Chapter 5

Accounting Equation and Rules of Debit and Credit

Learning Objectives

- Meaning of Accounting Equation
- Effects of Transactions on Accounting Equation
- Meaning of Debit and Credit
- Rules of Debit and Credit

MEANING OF ACCOUNTING EQUATION

Accounting equation is based on dual aspect concept of accounting. Accordingly, the assets of a business are always equal to total of its liabilities and capital (owner's equity). In equation form, this relationship is expressed as :

Assets = Liabilities + Capital

Where,

Liabilities = amount due to outsiders or creditors' equity

Capital = Owner's capital or owner's equity

From the above equation, we have:

Liabilities = Assets – Capital

and

Capital = Assets – Liabilities

The accounting equation always depicts the relationship among different components of the balance sheet so it is also called as **Balance Sheet Equation**. The components of balance sheet are assets, liabilities and capital. Thus, at any point of time, the assets of the business must be equal to sum of proprietor's capital and claim of outside liabilities.

Accounting Equation Approach or Modern Approach or American Approach: Recording of business transactions based on Accounting Equation Approach is also called as **Modern Approach or American Approach.**

Since Accounting Equation Approach is based on dual aspect concept of accounting. Thus, **Assets are denoted with Debit (Dr.) balance and Capital** and **Liabilities are denoted with Credit (Cr.) balance.** Following simple rule is observed while recording transactions:

Items	*Increase*	*Decrease*
Assets	Dr.	Cr.
Capital & Liabilities	Cr.	Dr.

Every transaction affects the accounting equation but accounting equation always holds true after every transaction as it is based on dual aspect concept of accounting. This is also depicted from the following balance sheet:

Balance Sheet
as at 31st March, ...

Liabilities	*(₹)*	*Assets*	*(₹)*
Capital	1,20,000	Cash	
Liabilities:		Bank	2,50,000
Creditors	70,000	Debtors	
Loan	60,000	Stock	
		Fixed Assets	
	2,50,000		2,50,000

Accounting Equation:

Assets = Liabilities + Capital

₹ 2,50,000 = ₹ 1,30,000 + ₹ 1,20,000

At any point of time assets (resources) of the business are equal to the sum of claim of owner's (capital) and claim of outsiders (liabilities).

A transaction may affect either both sides of the accounting equation by the same amount or may affect only one side of the equation *i.e.,* by increasing or decreasing it by the equal amounts.

Types of Transactions Affecting Accounting Equation

From the point of view of accounting equation, transactions are of two types:

1. Transactions affecting two items.
2. Transactions affecting more than two items.

1. Transactions affecting two items: They are of two types:

(A) Transactions affecting both the sides of accounting equation:

***(i)* Increase in assets, Increase in liabilities:** Examples may be:

Transactions	*Affects*
– Started business with cash	Cash & Capital
– Credit Purchase of goods	Stock & Liabilities
– Credit Purchase of Asset	Asset & Liabilities
– Bank Loan	Bank & Liabilities
– Received Commission	Cash & Capital

***(ii)* Decrease in Assets, Decrease in Liabilities**: Examples may be:

Transactions	*Affects*
– Payment to Creditors	Cash & Liabilities
– Drawing	Cash & Capital
– Bought furniture for personal use	Cash & Capital
– Rent paid	Cash & Capital
– Depreciation on machine	Machine & Capital

(B) Transactions affecting one side of accounting equation: Transactions may affect in opposite direction on one side of equation. Examples may be:

***(i)* Increase in asset, decrease in asset:**

Transactions	*Affects*	
– Cash purchases	– Cash	+ Stock
– Cash received from debtors	+ Cash	– Debtors
– Withdrew cash from bank	+ Cash	– Bank
– Deposited into bank	+ Bank	– Cash
– Furniture purchased for cash	+ Furniture	– Cash
– Purchase of Investment	+ Investment	– Cash
– B/R drawn	+ B/R	– Debtors

***(ii)* Increase in Liability, Decrease in Liability:**

Transactions	*Affects*
– Acceptance of Bills Payable	+ B/P, – Creditors

***(iii)* Increase or decrease in Liability & Capital:**

Transactions	*Affects*
– Conversion of debentures into shares	– Liability, + Capital
– Proposed Dividend	– Profits (Capital), + Liability

2. Transactions affecting more than two items–Even if a transaction affects more than two items, accounting equation will balance. For example, goods costing ₹ 10,000 is sold for ₹ 12,000. Here, cost of goods reduces stock by ₹ 10,000, sales will increase cash by ₹ 12,000 but profit of ₹ 2,000 will increase capital by ₹ 2,000. On the other hand, loss will reduce the capital of the owner.

R EFFECTS OF TRANSACTIONS ON ACCOUNTING EQUATION

There are three steps to proceed to Accounting equation:

Steps:

1. Analyse the transaction to ascertain to which variable of accounting equation it affects *i.e.*, assets, liabilities, capital. **It should be noted that revenue increases the capital while expense is a loss so it reduces the capital.**
2. Decide the effect of transaction on components of accounting equation *i.e.*, whether they will increase or decrease asset, liability and capital.
3. Finally, record the effect on accounting equation in monetary terms.

Following example will illustrate the mechanism of accounting equation:

Example:

Transaction 1: Ram commenced business with capital of ₹ 50,000

It means that *(i)* firm has assets of ₹ 50,000 in the form of cash and *(ii)* business has to repay ₹ 50,000 to Ram towards his capital. The equation will be:

Assets	=	**Liabilities**	+	**Capital**
₹ 50,000	=	0	+	₹ 50,000

Transaction 2: He purchased goods for cash ₹ 10,000. The effect of this transaction will be *(i)* Goods in the form of stock will come ₹ 10,000 *(ii)* Cash balance will be reduced by ₹ 10,000. Equation will be:

Transactions			*Assets*	=	*Liabilities*	+	*Capital*
	Cash	+	Stock	=	Liabilities	+	Capital
Old equation	₹ 50,000	+	0	=	0	+	₹ 50,000
New transaction	(–) ₹ 10,000	+	₹ 10,000	=	0	+	₹ 50,000
New equation	₹ 40,000	+	₹ 10,000	=	0	+	₹ 50,000

Transactions 3: Ram bought furniture from Mohan on credit for ₹ 5,000.

The effect of this transaction will be *(i)* Assets in the form of furniture will come for ₹ 5,000 *(ii)* ₹ 5,000 is due to Mohan as creditor of the firm. New equation will be:

Transactions			*Assets*			=	*Liabilities*	+	*Capital*
	Cash	+	Stock	+	Furniture	=	Creditors	+	Capital
Old equation	₹ 40,000	+	₹ 10,000	+	0	=	0	+	₹ 50,000
New transaction	0	+	0	+	₹ 5,000	=	₹ 5,000	+	0
New equation	₹ 40,000	+	₹ 10,000	+	₹ 5,000	=	₹ 5,000	+	₹ 50,000

Transaction 4: Goods costing ₹ 8,000 was sold for ₹ 10,000 on credit.

The effect of the transaction will be *(i)* Stock will be reduced by ₹ 8,000 *(ii)* Debtors will go up by ₹ 10,000 *(iii)* ₹ 2,000 will be profit on sale so capital will increase by ₹ 2,000 *i.e.,* (₹ 10,000 – ₹ 8,000). New equation will be:

Transactions			*Assets*					=	*Liabilities*	+	*Capital*
	Cash	+	Stock	+	Furniture	+	Debtors	=	Creditors	+	Capital
Old equation	₹ 40,000	+	₹ 10,000	+	₹ 5,000	+	0	=	₹ 5,000	+	₹ 50,000
Transaction	0	–	₹ 8,000	+	0	+	₹ 10,000	=	0	+	₹ 2,000
New equation	₹ 40,000	+	₹ 2,000	+	₹ 5,000	+	₹ 10,000	=	₹ 5,000	+	₹ 52,000

Transaction 5: Paid salary ₹ 600 and rent ₹ 400.

Its effect will be that *(i)* cash will be reduced by ₹ 1,000 *(ii)* Both salary and rent are expenses so it is a loss and will reduce the capital. New equation will be:

Transactions			*Assets*					=	*Liabilities*	+	*Capital*
	Cash	+	Stock	+	Furniture	+	Debtors	=	Creditors	+	Capital
Old equation	₹ 40,000	+	₹ 2,000	+	₹ 5,000	+	₹ 10,000	=	₹ 5,000	+	₹ 52,000
Transaction	– ₹ 1,000	+	0	+	0	+	0	=	0	–	₹ 1,000
New equation	₹ 39,000	+	₹ 2,000	+	₹ 5,000	+	₹ 10,000	=	₹ 5,000	+	₹ 51,000

Transaction 6: Purchased goods for ₹ 12,000 from Ram but paid only ₹ 4,000.

Its effect will be *(i)* stock will go up by ₹ 12,000 *(ii)* cash will be reduced by ₹ 4,000 and *(iii)* creditors will increase by ₹ 8000. New equation will be:

Transactions			*Assets*					=	*Liabilities*	+	*Capital*
	Cash	+	Stock	+	Furniture	+	Debtors	=	Creditors	+	Capital
Old equation	₹ 39,000	+	₹ 2,000	+	₹ 5,000	+	₹ 10,000	=	₹ 5,000	+	₹ 51,000
Transaction	– ₹ 4,000	+	₹ 12,000	+	0	+	0	=	₹ 8,000	+	0
New equation	₹ 35,000	+	₹ 14,000	+	₹ 5,000	+	₹ 10,000	=	₹ 13,000	+	₹ 51,000

It is, thus, clear that after each transaction, equation stands balanced *i.e.*, total of assets is equal to the total of liabilities and the capital. The result of the last equation can also be presented in the form of a statement, called balance sheet. The last equation will be shown as:

Balance Sheet of Ram
as at 31st March, 2020 (assumed)

Liabilities	*(₹)*	*Assets*	*(₹)*
Creditors	13,000	Cash	35,000
Capital	51,000	Stock	14,000
		Furniture	5,000
		Debtors	10,000
	64,000		64,000

It follows that left hand side of the balance sheet shows the sources of funds while the right hand side discloses the various assets in which the fund has been invested. This is due to the fact that each transaction is based on dual aspect concept.

Rules for Accounting Equations at a glance

Following general rules are observed while preparing accounting equation:

		Accounts Affected	
S.No.	*Transactions*	*Assets*	*Liabilities & Capital*
1.	**Capital brought in**	Cash increases (+)	Capital increases (+)
2.	**Drawing**	Cash decreases (–)	Capital decreases (–)
3.	**Fixed Asset purchased:**		
	(i) for cash	Cash (–), Asset (+)	–
	(ii) on credit	Fixed asset (+)	Liability (+)
4.	**Goods purchased**		
	(i) for cash	Cash (–); stock (+)	–
	(ii) on credit	Stock (+)	Liability (+)
5.	**Payment to creditors**	Cash (–)	Liability (–)
6.	**Sale of goods**		
	(i) Cost ₹ 5,000, sold for cash ₹ 6,000	Stock (–) ₹ 5,000; Cash (+) ₹ 6,000	Capital (+) ₹ 1,000 Profit
	(ii) Cost ₹ 5,000, sold to Ram on credit ₹ 6,000	Stock (–) ₹ 5,000; Debtors (+) ₹ 6,000	Capital (+) ₹ 1,000 Profit
	(iii) Cost ₹ 5,000, sold for cash ₹ 4,500	Stock (–) ₹ 5,000; Cash (+) ₹ 4,500	Capital (–) ₹ 500 Loss
7.	**Cash received from debtors**	Cash (+), Debtors (–)	–
8.	**B/R drawn on Debtors**	B/R (+), Debtors (–)	–
9.	**B/P accepted by creditors**	–	B/P (+), Creditors (–)
10.	**Redemption of Loan**		
	(i) by cash	Cash (–)	Loan (–)
	(ii) by issuing share capital	–	Loan (–); Capital +
11.	**Purchases return**	Stock (–)	Creditors (–)

12.	**Expenses:** *(i)* Salary paid *(ii)* Salary outstanding or Salary unpaid *(iii)* Salary prepaid *(iv)* Salary paid includes prepaid salary	 Cash (–) Cash (–); salary prepaid (+) salary prepaid (+)	 Capital (–) as expense is a loss Creditor (+), Capital (–) (Salary o/s) as expense is a loss Capital (+) as exp. charged be reduced
13.	**Income (*e.g.*, interest)** *(i)* Cash received *(ii)* Interest accrued (due but not received) *(iii)* Interest received in advance	 Cash (+) Accrued Int. (+) Cash (+)	 Capital (+) as it is gain Capital (+) as gain Interest received in advance (Liab.) +
14.	**Adjustments for:–** **Interest on capital** ₹ 100	 –	 Capital (No effect) as *(i)* Expense will reduce capital by ₹ 100 *(ii)* Interest on capital will increase capital by ₹ 100
15.	**Interest on drawing** ₹ 100	–	Capital (No effect) as *(i)* income will increase capital by ₹ 100 *(ii)* Interest on drawing will reduce capital by ₹ 100
16.	**Depreciation on fixed assets**	Fixed assets (–)	Capital (–) as depreciation is a loss
17.	**Bad debts**	Debtors (–)	Capital (–) as Bad Debt is a loss
18.	**Discount received** (Paid ₹ 1,900 to creditor, Ram in full settlement of his claim ₹ 2,000)	Cash (–) ₹ 1,900	Creditors (–) ₹ 2,000; Capital (+) 100 as discount received is a income
19.	**Discount allowed** (Received ₹ 1,900 from debtor, Ram is full settlement of ₹ 2,000)	Cash (+) ₹ 1,900; Debtor (–) ₹ 2,000	Capital (–) ₹ 100 as discount allowed is a loss
20.	**Sales Return**-goods costing ₹ 300 sold for ₹ 400 is returned	Stock (+) ₹ 300; debtors (–) ₹ 400	Capital (–) ₹ 100 (Profit is reduced)
21.	**Interest on loan**	Cash (–)	Capital (–)
22.	**Paid interest on Bank Loan** along with instalment (₹ 2,000 + 10,000)	Bank (–) ₹ 12,000	Bank Loan (–) ₹ 10,000 Capital (–) ₹ 2,000 as interest paid is a loss

Following illustrations will illustrate the mechanism of the accounting equation in a better way.

ILLUSTRATION 1: Show the accounting equation on the basis of the following transactions and prepare a balance sheet on the basis of last equation :

	(₹)
1. Mohan started business with cash	40,000
2. Purchased goods on credit	15,000
3. Purchased furniture for cash	10,000
4. Paid rent ₹ 300 and salary ₹ 700	–
5. Sold goods costing ₹ 12,000 on credit	15,000
6. Paid to creditors	8,500
7. Received Interest	1,500
8. Withdrew cash for private use	4,000
9. Bought goods from Ram for ₹ 8,000 and paid ₹ 5,000 immediately	–

SOLUTION: Accounting Equation of Mohan

S.No.	*Transactions*	*Assets*				=	*Liabilities*	+	*Capital*
		Cash +	*Stock* +	*Furniture* +	*Debtors*	=	*Creditors* +		*Capital*
1.	Started business with cash ₹ 40,000	40,000 +	0 +	0 +	0	=	0 +		40,000
2.	Purchased goods on credit ₹ 15,000	0 +	15,000 +	0 +	0	=	15,000 +		0
	New Equation	40,000 +	15,000 +	0 +	0	=	15,000 +		40,000
3.	Purchased furniture for cash ₹ 10,000	– 10,000 +	0 +	10,000 +	0	=	0 +		0
	New Equation	30,000 +	15,000 +	10,000 +	0	=	15,000 +		40,000
4.	Paid rent ₹ 300 and salary ₹ 700	– 1,000 +	0 +	0 +	0	=	0 –		1,000
	New Equation	29,000 +	15,000 +	10,000 +	0	=	15,000 +		39,000
5.	Sold goods costing ₹ 12,000 on credit ₹ 15,000;	0 –	12,000 +	0 +	15,000	=	0 +		3,000
	New Equation	29,000 +	3,000 +	10,000 +	15,000	=	15,000 +		42,000
6.	Paid to creditors ₹ 8,500	– 8,500 +	0 +	0 +	0	=	–8,500 +		0
	New Equation	20,500 +	3,000 +	10,000 +	15,000	=	6,500 +		42,000
7.	Interest received ₹ 1,500	+ 1,500 +	0 +	0 +	0	=	0 +		1,500
	New equation	22,000 +	3,000 +	10,000 +	15,000	=	6,500 +		43,500
8.	Withdrew cash for private use ₹ 4,000;	– 4,000 +	0 +	0 +	0	=	0 –		4,000
	New equation	18,000 +	3,000 +	10,000 +	15,000	=	6,500 +		39,500
9.	Bought goods from Ram ₹ 8,000 & paid cash ₹ 5,000;	– 5,000 +	8,000 +	0 +	0	=	3,000 +		0
	New equation	13,000 +	11,000 +	10,000 +	15,000	=	9,500 +		39,500

Balance Sheet of Mohan

as at .....

Liabilities	(₹)	*Assets*	(₹)
Creditors	9,500	Cash	13,000
Capital	39,500	Stock	11,000
		Furniture	10,000
		Debtors	15,000
	49,000		49,000

Working Notes:

1. Transaction no. 4. Rent & salary are expenses so capital will go down.
2. Transaction no 5. Stock will reduce by ₹ 12,000 while debtors will increase by ₹ 15,000. Capital will go up by ₹ 3,000 as profit (₹ 15,000 – 12,000)
3. Transaction 7. Interest received is a income so capital will increase.
4. Transaction 9. Stock will increase by ₹ 8,000, cash will be reduced by ₹ 5,000 and creditors will go up by ₹ 3,000 as it is credit purchase of goods.

U ILLUSTRATION 2: Prepare accounting equation of Amit on the basis of the following transactions:

1. Commenced business with cash ₹ 80,000.
2. Bought goods for cash ₹ 20,000 and on credit ₹ 25,000.
3. Paid wages ₹ 3,000 and rent ₹ 1,000.
4. Wages outstanding ₹ 1,000.
5. Sold goods costing ₹ 12,000 for ₹ 16,000 for cash.
6. Goods bought was returned to creditor ₹ 1,000.
7. Bought furniture for cash ₹ 2,000 and on credit ₹ 3,000.
8. Charge interest on capital @ 10% for the year.
9. Cash deposited into bank ₹ 50,000.

Also prepare his balance sheet on the basis of accounting equation.

SOLUTIONS: Accounting Equation of Amit

S.No.	*Transactions*	*Assets*				= *Liabilities*	+ *Capital*
		Cash +	*Stock* +	*Furniture* +	*Bank* =	*Creditors* +	*Capital*
1.	Commenced business with cash ₹ 80,000	80,000 +	0 +	0 +	0 =	0 +	80,000
2.	Bought goods for cash ₹ 20,000 and on credit ₹ 25,000;	– 20,000 +	45,000 +	0 +	0 =	25,000 +	0
	New equation	60,000 +	45,000 +	0 +	0 =	25,000 +	80,000
3.	Wages ₹ 3,000 & rent ₹ 1,000;	– 4,000 +	0 +	0 +	0 =	0 –	4,000
	New equation	56,000 +	45,000 +	0 +	0 =	25,000 +	76,000
4.	Wages outstanding ₹ 1,000;	0 +	0 +	0 +	0 =	+1,000 –	1,000
	New equation	56,000 +	45,000 +	0 +	0 =	26,000 +	75,000
5.	Sold goods costing ₹ 12,000 for ₹ 16,000 for cash	16,000 –	12,000 +	0 +	0 =	0 +	4,000

	New equation	72,000	+	33,000	+	0	+	0	=	26,000	+	79,000
6.	Goods bought was returned to creditor ₹ 1,000	0	–	1,000	+	0	+	0	=	–1,000	+	0
	New equation	72,000	+	32,000	+	0	+	0	=	25,000	+	79,000
7.	Bought furniture for cash ₹ 2,000 and on credit ₹ 3,000;	– 2,000	+	0	+	5,000	+	0	=	3,000	+	0
	New Equation	70,000	+	32,000	+	5,000	+	0	=	28,000	+	79,000
8.	Charge interest on capital @ 10% for the year	0	+	0	+	0	+	0	=	0	+	8,000
											–	8,000
	New Equation	70,000	+	32,000	+	5,000	+	0	=	28,000	+	79,000
9.	Cash deposited into bank ₹ 50,000	– 50,000	+	0	+	0	+	50,000	=	0	+	0
	New Equation	20,000	+	32,000	+	5,000	+	50,000	=	28,000	+	79,000

Notes: 1. Trans. 4 – Wages o/s is an expense so it will reduce capital and will increase creditors.

2. Trans. 5 – Stock will reduce by ₹ 12,000, cash will increase by ₹ 16,000 and capital will increase by ₹ 4,000 as profit will go up.

Balance Sheet of Amit

as at .....

Liabilities	(₹)	*Assets*	(₹)
Creditors	28,000	Cash	20,000
Capital	79,000	Stock	32,000
		Furniture	5,000
		Bank	50,000
	1,07,000		1,07,000

ILLUSTRATION 3: Sonu had the following transactions:

1. Commenced business with cash ₹ 1,00,000 of which he deposited ₹ 60,000 in bank.
2. Bought goods for cash ₹ 30,000 and on credit ₹ 40,000.
3. Purchased a machine for ₹ 2,00,000 by raising loan from P.N. Bank, Hisar.
4. Sold goods costing ₹ 20,000 @ a profit of 20% on cost to Mohan on credit.
5. Took goods of ₹ 5,000 and cash ₹ 4,000 for personal use.
6. Paid interest on loan ₹ 4,000 and instalment of bank loan ₹ 20,000 by cheque.
7. Commission received in advance ₹ 8,000.
8. Mohan returned goods worth ₹ 6,000.
9. Paid ₹ 20,000 to creditor by cheque.
10. Mohan settled his account at a discount of ₹ 500.
11. Charge depreciation on machine @ 10% for the whole year.

Use accounting equation to show the effect of above transactions.

SOLUTIONS: **Accounting Equation of Sonu**

S.No.	Transations	Assets					=	Liabilities	+	Capital	
		Cash +	Bank +	Stock +	Machine +	Debtors	= Creditors +	Bank Loan	+	Capital	
1.	Commenced business with cash ₹ 1,00,000 of which ₹ 60,000 deposited in bank	40,000 +	60,000 +	0 +	0 +	0	= 0 +	0	+	1,00,000	
2.	Bought goods for cash ₹ 30,000 and on credit ₹ 40,000	–30,000 +	0 +	70,000 +	0 +	0	= 40,000 +	0	+	0	
	New equation	10,000 +	60,000 +	70,000 +	0 +	0	= 40,000 +	0	+	1,00,000	
3.	Purchased a machine for ₹ 2,00,000 by raising bank loan from P.N.B.	0 +	0 +	0 +	2,00,000 +	0	= 0 +	2,00,000	+	0	
	New equation	10,000 +	60,000 +	70,000 +	2,00,000 +	0	= 40,000 +	2,00,000	+	1,00,000	
4.	Sold goods costing ₹ 20,000 @ a profit of 20% on credit	0 +	0 –	20,000 +	0 +	24,000	= 0 +	0	+	4,000	
	New equation	10,000 +	60,000 +	50,000 +	2,00,000 +	24,000	= 40,000 +	2,00,000	+	1,04,000	
5.	Took good ₹ 5,000 and cash ₹ 4,000 for personal use	–4,000 +	0 –	5,000 +	0 +	0	= 0 +	0	–	9,000	
	New equation	6,000 +	60,000 +	45,000 +	2,00,000 +	24,000	= 40,000 +	2,00,000	+	95,000	
6.	Paid interest on loan ₹ 4,000 and instalment ₹ 20,000 by cheque	0 –	24,000 +	0 +	0 +	0	= 0 –	20,000	–	4,000	
	New equation	6,000 +	36,000 +	45,000 +	2,00,000 +	24,000	= 40,000 +	1,80,000	+	91,000	
											Adv. Comm.
7.	Commission received in advance ₹ 8,000	+8,000 +	0 +	0 +	0 +	0	= 0 +	0	+	0	+ 8,000
	New equation	14,000 +	36,000 +	45,000 +	2,00,000 +	24,000	= 40,000 +	1,80,000	+	91,000	+ 8,000
8.	Mohan returned goods ₹ 6,000	0 +	0 +	5,000 +	0 –	6,000	= 0 +	0	–	1,000	+ 0
	New equation	14,000 +	36,000 +	50,000 +	2,00,000 +	18,000	= 40,000 +	1,80,000	+	90,000	+ 8,000
9.	Paid to creditors by cheque ₹ 20,000	0 –	20,000 +	0 +	0 +	0	= 20,000 +	0	+	0	+ 0
	New equation	14,000 +	16,000 +	50,000 +	2,00,000 +	18,000	= 20,000 +	1,80,000	+	90,000	+ 8,000
10.	Mohan settled his account at a discount of ₹ 500	17,500 +	0 +	0 +	0 –	18,000	= 0 +	0	–	500	+ 0
	New equation	31,500 +	16,000 +	50,000 +	2,00,000 +	0	= 20,000 +	1,80,000	+	89,500	+ 8,000
11.	Charge depreciation on Machine @ 10%	0 +	0 +	0 –	20,000 +	0	= 0 +	0	–	20,000	+ 0
	New equation	31,500 +	16,000 +	50,000 +	1,80,000 +	0	= 20,000 +	1,80,000	+	69,500	+ 8,000

Notes: 1. Trans. 8 Mohan return goods worth ₹ 6,000 means 6,000 × 20/120 = ₹ 1,000 profit so cost is ₹ 5,000.
2. Trans. 10 Due to Mohan ₹ 18,000, allowed discount ₹ 500 so amount paid is ₹ 17,500 and capital will decrease by ₹ 500.

U ILLUSTRATION 4: Prepare accounting equation from the following transactions:

1. Sumit started business with cash ₹ 10,000; goods ₹ 30,000 and machinery worth ₹ 50,000.
2. Goods purchased from Ram on credit ₹ 15,000.
3. Sold goods costing ₹ 20,000 for ₹ 25,000 to Ruchi and received ₹ 10,000 in cash.
4. Paid ₹ 14,500 to Ram in full settlement of his account.
5. Ruchi returned goods for ₹ 5,000 being defective.
6. Ruchi settled her account at a discount of ₹ 200.
7. Withdrew cash ₹ 2,000 and goods for ₹ 3,000 for personal use by Sumit.
8. Charge depreciation on machinery @ 10% for the year.

SOLUTIONS: Accounting Equation of Sumit

S.No.	*Transactions*	*Assets*				=	*Liabilities*	+	*Capital*
		Cash +	*Stock* +	*Machinery* +	*Debtors*	=	*Creditors*	+	*Capital*
1.	Started business with cash ₹ 10,000 goods ₹ 30,000 & machinery ₹ 50,000	10,000 +	30,000 +	50,000 +	0	=	0	+	90,000
2.	Purchased goods from Ram ₹ 15,000	0 +	15,000 +	0 +	0	=	15,000	+	0
	New equation	10,000 +	45,000 +	50,000 +	0	=	15,000	+	90,000
3.	Sold goods to Ruchi costing ₹ 20,000 for ₹ 25,000 and received ₹ 10,000 in cash	+ 10,000 –	20,000 +	0 +	15,000	=	0	+	5,000
	New equation	20,000 +	25,000 +	50,000 +	15,000	=	15,000	+	95,000
4.	Paid ₹ 14,500 to Ram in full settlement of his account	–14,500 +	0 +	0 +	0	=	–15,000	+	500
	New equation	5,500 +	25,000 +	50,000 +	15,000	=	0	+	95,500
5.	Ruchi returned goods for ₹ 5,000 being defective	0 +	4,000 +	0 –	5,000*	=	0	–	1,000
	New equation	5,500 +	29,000 +	50,000 +	10,000	=	0	+	94,500
6.	Ruchi settled account at a discount of ₹ 200	+9,800 +	0 +	0 –	10,000	=	0	–	200
	New equation	15,300 +	29,000 +	50,000 +	0	=	0	+	94,300
7.	Withdrew cash ₹ 2,000 and goods ₹ 3,000 for personal use	–2,000 –	3,000 +	0 +	0	=	0	–	5,000
	New equation	13,300 +	26,000 +	50,000 +	0	=	0	+	89,300
8.	Depreciation @ 10% on Machinery	0 +	0 –	5,000 +	0	=	0	–	5,000
	New equation	13,300 +	26,000 +	45,000 +	0	=	0	+	84,300

Notes: 1. Trans 3 – Stock will decrease by ₹ 20,000, cash will increase by ₹ 10,000, Debtors by ₹ 15,000 and profit by ₹ 5,000.

2. Trans 4 – Cash will reduce by ₹ 14,500 and creditors by ₹ 15,000 but capital will increase by ₹ 500 due to discount received.

3. Trans 5 – Cost of goods returned = ₹ 5,000 × $\frac{20,000}{25,000}$ = ₹ 4,000 so stock will reduce by ₹ 4,000, Debtors by ₹ 5,000 and capital by ₹ 1,000 as profit will go down.

4. Trans 6 – Amount due to Ruchi is ₹10,000 so discount allowed will reduce capital by ₹ 200.

A ILLUSTRATION 5: Show that accounting equation is satisfied in all the following transactions of Sumit:

1. Started business with cash ₹ 40,000, goods ₹ 50,000 and furniture ₹ 10,000.
2. Purchased goods from Sohan ₹ 20,000.
3. He sold goods purchased from Sohan for ₹ 25,000 to Ram.
4. He paid Sohan in full settlement of his account ₹ 19,500.
5. Received cash from Ram in full settlement ₹ 24,200.
6. Paid Rent ₹ 3,000 but ₹ 800 is still outstanding.
7. Charge depreciation on furniture ₹ 1,000.
8. Received commission ₹ 2,000 including ₹ 500 as advance.
9. Charge interest on capital ₹ 8,000.

SOLUTION: Accounting Equation of Sumit

S.No.	Transactions	Assets				=	Liabilities	+	Capital	
		Cash	+ Stock	+ Furniture	+ Debtors	=	Creditors	+ Rent O/S	+ Adv. Com.	+ Capital
1.	Started business with cash ₹ 40,000, goods ₹ 50,000 and furniture ₹ 10,000	40,000	+ 50,000	+ 10,000	+ 0	=	0	+ 0	+ 0	+ 1,00,000
2.	Purchased goods from Sohan ₹ 20,000	0	+ 20,000	+ 0	+ 0	=	20,000	+ 0	+ 0	+ 0
	New equation	40,000	+ 70,000	+ 10,000	+ 0	=	20,000	+ 0	+ 0	+ 1,00,000
3.	Sold goods bought from Sohan for ₹ 25,000 to Ram	0	– 20,000	+ 0	+ 25,000	=	0	+ 0	+ 0	+ 5,000
	New equation	40,000	+ 50,000	+ 10,000	+ 25,000	=	20,000	+ 0	+ 0	+ 1,05,000
4.	Paid Sohan ₹ 19,500 in full settlement	–19,500	+ 0	+ 0	+ 0	=	– 20,000	+ 0	+ 0	+ 500
	New equation	20,500	+ 50,000	+ 10,000	+ 25,000	=	0	+ 0	+ 0	+ 1,05,500
5.	Received cash from Ram ₹ 24,200 in full settlement	24,200	+ 0	+ 0	– 25,000	=	0	+ 0	+ 0	– 800
	New equation	44,700	+ 50,000	+ 10,000	+ 0	=	0	+ 0	+ 0	+ 1,04,700
6.	Paid rent ₹ 3,000 but ₹ 800 still o/s	–3,000	+ 0	+ 0	+ 0	=	0	+ 800	+ 0	– 3,800
	New equation	41,700	+ 50,000	+ 10,000	+ 0	=	0	+ 800	+ 0	+ 1,00,900

7.	Charge depreciation on furniture ₹ 1,000	0 +	0 –	1,000 +	0 =	0 +	0 +	0 –	1,000
	New equation	41,700 +	50,000 +	9,000 +	0 =	0 +	800 +	0 +	99,900
8.	Received commission ₹ 2,000 including ₹ 500 as advance	+2,000 +	0 +	0 +	0 =	0 +	0 +	500 +	1,500
	New equation	43,700 +	50,000 +	9,000 +	0 =	0 +	800 +	500 +	1,01,400
9.	Charge interest on capital ₹ 8,000	0 +	0 +	0 +	0 =	0 +	0 +	0 +	8,000
								–	8,000
	New equation	43,700 +	50,000 +	9,000 +	0 =	0 +	800 +	500 +	1,01,400

Notes: *(i)* Trans 4 – Discount received ₹ 500 is profit so capital will increase.
(ii) Trans 5 – Discount allowed ₹ 800 is a loss so capital will reduce by ₹ 800.
(iii) Trans 6 – Rent o/s is an expense so capital will reduce by ₹ 3,800 (*i.e.*, 3,000 + 800)
(iv) Trans 8 – Advance commission is ₹ 500 so income of current year is ₹ 1,500.

A ILLUSTRATION 6: Ramesh started business with a capital of ₹ 1,00,000. Following transactions took place during the year:

1. Deposited ₹ 60,000 in bank.
2. Purchased goods from Amit ₹ 30,000.
3. Sold goods costing ₹ 20,000 for ₹ 25,000 to Mohan out of which ₹ 7,000 received in cash.
4. Paid salary ₹ 5,000 but salary still unpaid ₹ 1,000.
5. Received commission ₹ 2,000 including ₹ 500 as advance.
6. Sold goods costing ₹ 5,000 at a loss of ₹ 500 in cash.
7. Received ₹ 17,400 from Mohan in full settlement of his account by cheque.
8. Returned goods to Amit ₹ 2,000.
9. Issued a cheque of ₹ 27,200 to Amit in full settlement of his account.

Use accounting equation to give effect to above transaction.

SOLUTION: **Accounting Equation of Ramesh**

S.No.	*Transactions*	*Assets*				= *Liabilities*	+ *Capital*		
		Cash +	*Bank* +	*Stock* +	*Debtors* =	*Creditors* +	*Salary O/S* +	*Adv. Com.* +	*Capital*
	Started business with a capital of ₹ 1,00,000	1,00,000 +	0 +	0 +	0 =	0 +	0 +	0 +	1,00,000
1.	Deposited ₹ 60,000 in bank	–60,000 +	60,000 +	0 +	0 =	0 +	0 +	0 +	0
	New equation	40,000 +	60,000 +	0 +	0 =	0 +	0 +	0 +	1,00,000
2.	Purchased goods from Amit ₹ 30,000	0 +	0 +	30,000 +	0 =	30,000 +	0 +	0 +	0
	New equation	40,000 +	60,000 +	30,000 +	0 =	30,000 +	0 +	0 +	1,00,000
3.	Sold goods costing ₹ 20,000 for ₹ 25,000 to Mohan & received ₹ 7,000 in cash	7,000 +	0 –	20,000 +	1,8000 =	0 +	0 +	0 +	5,000
	New equation	47,000 +	60,000 +	10,000 +	18,000 =	30,000 +	0 +	0 +	1,05,000

4.	Paid salary ₹ 5,000 but ₹ 1,000 still unpaid	–5,000	+ 0	+ 0	+ 0	= 0	+ 1,000	+ 0	–	6,000
	New equation	42,000	+ 60,000	+ 10,000	+ 18,000	= 30,000	+ 1,000	+ 0	+	99,000
5.	Received commission ₹ 2,000 including ₹ 500 as advance	+2,000	+ 0	+ 0	+ 0	= 0	+ 0	+ 500	+	1,500
	New equation	44,000	+ 60,000	+ 10,000	+ 18,000	= 30,000	+ 1,000	+ 500	+	1,00,500
6.	Sold goods costing ₹ 5,000 at a loss of ₹ 500 for cash	+4,500	+ 0	– 5,000	+ 0	= 0	+ 0	+ 0	–	500
	New equation	48,500	+ 60,000	+ 5,000	+ 18,000	= 30,000	+ 1,000	+ 500	+	1,00,000
7.	Received ₹ 17,400 from Mohan in full settlement by cheque	0	+ 17400	+ 0	– 18,000	= 0	+ 0	+ 0	–	600
	New equation	48,500	+ 77,400	+ 5,000	+ 0	= 30,000	+ 1,000	+ 500	+	99,400
8.	Returned goods to Amit ₹ 2,000	0	+ 0	– 2,000	+ 0	= –2,000	+ 0	+ 0	+	0
	New equation.	48,500	+ 77,400	+ 3,000	+ 0	= 28,000	+ 1,000	+ 500	+	99,400
9.	Issued cheque of ₹ 27,200 to Amit in full settlement of account	0	– 27,200	+ 0	+ 0	=–28,000	+ 0	+ 0	+	800
	New equation.	48,500	+ 50,200	+ 3,000	+ 0	= 0	+ 1,000	+ 500	+	1,00,200

Notes: *(i)* Trans 3 – Profit on sale ₹ 5,000 will increase capital.
(ii) Trans 4 – Salary o/s is expense so capital will reduce by ₹ 6,000 (5,000 + 1,000).
(iii) Trans 5 – Advance commission ₹ 500 means current year income is ₹ 1,500 only.
(iv) Trans 7 – Discount allowed ₹ 600 is a loss so capital will reduce by ₹ 600.
(v) Trans 9 – Discount received ₹ 800 is an income.

A ILLUSTRATION 7: Show that accounting equation is satisfied in the following cases:

1. Ajay commenced business with cash ₹ 40,000 and goods ₹ 20,000.
2. Sold half the goods at a profit of 25% to Ram.
3. Sold half the goods at a loss of 10% for cash.
4. Bought goods from Rakesh ₹ 25,000 and paid ₹ 9,000 in cash.
5. Bought furniture ₹ 7,000 for office use and for ₹ 3,000 for domestic purpose.
6. Paid insurance premium ₹ 1,000 of which ₹ 200 is prepaid.

SOLUTION: **Accounting Equation of Ajay**

S.No.	*Transactions*	*Assets*					= *Liabilities*	+ *Capital*
		Cash +	*Stock* +	*Debtors* +	*Furniture* +	*Prepaid Ins.* =	*Creditors* +	*Capital*
1.	Commenced business with cash ₹ 40,000 & goods ₹ 20,000	40,000 +	20,000 +	0 +	0 +	0 =	0 +	60,000

2.	Sold half goods at 25% profit to Ram	0 –	10,000 +	12,500 +	0 +	0 =	0 +	2,500
	New equation	40,000 +	10,000 +	12,500 +	0 +	0 =	0 +	62,500
3.	Sold half goods at 10% loss for cash	9,000 –	10,000 +	0 +	0 +	0 =	0 –	1,000
	New equation	49,000 +	0 +	12,500 +	0 =	0 =	0 +	61,500
4.	Bought goods from Rakesh ₹ 25,000 and paid ₹ 9,000 in cash	–9,000 +	25,000 +	0 +	0 +	0 =	16,000 +	0
	New equation	40,000 +	25,000 +	12,500 +	0 +	0 =	16,000 +	61,500
5.	Bought furniture ₹ 7,000 for office use & ₹ 3,000 for domestic use	–10,000 +	0 +	0 +	7,000 +	0 =	0 –	3,000
	New equation	30,000 +	25,000 +	12,500 +	7,000 +	0 =	16,000 +	58,500
6.	Paid insurance premium ₹ 1,000 of which ₹ 200 is prepaid	–1,000 +	0 +	0 +	0 +	200 =	0 –	800
	New equation	29,000 +	25,000 +	12,500 +	7,000 +	200 =	16,000 +	57,700

Notes: *(i)* Trans 2 – Sold ½ of ₹ 20,000 goods @ 25% profit so profit ₹ 2,500 will increase capital.
(ii) Trans 3 – Sold goods of ₹ 10,000 @ 10% loss so loss of ₹ 1,000 will reduce capital.
(iii) Trans 5 – Bought furniture for domestic purpose is a drawing so capital will reduce.
(iv) Trans 6 – Prepaid insurance ₹ 200 is asset and insurance paid for current year ₹ 800 is expense.

A ILLUSTRATION 8: Use accounting equation for the following transaction of Vijay:

1. Started business with cash ₹ 80,000.
2. Bought goods for cash ₹ 20,000 and on credit from Ram for ₹ 30,000.
3. Sold goods bought for cash to Mohan for ₹ 24,000.
4. Settled the account of Ram by paying ₹ 29,500.
5. Salary paid to Ajay ₹ 8,000.
6. Ajay requested for advance against salary of ₹ 1,000 and he got it.
7. Paid rent ₹ 7,000 but ₹ 1,000 rent is still due.
8. Paid insurance premium of ₹ 2,000 of which ¼th premium is for next year.

SOLUTION: Accounting Equation of Vijay

S.No.	*Transactions*	*Assets*				=	*Liabilities*	+ *Capital*
		Cash +	*Stock* +	*Debtors* +	*Prepaid Exp.*	= *Creditors* +	*O/s Exp.* +	*Capital*
1.	Started business with cash ₹ 80,000	80,000 +	0 +	0 +	0	= 0 +	0 +	80,000
2.	Bought goods for cash ₹ 20,000 and on credit for ₹ 30,000 from Ram	–20,000 +	50,000 +	0 +	0	= 30,000 +	0 +	0

	New equation	60,000 +	50,000 +	0 +	0 =	30,000 +	0 +	80,000
3.	Sold goods bought for cash to Mohan for ₹ 24,000	0 –	20,000 +	24,000 +	0 =	0 +	0 +	4,000
	New equation	60,000 +	30,000 +	24,000 +	0 =	30,000 +	0 +	84,000
4.	Settled the account of Ram by paying ₹ 29,500	–29,500 +	0 +	0 +	0 =	–30,000 +	0 +	500
	New equation	30,500 +	30,000 +	24,000 +	0 =	0 +	0 +	84,500
5.	Salary paid to Ajay ₹ 8,000	–8,000 +	0 +	0 +	0 =	0 +	0 +	–8,000
	New equation	22,500 +	30,000 +	24,000 +	0 =	0 +	0 +	76,500
6.	Advance Salary given to Ajay ₹ 1,000	–1,000 +	0 +	0 +	1,000 =	0 +	0 +	0
	New equation	21,500 +	30,000 +	24,000 +	1,000 =	0 +	0 +	76,500
7.	Rent paid ₹ 7,000 and still due ₹ 1,000	–7,000 +	0 +	0 +	0 =	0 +	1,000 –	8,000
	New equation	14,500 +	30,000 +	24,000 +	1,000 =	0 +	1,000 +	68,500
6.	Paid insurance ₹ 2,000 of which ¼th is prepaid	–2,000 +	0 +	0 +	500 =	0 +	0 –	1,500
	New equation	12,500 +	30,000 +	24,000 +	1,500 =	0 +	1,000 +	67,000

Notes: *(i)* Trans 3 – Profit on sale ₹ 4,000 will increase capital.

(ii) Trans 4 – Discount received ₹ 500 from Ram will increase capital.

(iii) Trans 7 – Rent paid is ₹ 7,000 and o/s rent is ₹1,000 so expense ₹ 8,000 will reduce capital by ₹ 8,000.

(iv) Trans 8 – Insurance paid ₹ 2,000 include ₹ 500 as prepaid so capital will be reduced by ₹ 1,500 as current year expense is ₹ 1,500 only.

A ILLUSTRATION 9: Show that accounting equation is satisfied in the following cases:

1. Ram commenced business with cash ₹ 50,000 and goods ₹ 30,000.
2. Sold 40% goods at a profit of 25% to Mohan.
3. Paid salary ₹ 4,000 but ₹ 1,000 still remains unpaid.
4. Paid insurance premium ₹ 2,000 of which ₹ 500 relates to next year.
5. Salary of ₹ 1,000 is prepaid to an employee whose son is ill.
6. Goods costing ₹ 2,000 was distributed as free samples and goods worth ₹ 3,000 was withdrawn by Ram for person use.

SOLUTION: **Accounting Equation of Ram**

S.No.	*Transactions*	*Assets*				=	*Liabilities*	+	*Capital*
		Cash +	*Stock* +	*Debtors* +	*Prepaid Exp.*	=	*Salary O/s*	+	*Capital*
1.	Commenced business with cash ₹ 50,000 & goods ₹ 30,000	50,000 +	30,000 +	0 +	0	=	0	+	80,000
2.	Sold 40% goods at a profit of 25% to Mohan	0 –	12,000 +	15,000 +	0	=	0	+	3,000
	New equation	50,000 +	18,000 +	15,000 +	0	=	0	+	83,000
3.	Paid salary ₹ 4,000 & ₹ 1,000 is o/s	–4,000 +	0 +	0 +	0	=	1,000	–	5,000

	New equation	46,000	+	18,000	+	15,000	+	0	=	1,000	+	78,000
4.	Paid ₹ 2,000 as insurance premium including ₹ 500 prepaid	–2,000	+	0	+	0	+	500	=	0	–	1,500
	New equation	44,000	+	18,000	+	15,000	+	500	=	1,000	+	76,500
5.	Prepaid salary ₹ 1,000	–1,000	+	0	+	0	+	1,000	=	0	+	0
	New equation	43,000	+	18,000	+	15,000	+	1,500	=	1,000	+	76,500
6.	Goods of ₹ 2,000 distributed as free samples & ₹ 3,000 worth taken for personal use	0	–	5,000	+	0	+	0	=	0	–	5,000
	New equation	43,000	+	13,000	+	15,000	+	1,500	=	1,000	+	71,500

Notes: *(i)* Trans 2 – Goods worth ₹ 12,000 sold for ₹ 15,000 so ₹ 3,000 profit will increase capital.

(ii) Trans 3 – Salary paid ₹ 4,000 & o/s is ₹ 1,000 so expense ₹ 5,000 will reduce capital.

(iii) Trans 4 – Insurance premium ₹ 2,000 has prepaid ₹ 500 so current year expense is ₹ 1,500.

(iv) Trans 5 – Prepaid salary paid will reduce cash & will increase prepaid exp.

(v) Trans 6 – Free sample is advertisement. It will reduce capital along with drawing.

U ILLUSTRATION 10: Find the total assets of the firm if the capital is ₹ 60,000 and liabilities ₹ 39,000.

SOLUTION: We know that Accounting equation is:

Total Assets = Liabilities + Capital

Total Assets = ₹ 39,000 + ₹ 60,000

= ₹ 99,000

U ILLUSTRATION 11: Find the capital (net worth) of the business if total assets are ₹ 1,70,000 and its liabilities are ₹ 70,000.

SOLUTION: We know that accounting equation is:

Total assets = liabilities + capital

Capital (net worth) = total assets – liabilities

= ₹ 1,70,000 – ₹ 70,000

= ₹ 1,00,000

U ILLUSTRATION 12: X commenced business on 1st April, 2019 with a capital of ₹ 50,000. On 31st March, 2020, his assets worth ₹ 95,000 and liabilities of ₹ 30,000. Find his capital at the end of the year and profit earned during the year.

SOLUTION: We know that:

Capital + Liabilities = Total Assets

Capital + ₹ 30,000 = ₹ 95,000

Closing Capital = ₹ 95,000 – ₹ 30,000 = **₹ 65,000**

Profit = Closing Capital – Opening Capital

Profit = ₹ 65,000 – ₹ 50,000

= ₹ 15,000

ILLUSTRATION 13: A started business on 1st April 2019 with a capital of ₹ 1,10,000 and took loan from bank ₹ 40,000. At the end of the year on 31st March, 2020, his assets were for ₹ 2,50,000, creditors for ₹ 70,000. Bank loan has not been paid so for, however, interest on loan has been paid. Find the closing capital and profit earned during year.

SOLUTION:

Closing capital = Closing assets – Closing liabilities
= ₹ 2,50,000 – ₹ 70,000 (creditors) – ₹ 40,000 (Bank loan)
= ₹ 1,40,000

Profit = Closing capital – Opening capital
= ₹ 1,40,000 – ₹ 1,10,000
= ₹ 30,000

ILLUSTRATION 14: Ram started a business on 1st January 2019 with a capital of ₹ 1,00,000. During the year ending 31st December 2019, he introduced further capital of ₹ 20,000 and withdrew goods and cash worth ₹ 15,000 for personal use. On 31st Dec., 2019, his assets includes cash ₹ 30,000 stock ₹ 80,000 Debtors ₹ 40,000 and furniture ₹ 30,000 and liabilities includes bank loan ₹ 30,000 and creditors ₹ 20,000.

Ascertain his capital at the end of 2019 and profit or loss incurred during the year.

SOLUTION:

Total Assets at end = Cash + Stock + Debtors + Furniture
= ₹ 30,000 + ₹ 80,000 + ₹ 40,000 + ₹ 30,000
= ₹ 1,80,000

Closing capital = Closing assets – Closing liabilities
= ₹ 1,80,000 – ₹ 30,000 (Bank loan) – ₹ 20,000 (creditors)
= ₹ 1,30,000

Profit: We know that

Closing capital = Opening capital + Further capital – Drawing + Profit

∴ Profit = Closing capital + Drawing – Further capital – Opening capital
= ₹ 1,30,000 + ₹ 15,000 – ₹ 20,000 – ₹ 1,00,000
= ₹ 25,000

ILLUSTRATION 15: Find the opening capital of the firm from the following information given at the end of the year:

Total assets ₹ 1,30,000; external liabilities ₹ 40,000. During the year, proprietor introduced additional capital of ₹ 20,000, withdrew ₹ 15,000 for personal use and earned a profit of ₹ 25,000.

SOLUTION:

Closing capital = Total assets – External liabilities
= ₹ 1,30,000 – ₹ 40,000 = ₹ 90,000

We know that:

Closing capital = Opening capital + Additional capital – Drawing + Profit

₹ 90,000 = Opening capital + ₹ 20,000 – ₹ 15,000 + ₹ 25,000

₹ 90,000 = Opening capital + ₹ 30,000

or Opening capital = ₹ 90,000 – 30,000

= ₹ 60,000

U ILLUSTRATION 16: Give an example of each type of transaction from the following information:

(i) Increase in asset, increase in liability

(ii) Increase in asset, increase in owner's capital

(iii) Increase in liability, decrease in another liability

(iv) Decrease in liability, increase in owner's equity

(v) Increase in asset, decrease in another asset

(vi) Decrease in asset, decrease in liability

(vii) Decrease in asset, decrease in owner's equity

SOLUTION:

(i) Purchase of goods on credit – Increase in stock, increase in creditors

(ii) Additional capital introduced – Increase in cash, increase in capital

(iii) Acceptance of B/P – Increase in B/P, Decrease in creditors

(iv) Conversion of loan into capital – Decrease in loan, increase in capital

(v) Cash received from debtors, – Increase in cash, decrease in debtors or furniture purchased for cash – Increase in furniture, decrease in cash

(vi) Repayment of loan or paid to creditors – Decrease in cash, decrease in liability

(vii) Drawing – Decrease in cash, decrease in capital

R MEANING OF DEBIT AND CREDIT

We have read that transaction are recorded in the books of accounts on the basis of dual aspect concept. Accordingly, every business transaction has two aspects *i.e.,* a debit and a credit of equal amount. For every debit, there is a credit of equal amount in one or more accounts and a vice versa. The system of accounting is, thus, called double entry system and the place where such a record is kept and maintained is called as 'Account'. We have separate accounts for each items such as Account of Ram, machinery, salary, sales, purchases, capital, etc.

In accounting terminology, account refers to ledger record of each item in a summarised form. All accounts are divided into two sides, the left side of an account is called debit side and right side of an account is called credit side. Thus, an account looks like the letter 'T' *e.g.,* all cash transactions are recorded in cash account as per the format given below:

Dr. **Cash Account** *Cr.*

Date	*Particulars*	*J.F.*	(₹)	*Date*	*Particulars*	*J.F.*	(₹)

← *Debit Side* → ← *Credit Side* →

In accounting language, an account is written as A/c. On the basis of each account, we can ascertain the ultimate position of each account at the end of an accounting period. For instance, goods sold is written on the left side (debit) of customer's account and payments received from the customer are shown on the right side (credit). The difference between the total of two sides reflects balance due towards the customers. The debit side in above is shown as Dr. and credit side as Cr.

RULES OF DEBIT AND CREDIT

From the point of view of recording, all the accounts are divided into five categories, namely *(i)* assets *(ii)* liabilities *(iii)* capital *(iv)* expenses/losses *(v)* revenue/gains.

We know that the accounting equation is:

Asset = Liabilities + Capital

Assets have debit balance while liabilities and capital have credit balance. We have read in accounting equation that expenses/losses reduce the capital so they have to be debited while income/gains increase the capital so they have to be credited. Thus, two set of simple rules have emerged for recording debit and credit in any account.

These rules are:

I. Rule for recording changes in assets/expenses (losses):

(i) Debit increase in assets

(ii) Debit increase in expenses/losses

(iii) Credit decrease in asset/expenses

II. Rule of recording changes in liabilities and Capital/Revenues (gains):

(i) Credit increase in liabilities / capital

(ii) Debit decrease in liabilities / capital

(iii) Credit increase in revenue / gains

(iv) Debit decrease in revenue

These rules can also be exhibited with the help of accounts

Dr. **Assets A/c** *Cr.*

Increase in Asset	Decrease in Asset

Dr.	**Expenses (losses) A/c**	*Cr.*
Increase in Expenses		Decrease in Expenses

Dr.	**Liabilities A/c**	*Cr.*
Decrease in Liabilities		Increase in Liabilities

Dr.	**Capital A/c**	*Cr.*
Decrease in capital		Increase in capital

Dr.	**Revenue (gain) A/c**	*Cr.*
Decrease in revenue		Increase in revenue

Example:

For more clarity of the concept, take an example:

Transaction 1: Started business with cash ₹ 40,000.

Analysis:

(i) Cash (Asset) will increase so debit Cash A/c

(ii) Capital will increase so credit Capital A/c

Dr.	**Cash A/c**	*Cr.*
(₹)		
40,000		

Dr.	**Capital A/c**	*Cr.*
		(₹)
		40,000

Transaction 2: Cash deposited into bank ₹ 30,000

Analysis:

(i) Cash (Asset) decreases so credit Cash A/c

(ii) Bank (Asset) balance increases so debit Bank A/c

Dr.	**Cash A/c**	*Cr.*
		(₹)
		30,000

Dr.	**Bank A/c**	*Cr.*
(₹)		
30,000		

Transaction 3: Bought goods for cash ₹ 8,000

Analysis:

(i) Goods (purchases) is an expense as it increases so debit Purchases A/c

(ii) Cash (Asset) decreases so credit Cash A/c

Dr.	Purchases A/c	Cr.
	(₹)	
	8,000	

Dr.	Cash A/c	Cr.
		(₹)
		8,000

Transaction 4: Bought furniture from Ram on credit ₹ 13,000.

Analysis:

(i) Furniture (Asset) increases so it is debited

(ii) Ram becomes creditor (liability) so it is credited.

Dr.	Furniture A/c	Cr.
	(₹)	
	13,000	

Dr.	Ram (Creditor) A/c	Cr.
		(₹)
		13,000

Transaction 5: Goods costing ₹ 3,000 was sold to Mohan for ₹ 4,500.

Analysis:

(i) Sales (Revenue) increase so credit sales A/c

(ii) Mohan become debtor (asset) so debit Mohan as asset increases.

Dr.	Sales A/c	Cr.
		(₹)
		4,500

Dr.	Mohan (Debtor) A/c	Cr.
	(₹)	
	4,500	

Transaction 6: Withdrew cash ₹ 1,000 and goods ₹ 2,000 for personal use.

Analysis:

(i) Cash (Asset) reduces by ₹ 1,000 and stock (asset) reduces by ₹ 2,000 so credit them.

(ii) Personal use of owner means that capital is reduced so debit it.

Dr.	Cash A/c	Cr.
		(₹)
		1,000

Dr.	Stock A/c	Cr.
		(₹)
		2,000

Dr.	Capital A/c	Cr.
(₹)		
3,000		

Transaction 7: Paid salary ₹ 2,000 in cash.

Analysis:

(i) Salary (expense) increases so debit it

(ii) Cash (Asset) decreases so credit it

Dr.	Salary A/c	Cr.
(₹)		
2,000		

Dr.	Cash A/c	Cr.
		(₹)
		2,000

Transaction 8: Charge depreciation on furniture worth ₹ 3,000 @ 10%

Analysis:

(i) Depreciation (Expense/loss) increases so debit it

(ii) Furniture (Asset) will decrease so credit it.

Dr.	Depreciation A/c	Cr.
(₹)		
300		

Dr.	Furniture A/c	Cr.
		(₹)
		300

U ILLUSTRATION 17: On which side the increase in the following accounts be recorded? Also specify the nature of accounts to which they belong:

(i) Ram (Proprietor)
(ii) Rent A/c
(iii) Purchase of goods
(iv) Cash A/c
(v) Sales A/c
(vi) Interest received
(vii) Debtor's A/c
(viii) Creditors A/c
(ix) Bank A/c
(x) Furniture A/c

SOLUTION:

(i) Credit – capital
(ii) Debit – expense
(iii) Debit – expense
(iv) Debit – Asset
(v) Credit – Revenue
(vi) Credit – Income/gain
(vii) Debit – Asset
(viii) Credit – Liabilities
(ix) Debit – Asset
(x) Debit – Asset

U ILLUSTRATION 18: On which side the decrease in the following accounts be recorded? Also specify the nature of account:

(i) Capital A/c
(ii) Machinery A/c
(iii) Ram: a customer
(iv) Mohan: a supplier of goods
(v) Salary outstanding

SOLUTION:

(i) Debit – capital A/c
(ii) Credit – Asset
(iii) Credit – Asset
(iv) Debit – Liability
(v) Debit – Liability

U ILLUSTRATION 19: Open a T-shape account of furniture and put the following transactions on the proper side of furniture A/c and balance the account.

1. Furniture purchased ₹ 10,000
2. Furniture purchased further ₹ 6,000
3. Sold furniture costing ₹ 4,000
4. Depreciation on furniture ₹ 2,000

SOLUTION:

Dr. **Furniture A/c** *Cr.*

Particulars	*(₹)*	*Particulars*	*(₹)*
1.	10,000	3.	4,000
2.	6,000	4.	2,000
		Balance	10,000
	16,000		16,000

U ILLUSTRATION 20: Open a T-shape account of creditor, Ram from the following transactions and balance it:

	(₹)
1. Bought goods from Ram	15,000
2. Paid cash to Ram	7,000
3. Again bought goods from Ram	8,000
4. Goods returned – being defective to Ram	1,000
5. Paid cheque to Ram	10,000

SOLUTION:

Dr. **Ram's (Creditor) A/c** *Cr.*

Particulars	(₹)	*Particulars*	(₹)
2. Cash	7,000	1. Purchases	15,000
4. Purchases return	1,000	3. Purchases	8,000
5. Bank	10,000		
Balance	5,000		
	23,000		23,000

ILLUSTRATION 21: Open a T-shape account of Amit, the proprietor of the business from the following transactions and balance it:

		(₹)	(₹)
(i)	Commenced business with:		
	cash	10,000	
	goods	20,000	
	furniture	15,000	45,000
(ii)	Further capital introduced		15,000
(iii)	Drawing made:	(₹)	
	in cash	4,000	
	in goods	6,000	10,000
(iv)	Profit during year		18,000

SOLUTION:

Dr. **Amit's Capital A/c** *Cr.*

Particulars	(₹)	*Particulars*	(₹)
3. –	10,000	1. –	45,000
Balance	68,000	2. –	15,000
		4. –	18,000
	78,000		78,000

ILLUSTRATION 22: Write the following transactions in the cash A/c, debtor's A/c and creditor's A/c and balance them:

		(₹)
1.	Cash sales	15,000
2.	Bought goods from Amit	20,000
3.	Sold goods to Sumit	22,000
4.	Bought goods in Cash	13,000
5.	Returned goods to Amit	3,000
6.	Paid cash to Amit	14,000
7.	Cash received from Sumit	15,000
8.	Sumit returned goods	2,000

SOLUTION:

Dr. **Cash A/c** *Cr.*

Particulars	(₹)	*Particulars*	(₹)
1	15,000	4	13,000
7	15,000	6	14,000
		Balance	3,000
	30,000		30,000

Dr. **Amit (Creditor's) A/c** *Cr.*

Particulars	(₹)	*Particulars*	(₹)
5	3,000	2	20,000
6	14,000		
Balance	3,000		
	20,000		20,000

Dr. **Sumit (Debtor's) A/c** *Cr.*

Particulars	(₹)	*Particulars*	(₹)
3	22,000	7	15,000
		8	2,000
		Balance	5,000
	22,000		22,000

EXERCISES

(I) VERY SHORT ANSWER QUESTIONS — (1 mark questions)

(A) Remembering Based Questions – marked (R)

R **1. Give an example of increase in asset and increase in liability.**

Ans. Purchase of goods/furniture on credit.

R **2. Give an example of decrease in asset and decrease in liability.**

Ans. Payment to Creditor/Repayment of loan.

R **3. Give an example of increase in asset and increase in capital.**

Ans. Started business with cash.

R **4. Give two examples of increase in asset and decrease of another asset.**

Ans. *(i)* Cash received from debtors

(ii) Cash deposited into bank

R **5. Give an example of decrease in liability and increase in capital.**

Ans. Conversion of loan into capital.

R **6. What is an account?**

Ans. Account refers to ledger record of each item in a summarized form. Transactions are recorded on debit and credit side as per accounting rules.

R **7. Give a specimen of an account.**

Ans.

Dr. **Ram's Account** Cr.

Date	*Particulars*	*J.F.*	*Amount* (₹)	*Date*	*Particulars*	*J.F.*	*Amount* (₹)

R **8. Assets = Liabilities + ...**

Ans. Capital

R **9. What are the two sides of an account called?**

Ans. Debit and credit.

R **10. What do debit item of capital account and credit item of a debtor's account mean?**

Ans. Debit item of capital A/c refers to drawing and credit item of debtor's A/c means cash received from debtor.

R **11. Name the side on which increase in cash and increase in capital are recorded.**

Ans. Increase in cash–debit side and increase in capital – credit side.

R **12. What is meant by debit and credit?**

Ans. **Debit** – When an amount is recorded on the left hand side of an account, it is called debit.

Credit — When an amount is written on the right hand side of an account, it is called credit.

(B) Understanding Based Questions – marked (U)

U **1. What is an accounting equation?**

Ans. An accounting equation is a mathematical equation which shows that assets of a business are always equal to total of its liabilities and capital. Thus, Assets = Liabilities + Capital

U **2. How is the accounting equation affected if goods costing ₹ 4,000 is sold to Ram for ₹ 5,000?**

Ans. – ₹ 4,000 (stock) + ₹ 5,000 (debtor) = + ₹ 1,000 capital (profit)

U **3. Name five categories of accounts as per accounting equation.**

Ans. Assets, liabilities, capital, expense (loss) and income (gain).

U **4. Why are the rules for recording debit and credit items are same for both capital and liability?**

Ans. Rules for recording debit and credit items are same for recording capital and liability as they are written on the same side of Balance Sheet *i.e.*, liability side. Moreover, capital is considered as internal liability.

(II) SHORT ANSWER QUESTIONS (3 or 4 marks questions)

(A) Remembering Based Questions – marked (R)

R **1.** What is meant by accounting equation? Explain with illustrations.

R **2.** What is an account? What does it reveal? Give a specimen of an account.

R **3.** Explain with reasons that rules of debit and credit are same for liability and capital.

R **4.** What is meant by debit and credit in an account? Do you think debit always stands for increase and credit for decrease?

R **5.** Discuss the rules of debit and credit for assets and expenses (losses).

R **6.** Discuss the rules of debit and credit for liabilities, capital and revenue (gain).

R **7.** Describe the rules while preparing accounting equation for the following items:

(i) Goods purchased on credit ₹ 10,000.

(ii) Goods costing ₹ 6,000 was sold to Ram for ₹ 8,000.

(iii) Salary paid ₹ 5,000 and salary outstanding ₹ 1,000.

(iv) Depreciate furniture by ₹ 1,500.

(v) Withdrew cash ₹ 2,000 and goods ₹ 3,000 by the proprietor for personal use.

Ans. *(i)* ₹ 10,000 (stock) = + ₹ 10,000 (creditors)

(ii) – Stock ₹ 6,000 + ₹ 8,000 (debtors) = + ₹ 2,000 capital (profit)

(iii) – ₹ 5,000 cash = + ₹ 1,000 salary O/s – ₹ 6,000 capital (expense)

(iv) – ₹ 1,500 furniture = – ₹ 1,500 capital (expense/loss)

(v) – ₹ 2,000 cash – ₹ 3,000 stock = – ₹ 5,000 capital (drawing)

(B) Understanding Based Questions – marked (U)

U **1.** Justify that accounting equation holds good under all circumstances.

U **2.** Explain the meaning of accounting equation. How are revenue and expense accounts related to it?

U **3.** Briefly explain the rules of debiting and crediting the various categories of accounts.

(III) OBJECTIVE TYPE/MULTIPLE CHOICE QUESTIONS

Understanding Based Questions – marked (U)

U **(A) Complete the followings:**

1. Assets = _____ + _____

2. Capital = Assets (+ or –) Liabilities

3. Assets = Liabilities + Capital

₹ 40,000 = ₹ 25,000 + ?

ANSWERS

1. Liabilities + capital **2.** (–) **3.** ₹ 15,000

U **(B) Fill in the blanks:**

1. Debit means increase in ..... .
2. Credit means increase in ..... .
3. Debit means increase in ..... or ..... .
4. Credit means increase in ..... or ..... .
5. Withdrawl of cash ..... the capital A/c so capital A/c is ..... .
6. Profit increases capital so it is to be ..... .
7. For every debit, there is corresponding ..... of equal amount.
8. Left side of an account is called ..... and right side of an account is called ..... .
9. Increase in assets or expenses has ..... balance.
10. Increase in liability or income has ..... balance.

ANSWERS

1. Asset **2.** Liabilities or Capital **3.** Asset or Expense
4. Liabilities or Revenue (gain) **5.** Reduces, Debited
6. Credited **7.** Credit **8.** Debit; Credit
9. Debit **10.** Credit.

U **(C) Multiple Choice Questions (MCQs)**

Select the correct alternative:

1. During the course of accounting equation, debit means:
   (a) Increase in asset *(b)* Increase in liabilities
   (c) Decrease in asset *(d)* All of these
2. Increase in liability or income always has a .....
   (a) Dr. balance *(b)* Cr. balance
   (c) Both *(a)* & *(b)* *(d)* None of these
3. During the course of accounting equation, credit means:
   (a) Increase in capital
   (b) Increase in liability
   (c) Increase in liability or capital
   (d) None of these
4. While preparing accounting equation, debit means:
   (a) Increase in asset
   (b) Increase in expense
   (c) Increase in asset or expense
   (d) None of these

ANSWERS

1. *(a)* **2.** *(b)* **3.** *(c)* **4.** *(c)*

U **(D)** On which side the increase in the following accounts be recorded? Also specify the nature of account:

(i) Mohan (Partner) *(ii)* Cash *(iii)* Rent paid *(iv)* Supplier of goods *(v)* Customer

Ans. *(i)* Credit – Capital *(ii)* Debit – Asset *(iii)* Debit – Expense *(iv)* Credit – Liabilities (Creditor) *(v)* Debit – Asset (debtor).

U **(E)** On which side decrease in the following accounts be recorded? Also specify the nature of accounts.

(i) Furniture *(ii)* Ram (Proprietor) *(iii)* Salary outstanding *(iv)* Ramesh (customer) *(v)* Mohan (supplier of goods).

Ans. *(i)* Credit – Asset *(ii)* Debit – capital *(iii)* Debit – Liability *(iv)* Credit – Asset *(v)* Debit – Liability.

PRACTICAL QUESTIONS

● Understanding – marked (U) ● Applying – marked (A)

(Q. Nos. 1 to 22 are strictly in order of Illustrations)

Based on Accounting Equation

U **1.** Show the accountings equation on the basis of the following transactions and prepare a balance sheet on the basis of last equation:

	(₹)
1. Ram commenced business with cash	30,000
2. Purchased goods for cash	10,000
3. Bought furniture for cash	5,000
4. Bought goods on credit	15,500
5. Paid rent	1,500
6. Sold goods costing ₹ 8,000 for cash	11,000

[***Ans.*** *Cash ₹ 24,500 + Stock ₹ 17,500 + Furniture ₹ 5,000 = Creditors ₹ 15,500 + Capital ₹ 31,500*]

U **2.** Prepare accounting equation from the following transactions:

	(₹)
1. Sumit started business with cash	50,000
2. Purchased furniture for cash	6,000
3. Bought goods from Ram on credit	15,000
4. Withdrew cash ₹ 4,000 and goods for ₹ 5,000 for personal use.	
5. Sold goods costing ₹ 8,000 at a profit of 25%.	
6. Paid to creditors	10,000
7. Received interest	2,000

[***Ans.*** *Cash ₹ 42,000 + Furniture ₹ 6,000 + Stock ₹ 2,000 = Creditors ₹ 5,000 + Capital ₹ 45,000.*]

U **3(A).** Show the accounting equation from the following transaction and prepare balance sheet on the basis of last equation:

	(₹)
1. Commenced business with cash	80,000
2. Bought goods from Ram on credit	20,000

3. Paid cash to Ram 15,000
4. Paid rent ₹ 1,600 and salary ₹ 4,400
5. Sold goods costing ₹ 10,000 for ₹ 13,000 to Mohan.
6. Received cash from Mohan. 10,000
7. Withdrew cash ₹ 4,000 and goods ₹ 5,000 for personal use.
8. Goods returned to Ram 2,000

*[**Ans.** Cash ₹ 65,000 + Stock ₹ 3,000 + Debtors ₹ 3,000 = Creditor, ₹ 3,000 + Capital ₹ 68,000.]*

U **3(B).** Prepare accounting equation from the following: (₹)

1. Commenced business with cash 1,00,000
2. Cash deposited into bank 60,000
3. Bought goods from X for ₹ 20,000 and paid ₹ 5,000 immediately
4. Sold goods for ₹ 20,000 for cash which costs ₹ 15,000.
5. Returned goods to X being defective ₹ 1,000
6. Borrowed loan ₹ 30,000 from bank
7. Paid wages ₹ 6,000 and wages still outstanding ₹ 1,000

*[**Ans.** Cash ₹ 49,000 + Bank ₹ 90,000 + Stock ₹ 4,000 = Creditors ₹ 14,000 + Bank Loan ₹ 30,000 + Wages O/s ₹ 1,000 + Capital ₹ 98,000.]*

A **4.** Monu had the following transactions: (₹)

1. Started business with cash 1,00,000
2. Deposited cash into bank 60,000
3. Bought a machine by raising a bank loan 50,000
4. Bought goods for cash ₹ 20,000 and on credit 40,000
5. Goods bought for cash was sold to Amit 25,000
6. Amit returned goods worth 5,000
7. Amit settled his account by paying 19,500
8. Paid instalment of bank loan ₹ 20,000 and paid interest by cheque 2,000
9. Charge 10% depreciation on machine.

Use accounting equation to show effect of above transactions.

*[**Hint.** Trans 6 – Amit returned goods ₹ 5,000. It costs ₹ 4,000 so ₹ 1,000 is loss. Trans 7 – ₹ 500 discount is a loss so reduce capital Trans 8 – Interest paid is a loss.*

*[**Ans.** Cash ₹ 39,500 + Bank ₹ 38,000 + Stock ₹ 44,000 + Machine ₹ 45,000 = Creditors ₹ 40,000 + Bank Loan ₹ 30,000 + Capital ₹ 96,500.]*

A **5.** Use accounting equation to show effect of the following transactions on assets, liabilities and capital:

(a) Started business with cash ₹ 30,000 goods ₹ 40,000 and furniture ₹ 20,000.

(b) Bought goods from Raman ₹ 20,000

(c) Sold goods bought from Raman to Sohan for ₹ 25,000

(d) Paid rent ₹ 4,000 and rent still outstanding ₹ 1,000

(e) Sohan settled his account at a discount of ₹ 500.

(f) Received commission ₹ 5,000 including ₹ 1,000 as advance.

*[**Ans.** Cash ₹ 55,500 + Stock ₹ 40,000 + Furniture ₹ 20,000 = Creditors ₹ 20,000 + Rent Outstanding ₹ 1,000 + Advance Commission ₹ 1,000 + Capital ₹ 93,500]*

*[**Hint.** Trans. (f) Com. ₹ 4,000 is income and ₹ 1,000 advance received is liability]*

A **6.** Prove that accounting equation is satisfied in all the following cases:

(i) Commenced business with cash ₹ 50,000

(ii) Paid rent ₹ 4,000 including ₹ 1,000 as advance.

(iii) Bought goods for cash ₹ 30,000 and on credit ₹ 20,000.

(iv) Sold the goods bought on credit for ₹ 25,000.

(v) Purchased furniture worth ₹ 10,000 for office uses and for ₹ 5,000 for personal use.

*[**Ans.** Cash ₹ 26,000 + Stock ₹ 30,000 + Furniture ₹ 10,000 + Prepaid Rent ₹ 1,000 = Creditors ₹ 20,000 + Capital ₹ 47,000.]*

*[**Hint.** Rent ₹ 3,000 is expense (loss), ₹ 1,000 Prepaid (Asset) & Cash will reduce by 4,000.]*

A **7.** Show the effect of the following transactions on the accounting equation :

(i) Started business with cash ₹ 20,000, goods ₹ 30,000 and furniture ₹ 10,000

(ii) Bought goods on credit from Ram ₹ 25,000

(iii) Bought goods for cash ₹ 10,000

(iv) Returned goods to Ram worth ₹ 4,000

(v) Sold goods costing ₹ 20,000 for ₹ 26,000 in cash.

(vi) Settled the account of Ram at a discount of ₹ 1,000.

(vii) Charge interest on capital ₹ 3,000

*[**Ans.** Cash ₹ 16,000 + Stock ₹ 41,000 + Furniture ₹ 10,000 = Capital ₹ 67,000]*

A **8.** Prepare accounting equation of Ram from the following transactions:

1. Commenced business with cash ₹ 50,000.
2. Bought goods for cash ₹ 15,000 from Gopi and on credit from Amit for ₹ 25,000.
3. Sold goods bought from Amit at a profit of 20%.
4. Settled the account of Amit by paying ₹ 24,500.
5. Rent paid to landlord ₹ 5,000.
6. Salary paid to Mohan ₹ 8,000 but salary is still due ₹ 1,000.

7. Landlord requested for advance rent of ₹ 1,000 and it was paid to him.
8. Insurance premium paid was ₹ 2,500 of which 1/5th was prepaid.

*[**Ans.** Cash ₹ 24,000 + Stock ₹ 15,000 + Prepaid expense ₹ 1,500 = Outstanding Expenses ₹ 1,000 + Capital 39,500]*

A **9.** Show that accounting equation is satisfied in the following cases:

1. Sumit commenced business with cash ₹ 40,000 and goods ₹ 25,000.
2. Sold 40% goods at a profit of 30% to Sohan.
3. Goods costing ₹ 1,000 was given as charity and goods worth ₹ 2,000 was taken away by Sumit for domestic use.
4. Salary is paid as advance ₹ 3,000 to a worker, Ram whose wife is ill.
5. Insurance Premium was paid ₹ 4,000 of which ¼th relates to next year.
6. Rent paid ₹ 5,000 but it is still due ₹ 1,000.

*[**Ans.** Cash ₹ 28,000 + Stock ₹ 12,000 + Debtors ₹ 13,000 + Prepaid Expenses ₹ 4,000 = Outstanding Expenses ₹ 1,000 + Capital ₹ 56,000]*

Based on Total Assets, Opening Capital, Closing Capital and Profit

U **10.** If the capital of a firm is ₹ 40,000 and outside liability is ₹ 60,000 find the total assets of the firm. *[**Ans.** ₹ 1,00,000]*

U **11.** Find the net worth (capital) of the business if the total asset is ₹ 1,30,000 and its liabilities are ₹ 70,000. *[**Ans.** ₹ 60,000]*

U **12.** Ram commenced business on 1st Jan., 2019 with a capital of ₹ 60,000. At the end of the year, his assets were worth ₹ 1,10,000 and liabilities were ₹ 40,000. Find his capital at the end of the year and profit earned.

*[**Ans.** Capital ₹ 70,000; profit ₹ 10,000]*

U **13.** X started business on 1st April, 2019 with a capital of ₹ 1,20,000. He took bank loan ₹ 40,000. On 31st March, 2020, his assets were ₹ 2,40,000 and creditors were ₹ 30,000. Loan has not been paid so far. Determine his capital at the end of the year and profit earned.

*[**Ans.** Capital ₹ 1,70,000, profit ₹ 50,000.]*

U **14.** X Started business on 1st April, 2019 with a capital of ₹ 1,20,000. During the year, he introduced further capital ₹ 30,000 but withdrew ₹ 25,000 during the year for personal use. At the end of the year, his assets worth ₹ 2,00,000 and liabilities amounting to ₹ 30,000.

Determine his capital at the end of the year and profit or loss incurred during the year ending 31st March, 2020.

*[**Ans.** Capital ₹ 1,70,000, profit ₹ 45,000.]*

U **15.** Find the opening capital of X from the following information:

Total assets ₹ 1,40,000, outside liabilities ₹ 30,000. During the year, he introduced ₹ 30,000 as further capital and withdrew ₹ 20,000 for personal use and earned a profit of ₹ 30,000 during the year.

*[**Ans.** Capital (closing) ₹ 1,10,000; capital (opening) ₹ 70,000.]*

U **16.** Give an example of each type of transaction from the following information:

(i) Decrease in asset, decrease in liability.

(ii) Increase in asset, decrease in another asset.

(iii) Increase in liability, decrease in another liability.

(iv) Increase in asset, increase in liability.

(v) Increase in asset, increase is capital.

(vi) Decrease in asset, decrease is owner's equity.

*[**Ans.** (i) Paid creditors/loan; (ii) Bought furniture/cash received from debtor; (iii) Bills payable accepted by the creditor; (iv) Goods purchased on credit; (v) Further capital introduced; (vi) Withdrew cash for personal use.]*

U **17.** On which side the increase in the following accounts be recorded? Also specify the nature of account to which they belong:

(i) Partner's capital *(ii)* Cash *(iii)* Creditors *(iv)* Furniture *(v)* Bank Loan *(vi)* Debtors.

*[**Ans.** (i) Credit – capital (ii) Debit – Asset (iii) Credit – liability (iv) Debit – Asset (v) Credit – Liability (vi) Debit – Asset]*

U **18.** On which side the decrease in the following accounts be recorded? Also specify the nature of account to which they belong?

(i) Capital *(ii)* Bank Loan *(iii)* Cash *(iv)* Debtor *(v)* Creditor *(vi)* Furniture

*[**Ans.** (i) Debit – capital (ii) Debit – Liability (iii) Credit – Asset (iv) Credit – Asset (v) Debit – Liability (vi) Credit – Asset]*

U **19.** Open a T-shaped account of furniture and put the following transactions on the proper side and balance the account:

(i) Bought furniture ₹ 18,000

(ii) A part of furniture sold ₹ 5,000

(iii) Bought new furniture ₹ 10,000

(iv) Charge depreciation on furniture ₹ 3,000

*[**Ans.** (i) Debit (ii) Credit (iii) Debit (iv) Credit: Balance ₹ 20,000]*

U **20.** Open T-shape account of creditor, Mohan from the following transactions and balance it:

	(₹)
(i) Bought goods from Mohan	20,000
(ii) Paid cash	4,000
(iii) Returned goods to Mohan	1,000
(iv) Paid by cheque	7,000

*[**Ans.** (i) Credit (ii) Debit (iii) Debit (iv) Debit: balance ₹ 8,000]*

U **21.** Prepare capital account of Ram in T-shape and balance it from the following transactions:

(i) Commenced business with cash ₹ 20,000 and goods ₹ 30,000

(ii) Drawing during year ₹ 7,000

(iii) Additional capital introduced ₹ 10,000

(iv) Loss during year ₹ 4,000

*[**Ans.** (i) Credit (ii) Debit (iii) Credit (iv) Debit ; balance ₹ 49,000.]*

U **22.** Record the following transactions in Cash A/c, Debtor's A/c and Creditor's A/c and balance them:

		(₹)
(i)	Cash sales	20,000
(ii)	Bought goods from Naresh	15,000
(iii)	Goods sold to Suresh	22,000
(iv)	Goods returned to Naresh	2,000
(v)	Paid cash to Naresh	9,000
(vi)	Suresh returned goods	3,000
(vii)	Cash received from Suresh	16,000

[Ans. Cash A/c *(i)* debit *(v)* credit *(vii)* debit; balance ₹ 27,000
Debtor's A/c *(iii)* debit *(vi)* credit *(vii)* credit; balance ₹ 3,000
Creditor's A/c *(ii)* credit *(iv)* debit *(v)* debit; balance ₹ 4,000]

ADDITIONAL QUESTIONS FOR PRACTICE

U **23.** Prepare accounting equation from the following transactions:

		(₹)
1.	Started business with cash ₹ 40,000 and goods	50,000
2.	Purchased goods from Ram on credit	30,000
3.	Goods purchased from Ram is sold to Mohan	40,000
4.	Furniture purchased for cash	10,000
5.	Mohan returned goods worth	4,000
6.	Settled the account of Ram by paying	29,200
7.	Received cash from Mohan	20,000
8.	Charged interest on capital	8,000

*[**Hint = Trans** 5–Goods returned ₹ 4,000 has cost of ₹ 3,000 so ₹ 1,000 loss on return]*

*[**Ans.** Cash ₹ 20,800 + Stock ₹ 53,000 + Debtors ₹ 16,000 + Furniture ₹ 10,000 = Capital ₹ 99,800.]*

U **24.** Prepare accounting equation from the following transactions:

1. Mona started business with cash ₹ 15,000; goods ₹ 25,000 and Machinery worth ₹ 50,000.
2. Sold goods costing ₹ 15,000 for ₹ 20,000 and received half the amount in cash.
3. Bought a machine for ₹ 1,00,000 by raising Bank Loan.
4. Paid salary ₹ 4,000 and salary outstanding ₹ 1,000.
5. Paid Insurance premium ₹ 2,000 of which ₹ 400 relates to next year.
6. Paid interest on Bank Loan ₹ 1,000 and instalment of Loan ₹ 10,000.

7. Bought goods from Ramesh ₹ 10,000.
8. Sold goods bought from Ramesh to Mohan for ₹ 14,000.
9. Charge depreciation on Machinery ₹ 10,000.

*[**Ans.** Cash ₹ 8,000 + Stock ₹ 10,000 + Machinery ₹ 1,40,000 + Debtors ₹ 24,000 + Prepaid Insurance ₹ 400 = Capital ₹ 81,400 + Bank Loan ₹ 90,000 + Salary Outstanding ₹ 1,000 + Creditors ₹ 10,000]*

Based on Rule of Debit and Credit

U **25.** Prepare an accounting equation and balance sheet from the following transactions:

1. Commenced business with cash ₹ 50,000 and goods ₹ 50,000.
2. Sold half the goods at a profit of 20% to Gopal
3. Bought goods for cash ₹ 20,000 and on credit ₹ 25,000
4. Bought furniture on credit ₹ 25,000 from Mohan
5. Paid ₹ 24,500 to Mohan in full settlement of his account.
6. Withdrew cash ₹ 3,000 and goods for ₹ 4,000 for peronal use.
7. Charge interest on drawing ₹ 500.

*[**Ans.** Cash ₹ 2,500 + Stock ₹ 66,000 + Furniture ₹ 25,000 + Debtors ₹ 30,000 = Creditors ₹ 25,000 + Capital ₹ 98,500]*

U **26.** Create an accounting equation on the basis of the following transactions :

(i) Started business with cash ₹ 40,000 and furniture ₹ 20,000
(ii) Bought goods for cash ₹ 10,000 and on credit from Atul for ₹ 20,000
(iii) Goods bought from Atul on credit was sold for ₹ 26,000
(iv) Cleared the account of Atul by paying ₹ 19,500.
(v) Paid salary ₹ 6,000 and still unpaid ₹ 2,000.
(vi) Received commission ₹ 3,000 including ₹ 1,000 as advance.

*[**Ans.** Cash ₹ 33,500 + Furniture ₹ 20,000 + Stock ₹ 10,000 = Salary Ouststanding ₹ 2,000 + Advance com. ₹ 1,000 + Capital ₹ 60,500.]*

U **27.** Ram commenced business with a capital of ₹ 2,00,000. At the end of the year his assets include cash ₹ 40,000, stock ₹ 70,000, debtors ₹ 85,000, furniture ₹ 25,000 and liabilities ₹ 30,000.

Ascertain his capital at the end and profit or loss incurred if he introduced further capital of ₹ 25,000 but bought bike of ₹ 30,000 for personal use during the year.

*[**Ans.** Capital at end ₹ 1,90,000, loss ₹ 5,000]*

U **28.** Open T-shaped cash account and put the following transactions on proper side and balance the account:

(i) Commenced business with cash ₹ 20,000
(ii) Bought furniture ₹ 3,000
(iii) Bought goods ₹ 7,000

(iv) Sold goods for ₹ 9,000

(v) Paid creditors ₹ 4,000

*[**Ans.** (i) Debit (ii) Credit (iii) Credit (iv) Debit (v) Credit: Balance ₹ 15,000]*

U **29.** Prepare T-shaped cash A/c from the following transactions:

(i) Started business with cash ₹ 40,000

(ii) Bought goods for ₹ 22,000

(iii) Sold goods for ₹ 18,000

(iv) Bought goods on credit from Ram ₹ 15,000

(v) Sold goods to Mohan ₹ 18,000

(vi) Paid to Ram ₹ 10,000

(vii) Cash received from Mohan ₹ 15,000

*[**Ans.** (i) Debit (ii) Credit (iii) Debit (vi) Credit (vii) Debit, Balance ₹ 41,000]*

U **30.** State the normal balance of the following accounts as per rules of debit and credit :

(i) Salary paid *(ii)* Sales *(iii)* Capital *(iv)* Debtor *(v)* Furniture *(vi)* Bank Loan *(vii)* Interest received *(viii)* Purchases

*[**Ans.** (i) Debit – Expense (ii) Credit (Revenue) (iii) Credit (iv) Debit – Asset (v) Debit – Asset (vi) Credit – Liability (vii) Credit (Gain) (viii) Debit – Expense.]*

U **31.** Analyse the following transactions and state the nature of account as per rule of debit and credit:

(i) Started business with cash

(ii) Bought furniture for cash

(iii) Sold goods to Mohan

(iv) Cash deposited into bank

(v) Bank loan taken

(vi) Bought goods from Ram

(vii) Interest on capital allowed

(viii) Salary paid

(ix) Depreciation on furniture

(x) Salary outstanding

*[**Ans.** (i) Cash-debit; capital - credit; (ii) Furniture (Asset) - debit: cash - credit; (iii) Sales (revenue) so add to capital - credit & Mohan (debtor - asset) - debit; (iv) Cash - credit, bank - debit; (v) Bank loan (liability) - credit; bank - debit; (vi) Purchases - expense so deduct from capital - debit and Ram (creditor) - credit; (vii) Interest (expense to firm) - capital will reduce - debit, Interest on Capital will increase Capital so add - credit (net effect will be zero on capital); (viii) Cash - credit, capital - debit (expense); (ix) Furniture - credit; capital - debit (loss/expense); (x) Creditor - credit; capital - debit (expense)]*

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