00,000
Add:.	Increase in cost of material	$26,00,000 \times \frac{7}{10} \times \frac{25}{100}$		4,55,000
	Increase in cost of Labour	$26,00,000 \times \frac{3}{10} \times \frac{30}{100}$		2,34,000
	Current cost of old plant			32,89,000
Less:	Cost of Material used		92,000	
	Cost of Material sold		1,68,000	(-) 2,60,000
Amount to be written off to Revenue A/c				30,29,000

(ii) Statement showing amount to be capitalised

Cost of new plant excluding the value of old materials used		66,00,000
Less:	Current cost of old plant	32,89,000
Current cost to be capitalized		33,11,000
Add:	Value of old material used	92,000
Total amount to be capitalized		34,03,000

(iii) Journal Entries in the Books of X Electricity Company Ltd.

			Rs.	Rs.
(a)	Replacement Account	Dr.	32,89,000	
	To Bank Account			32,89,000
	(Being the replacement of old plant by a new plant; the current cost of replacement Rs.32,89,000)			
(b)	Plant Account	Dr.	34,03,000	
	To Replacement Account			92,000
	To Bank Account			33,11,000
	(Being additional cost of new plant capitalized and also old materials used in construction of new plant)			

(c)	Bank Account	Dr.	1,68,000	
	To Replacement A/c			1,68,000
	(Being the sale of old materials for Rs.1,68,000)			
(d)	Revenue A/c	Dr.	30,29,000	
	To Replacement Account			30,29,000
	(Being the balance of replacement account transferred to revenue account)			

(iv)

Replacement Account

Dr.					Cr.
		Rs.			Rs.
To	Bank A/c	32,89,000	By	New Plant A/c	92,000
			By	Bank A/c	1,68,000
			By	Revenue A/c (Balancing figure)	30,29,000
		32,89,000			32,89,000

Question 4

'H' Electricity Company earned a profit of Rs.60,00,000 (after tax) after paying Rs.48,000 at 12% interest on debentures for the year ended 31.3.2007. The following further information is supplied to you:

	Rs.
Share Capital	2,50,00,000
Reserve Fund Investment (invested in 8% Government Securities at par)	60,00,000
Contingencies Reserve Fund Investment (7%)	25,00,000
Loan from State Electricity Board	50,00,000
Development Reserve	16,00,000
Fixed Assets	6,00,00,000
Depreciation Reserve on Fixed Assets	60,00,000
Security Deposits of customers	80,00,000
Amount contributed by consumers towards cost of Fixed Assets	4,50,000
Intangible Assets	17,50,000

Tariffs and Dividends Control Reserve	22,00,000
Monthly average of Current Assets including amount due from customers Rs.5,00,000	36,00,000

Show, how the profits of the company will be dealt with under the provisions of the Electricity Act, assuming the bank rate of the year was 8%. All working notes should form part of your answer. (16 Marks) (PE II, Nov. 2007)

Answer

'H' Electricity Company

Statement of Distribution of Profit for the year ended 31.3.2007

Capital Base

	Rs.	Rs.
Fixed Assets as reduced by customers contribution		
(6,00,00,000 – 4,50,000)	5,95,50,000	
Intangible Assets	17,50,000	
Monthly average of Current Assets (Excluding amount due from customers i.e. 36,00,000 – 5,00,000)	31,00,000	
Contingencies Reserve Fund Investment	25,00,000	6,69,00,000
Deduct:		
Depreciation Reserve	60,00,000	
Loan from Electricity Board	50,00,000	
12% Debentures ($48{,}000 \times \frac{100}{12}$)	4,00,000	
Development Reserve	16,00,000	
Security Deposits of Customers	80,00,000	
Tariffs and Dividends Control Reserve	22,00,000	2,32,00,000
Capital Base		4,37,00,000

Reasonable Return

	Rs.
10% (Bank Rate + 2%) on Capital Base	43,70,000
8% on Reserve Fund Investment	4,80,000

½% on Loan from Electricity Board	25,000
½% on Debentures	2,000
½% on Development Reserve	8,000
Reasonable Return	48,85,000

Surplus and its Disposal

	Rs.
Clear Profit	60,00,000
Surplus (Rs.60,00,000 – Rs.48,85,000)	11,15,000
Less: 20% of Reasonable Return (to be disposed off)	9,77,000
Amount refundable to consumers	1,38,000

Disposal of Surplus of Rs.9,77,000

		Rs.
(i)	$\frac{1}{3}$ of surplus over clear profit limited to 5% of reasonable return will be at the disposal of the company i.e. Rs.3,71,667 >Rs.2,44,250	2,44,250
(ii)	Credit to Tariffs and Dividends Control Reserve (1/2 of remaining balance of 20% of Reasonable Return)	3,66,375
(iii)	Credit to Consumers' Suspense Account	3,66,375
		9,77,000

Total amount at the disposal of the company

		Rs.
(a)	Amount of reasonable return	48,85,000
(b)	Share in surplus	2,44,250
		51,29,250

Total amount refunded to consumers

		Rs.
(a)	Surplus in excess of 20% of reasonable return	1,38,000
(b)	Share in surplus	3,66,375
		5,04,375