

Chapter 23

Taxation

REMEMBER

Before beginning this chapter, you should be able to:

- Study about sales tax
- Know what is value added tax (VAT)
- Understand cost of living index

KEY IDEAS

After completing this chapter, you would be able to:

- Understand concepts related to income tax
- Learn about rebates, funds and solve problems related to it.
- Study sales tax and do calculation of sales tax.

INTRODUCTION

The government of a country requires performing many social and economic functions, for which it needs money that comes from both domestic and foreign sources. For a government, the most important source of money is taxation. Tax is a type of fee that a government charges on various economic activities and the wealth that is created by such activities or for providing legal safeguards.

Taxes can thus be classified on the basis of the economic activities or the kind of legal safeguards provided. Taxes can also be classified as direct or indirect types, based on the manner in which they are collected. If taxes are collected directly from the person who is paying, then those are direct taxes. If taxes are paid by a person other than the person upon whom it is levied, such as sales tax—those fall in the category of indirect taxes. The most important type of direct tax is income tax. Here, we shall discuss about income tax and sales tax.

INCOME TAX

The following discussion is only an indicative of the general nature of the computation of income tax. The actual details vary from one financial year to another. A financial year begins from 1st April of a calendar year and ends on 31st March of the subsequent calendar year. The year next to a financial year is called the assessment year for that financial year. For the financial year 2004–05, the assessment year is 2005–06. People who earn above a certain limit are liable to pay income tax. The tax imposed on an individual is called personal income tax. A certain part of the income, called standard deduction, is not liable to be taxed.

As an example, the following table (Table 23.1(a)) shows of standard deduction. The symbol S stands for the annual salary of an individual.

Table 23.1(a)

Salary (₹)	Standard Deduction (₹)
$S \leq 90,000$	$S/3$
$90,000 < S \leq 150,000$	30,000
$150,000 < S \leq 350,000$	25,000
$350,000 < S \leq 500,000$	20,000
$500,000 < S$	Nil

In addition, deduction from income is allowed on certain specified donations as detailed below.

Table 23.1(b)

Donation	Part Exempted
PM's National Relief Fund	100%
National Defence Fund	100%
Medical Research	100%
Charitable Trusts, Educational Bodies, Hospitals and Orphanages	50%

Such donations (i.e., the indicated rates) are deducted from income. However, this deduction is subject to a maximum of 10% of the total income. To explain this, if more than 10% is donated, the excess amount is subject to tax at the applicable rate.

After allowing for these deductions (D) (i.e., standard deduction and specified donations) the net taxable income ($TI = S - D$) is taxed at the following rate(s) (Table 23.2).

Table 23.2

Taxable Income (₹)	Rate of Tax	Rate of Surcharge
$TI \leq 50,000$	Nil	0
$50,000 < TI \leq 60,000$	10% of $(TI - 50,000)$	0
$60,000 < TI \leq 150,000$	$1,000 + 20\%$ of $(TI - 60,000)$	5%
$150,000 < TI$	$19,000 + 30\%$ of $(TI - 150,000)$	5%

By using the above table, we can compute the tax payable. Senior citizens (Aged 65 years or more), women and citizens who have invested in specified funds are allowed certain rebates on this tax. Therefore, this amount is referred to as Tax Before Rebate (TBR).

Note The third column in the above table gives the rate of surcharge on tax. Surcharge is calculated after deducting the rebate as illustrated in the examples.

These rebates are tabulated in the following tables.

Table 23.3(a) Senior Citizens

TBR	Rebate
$TBR \leq 15,000$	TBR
$15,000 < TBR$	15,000

Table 23.3(b) Women (less than 65 years old)

TBR	Rebate
$TBR \leq 5,000$	TBR
$5,000 < TBR$	5,000

All citizens (including senior citizens and women) who save in the following funds are allowed rebate at the mentioned rates as shown below.

1. Contributory Provident Fund (CPF)
2. General Provident Fund (GPF)
3. Public Provident Fund (PPF)
4. Life Insurance Premium (LIC)
5. National Savings Certificates (NSC)
6. Certain Infrastructure Bonds (CIB)

Table 23.3(c)

Salary (S) (₹)	Rate of Rebate
$S \leq 150,000$	20% of savings
$150,000 < S \leq 500,000$	15% of savings
$500,000 < S$	Nil

We note that while Tables 23.3 (a) and (b) are applicable to different classes of people, Tables 23.3 (a) and (c) or (b) and (c) could apply to the same person. An individual who pays income tax is known as an 'assessee'. On applying every assessee is given a Permanent Account Number (PAN) by the Income Tax Department.

The tax after rebate on TAR is computed from Tables 23.3(a), (b), and (c).

Finally, the surcharge (the rate given in Table 23.2) is computed on the TAR and the total tax payable (TTP) is computed. The computation of income tax is illustrated with the following examples.

EXAMPLE 23.1

The monthly salary of Madhuri is ₹15,000. She contributes ₹5,000 to the PM's National Relief Fund and ₹2,500 to a hospital. She also pays an annual premium of ₹2,000 towards her LIC policy. Compute her income tax.

SOLUTION

We have to compute the TI, TBR, TAR and TTP.

All amounts are in rupees.

$$\text{Annual salary } (S) = 12(15,000) = 180,000$$

$$\text{Standard deduction} = 25,000 \text{ (Table 23.1(a))}$$

$$\text{Donation (PMNRF)} = 5000 \text{ (Table 23.1(b))}$$

$$\text{Donation (Hospital)} = 2500 \text{ (Table 23.1(b))}$$

$$\text{Total deduction } (D) = 32,500$$

$$TI = S - D = 147,500$$

$$\text{TBR} = 1000 + 20\% \text{ of } (147,500 - 60,000)$$

$$= 1000 + \frac{20}{100}(87500) \text{ (Table 23.2)}$$

$$= 1000 + 17,500 = 18,500$$

$$\text{Rebate for women} = 5,000 \text{ (Table 23.3(b))}$$

$$\text{Rebate for LIC premium} = 20\% \text{ of } 2,000 \text{ (Table 23.3c)} = 400$$

$$\text{Total rebate} = 5,400$$

$$\therefore \text{TAR} = \text{TBR} - \text{Rebate} = 18,500 - 5,400 = 13,100$$

$$\text{Surcharge} = 5\% \text{ of } 13,100 = \frac{13100}{20} = 655$$

$$\therefore \text{TTP} = \text{TAR} + \text{Surcharge} = 13,100 + 655 = ₹13,755.$$

EXAMPLE 23.2

Raghav's monthly salary is ₹20,000. He donates ₹15,000 per annum for cancer research and ₹1000 to the NDF. He contributes ₹50,000 to PPF. Compute his income tax.

SOLUTION

We compute the TI, TBR, TAR and TTP as follows:

$$\text{Annual salary, } S = 20,000 \times 12 = ₹240,000$$

$$\text{Standard Deduction} = ₹25,000 \text{ (Table 23.1(a))}$$

$$\text{Donation to NDF} = ₹10,000$$

$$\text{Donation to Cancer Research} = ₹15,000$$

As the total donation is 25,000, only 10% of Raghav's income, i.e., 24,000 can be deducted.

$$\therefore \text{Total deduction} = (25,000 + 24,000) = ₹49,000$$

$$TI = S - D = 240,000 - 49,000 = ₹191,000$$

$$TBR = 19,000 + 30\% \text{ of } (191,000 - 150,000)$$

$$= 19,000 + \frac{3}{10}(41,000) = ₹31,300$$

He contributes 50,000 to PPF

$$\therefore \text{He receives a rebate of } 15\% \text{ on } 50,000 = ₹7,500$$

$$\therefore \text{TAR} = 31,300 - 7,500 = ₹23,800$$

He has to pay a surcharge of 5%.

$$\text{Surcharge} = \frac{5}{100}(23,800) = ₹1,190$$

$$\therefore \text{TTP} = 23,800 + 1,190 = ₹24,990.$$

EXAMPLE 23.3

Somu earned a monthly salary of ₹17,500. He contributed ₹5,250 per month towards LIC premium. Find the income tax paid by him. (in ₹)

(a) 20,094.50

(b) 21,016.50

(c) 21,052.50

(d) 21,078.50

SOLUTION

$$\text{The annual salary (in ₹)} = (17,500)(12) = 210,000$$

$$\text{Standard deduction} = ₹25,000$$

$$\text{Net taxable income } ₹210,000 - ₹25,000 = ₹185,000$$

The tax that Somu has to pay for different parts of his income are tabulated below.

Range of T1	Rate	Tax
0 to 50,000	0	0
50,000 to 60,000	10	1,000
60,000 to 150,000	20	11,000
150,000 to 185,000	30	10,500
		29,500

But Somu invested in LIC premiums.

$$\text{His annual investment (in ₹)} = (5,250)(12) = 63,000.$$

$$\therefore \text{He would have received a rebate of } 15\% \text{ on savings, i.e., } \frac{15}{100} (₹63,000) = ₹9,450$$

$$\text{Surcharge rate} = 5\%$$

$$\therefore \text{Surcharge (in ₹)}$$

$$= \frac{5}{100}(29,500 - 9,450) = \frac{1}{20}(20,050) = 1,002.50.$$

$$\therefore \text{The amount of tax to be paid by him} = ₹20,050 + ₹1,002.50 = ₹21,052.50.$$

EXAMPLE 23.4

Ashwin's annual salary was ₹150,000. He contributed ₹5,000 to Public Provident Fund and ₹10,000 to National Savings Certificate. Find the income tax paid by him. (in ₹)

- (a) 10,200 (b) 10,500 (c) 10,800 (d) 11,200

SOLUTION

Annual salary (in ₹) = 150,000.

Standard deduction = ₹30,000.

Net taxable income = ₹150,000 – ₹30,000 = ₹120,000.

The tax to be paid if Ashwin had no investments (in ₹)

$$= 1000 + \frac{20}{100} (120000 - 60000)$$

$$= 1000 + 12000 = 13000$$

Contribution to PPF = ₹5,000.

Contribution to NSC = ₹10,000.

Total contribution = ₹15,000.

That is, he would have received a rebate of 20% on his savings, i.e., $\frac{20}{100} (\text{₹}15,000) = \text{₹}3,000$

Surcharge rate = 5%

∴ Surcharge (in ₹)

$$= \frac{5}{100} (13000 - 3000)$$

$$= \frac{5}{100} (10000) = 500.$$

∴ The amount of tax to be paid by him = ₹10,000 + ₹500 = ₹10,500.

EXAMPLE 23.5

Ganesh's salary is ₹25,000 per month. He contributes ₹25,000 to Contributory Provident Fund and ₹20,000 to Public Provident Fund. He donates ₹13,000 to the PM's National Relief Fund and ₹15,000 to Medical Research. Find his net taxable income. (in ₹)

- (a) 243,000 (b) 247,000 (c) 251,000 (d) 25,500

SOLUTION

Annual salary (in ₹) = (25,000)(12) = 300,000

Standard deduction = ₹25,000

Donation to PM's NRF = ₹13,000

Donation to MR = ₹15,000

Total donation = ₹28,000

10% of annual salary = ₹30,000

Total donation is less than this.

The total donation can be completely deducted.

$$\Rightarrow \text{Total deduction} = ₹28,000 + ₹25,000 = ₹53,000.$$

$$\text{Net taxable income} = ₹300,000 - ₹53,000 = ₹24,7000.$$

SALES TAX

Sales tax is the tax levied on the sale of goods within a state.

Central sales tax is the tax levied by the Union Government when goods produced in one state are sold in another state.

The proceeds under sales tax are credited to the government's account. Hence, sales tax is not included in the selling price.

Calculation of Sales Tax

1. When no discount is given, the marked prices of articles become the sale price, and sales tax is calculated on it.
2. When a certain discount is given, then sales tax is calculated on the reduced price of the article after the discount.

EXAMPLE 23.6

Rakesh bought a radio for ₹1,296. This price includes a discount of 20% offered on the marked price and 8% sales tax on the remaining amount. Find the marked price of the radio.

SOLUTION

Let the marked price of the radio be ₹ x .

$$\Rightarrow \text{Discount offered} = ₹(20\% \text{ of } x) = ₹\left(\frac{20}{100} \times x\right) = ₹\frac{x}{5}$$

$$\text{The price of the radio, after discount} = ₹\left(x - \frac{x}{5}\right) = ₹\frac{4x}{5}$$

$$\text{Sales tax charged} = ₹\left(8\% \text{ of } \frac{4x}{5}\right) = ₹\left(\frac{8}{100} \times \frac{4x}{5}\right)$$

$$\text{The cost of the radio, inclusive of sales tax} = ₹\left[\frac{4x}{5} + \frac{8}{100} \times \frac{4x}{5}\right] = ₹\left[\frac{27}{25} \times \frac{4x}{5}\right]$$

Given that Rakesh paid ₹1,296 for the radio.

$$\Rightarrow \frac{27}{25} \times \frac{4x}{5} = 1296$$

$$\Rightarrow x = \frac{1296 \times 25 \times 5}{108} = ₹1,500.$$

EXAMPLE 23.7

The list price of an article is ₹2,160 and sales tax applicable on the article is 8%. If a customer asked the shopkeeper to give a certain discount on its list price such that he pays ₹2,160 inclusive of sales tax, then find the per cent of discount offered.

SOLUTION

Let us assume that the reduced price of the article after discount to be ₹ x .

$$\text{Sales tax charged} = ₹(8\% \text{ of } x) = ₹\left(\frac{8}{100} \times x\right) = ₹\frac{2x}{25}$$

$$\text{The selling price of the article, inclusive of sales tax} = ₹\left(x + \frac{2x}{25}\right) = ₹\frac{27x}{25}$$

Given that the customer pays ₹2,160 for the article, inclusive of taxes

$$\Rightarrow \frac{27x}{25} = 2160$$

$$\Rightarrow x = \frac{2160 \times 25}{27} = ₹2,000$$

$$\therefore x = ₹2,000.$$

$$\Rightarrow \text{Discount offered} = ₹(2160 - 2000) = ₹160$$

$$\Rightarrow \text{The rate of discount} = \frac{160}{2160} \times 100 = 7\frac{11}{27}\%$$

$$\therefore \text{The discount per cent offered} = 7\frac{11}{27}.$$

EXAMPLE 23.8

A fridge has a listed price of ₹16,000. Successive discounts of 10% and 20% are given on its listed price. Sales tax is then charged at 30%. Ravi bought it for ₹ S which includes the sales tax. Find S .

(a) 16,000

(b) 15,848

(c) 16,168

(d) 14,976

SOLUTION

List price of the fridge = ₹16,000

Price of the fridge after deducting the discounts (in ₹)

$$= 16000 \left(1 - \left(\frac{10}{100}\right)\right) \left(1 - \left(\frac{20}{100}\right)\right)$$

$$= 16000(0.9)(0.8)$$

$$= ₹1,1520$$

$$\text{Sales tax} = \frac{30}{100} (11,520) = ₹3,456$$

The final price of the fridge = ₹11,520 + ₹3,456 = ₹14,976.

EXAMPLE 23.9

Amit bought a TV for ₹17,280 at a discount of 20% followed by a 20% sales tax. Had a 10% discount been offered instead, followed by a 10% sales tax, he would have bought it at a price which, including the sales tax, would have been _____.

(a) ₹170 less

(b) ₹140 less

(c) ₹280 more

(d) ₹540 more

SOLUTION

Let the list price of the TV be ₹ K .

The final price of the TV = ₹17,280.

$$\therefore ₹k \left(k - \frac{20}{100} \right) \left(1 + \frac{20}{100} \right) = ₹17280$$

$$k = \frac{17280}{(0.8)(1.2)} = \frac{17280}{0.96}$$

$$= \frac{17280}{96}(100) = 1800$$

In the hypothetical case, the final price of the TV (in ₹), would have been

$$= 18000 \left(1 - \frac{10}{100} \right) \left(1 + \frac{10}{100} \right)$$

$$= 18000(0.9)(1.1)$$

$$= 16200(1.1) = 17820. \text{ This is ₹540 more than the actual price paid.}$$

TEST YOUR CONCEPTS

Very Short Answer Type Questions

1. The tax charged on the sale of goods that are moved from one state to other is called _____.
2. If the marked price of an article is ₹100 and sales tax is 12%, then the selling price is ₹_____.
3. The tax imposed on an individual or group of individuals which affects them directly, and is paid to the government directly is known as _____.
4. The tax imposed on an individual or a group of individuals on their annual incomes is known as _____.
5. A financial year begins from _____.
6. Kumar paid ₹220 to buy an article including 10% sales tax. Then, the selling price of the article is ₹_____.
7. Exemption rate on donation to Prime Minister's National Relief Fund is _____.
8. While assessing income tax, the year next to a financial year is called _____ year for that financial year.
9. Ajay paid ₹150 to buy an article whose selling price is ₹120. The amount of sales tax paid by Ajay is ₹_____.
10. Every assessee is expected to file a statement of the previous year's income to the income tax department in a prescribed form which is known as _____.
11. The tax paid by the first person is less than the tax paid by the second person. If neither of them saved any amount, then the second person has more income. (True/False)
12. Rate of surcharge if annual taxable income exceeds ₹60,000 is _____.
13. Anand paid ₹30 as sales tax on a bottle of mineral water with a marked price of ₹400. Calculate the rate of sales tax.
14. The Annual Union Budget is usually presented in the Lok Sabha every year, on _____.
15. A washing machine is available for ₹7,950, including sales tax. If the rate of sales tax is 6%, find the list price of the washing machine.

Short Answer Type Questions

16. Find the list price of a bicycle which costs ₹1,595, inclusive of sales tax. The rate of sales tax is 10%.
17. The marked price and the selling price of an article are ₹1,500 and ₹1,800, respectively. If there is no discount, find the rate of sales tax.
18. Madhu bought the following items from a super market:
 - (i) Soaps worth ₹220,
 - (ii) Cosmetics worth ₹580 and
 - (iii) Vegetables worth ₹650.

If sales tax is charged at the rate of 5% on soaps, 10% on cosmetics, and 2% on vegetables, then find the total amount paid by Madhu.
19. Prasad has a total salaried income of ₹160,000 per annum. Calculate the amount of income tax he has to pay.
20. Rijwana's monthly salary is ₹25,000. She contributes ₹600 per month towards GPF and pays ₹7,000 towards annual LIC premium. Find the amount of income tax she has to pay for the last month if she paid ₹4,000 per month towards income tax for 11 months.

Essay Type Questions

21. Ramakanth draws a salary of ₹15,000 per month. He contributes ₹5,000 per month towards PPF. He also donates ₹1,250 per month towards medical research. Calculate the income tax Ramakanth has to pay.
22. Khalique's monthly salary is ₹20,000. He donates ₹1,500 per month for medical research (100% relief), contributes ₹2,000 per month to PF, and pays annual LIC premium of ₹3,000.



Calculate the income tax he has to pay for the financial year.

23. Chakradhar buys a TV marked at ₹14,500 after receiving successive discounts of 15% and 20% and paying 10% sales tax. He spends ₹2,000 on it and sells the TV for ₹12,000. Find his gain or loss per cent.

24. Subiksha earns ₹12,500 per month. She donates ₹3,300 per month towards Prime Minister National Relief Fund (100% relief). Find the amount of tax she has to pay.

25. Laxmikala, a senior citizen receives a pension of ₹12,000 per month. Calculate the income tax to be paid by her.

CONCEPT APPLICATION

Level 1

- Ramu purchased a motorcycle at a price of ₹37,800 which includes sales tax. If the rate of sales tax is 8%, then what is the list price of the motorcycle?
 - ₹31,000
 - ₹33,000
 - ₹35,000
 - ₹37,000
- Rohan buys a pair of shoes marked at ₹2,500. He receives a rebate of 8% on it. After receiving the rebate, sales tax is charged at the rate of 5%. What is the amount Rohan will have to pay for the pair of shoes?
 - ₹2,400
 - ₹2,415
 - ₹2,430
 - ₹2,445
- Raju purchased a car for ₹1,55,750, inclusive of sales tax. He paid ₹5,750 as sales tax. What is the rate of sales tax?
 - $3\frac{2}{3}\%$
 - $3\frac{3}{4}\%$
 - $3\frac{4}{5}\%$
 - $3\frac{5}{6}\%$
- Amar wants to buy a shirt which is listed at ₹378. The rate of sales tax is 8%. He requested the shop-keeper to reduce the list price to such an extent that he has to pay not more than ₹378 including sales tax. What is the minimum reduction needed in the list price of the shirt?
 - ₹24
 - ₹26
 - ₹28
 - ₹30
- Ramesh purchased a bag listed at ₹550. If the rate of sales tax is 8%, then what is the amount of sales tax paid by him?
 - ₹42
 - ₹43
 - ₹44
 - ₹45
- Ismail gets a monthly salary of ₹12,500. He contributes ₹3,500 per month towards PF. Calculate the income tax paid by him.
 - ₹3,000
 - ₹5,600
 - ₹4,830
 - ₹3,300
- Rakesh purchased a car which was quoted at ₹2,56,000. The dealer charged sales tax on it at the rate of 12%. As Rakesh wanted to take the car outside the state, the dealer further charged 3% extra as central sales tax. What is the amount he had to pay for the car?
 - ₹2,95,123.60
 - ₹2,86,720
 - ₹2,94,400
 - None of these
- Satish earns an annual salary of ₹1,50,000 and the standard deduction applicable to him is 40% of the salary or ₹30,000, whichever is less. Then his net taxable income is _____.
 - ₹30,000
 - ₹1,20,000
 - ₹60,000
 - ₹90,000
- Ajay purchased a computer for ₹34,650 which includes 12% rebate on the marked price and 5% sales tax on the remaining price. What is the marked price of the computer?
 - ₹35,000
 - ₹37,500
 - ₹40,000
 - ₹42,500

Direction for questions 10 and 11: These questions are based on the following data.

Dinakar's salary is ₹30,000 per month. He contributes ₹27,000 towards GPF and ₹30,000 towards LIC.



He donates ₹8,000 to a charitable trust (50%), ₹10,000 towards National Relief Fund (100% relief).

10. Calculate taxable income.

- (a) ₹198,000 (b) ₹280,000
(c) ₹326,000 (d) ₹380,000

11. Find the rebate amount on his savings.

- (a) ₹15,350 (b) ₹10,250
(c) ₹8,550 (d) ₹20,000

12. If the marked price of an article is ₹M, then find the rate at which sales tax is charged if the person pays ₹M inclusive of sales tax. Discount allowed is 10%.

- (a) 9% (b) 10%
(c) $11\frac{1}{9}\%$ (d) $9\frac{1}{11}\%$

13. The list price of a TV is ₹15,000, and the shopkeeper allows a discount of 20% and 10% successively on list price. On the remaining amount,

he charges 20% as sales tax. If the buyer paid ₹x, then by how much amount will the list price exceed ₹x?

- (a) ₹3,000 (b) ₹4,200
(c) ₹2,040 (d) ₹5,000

14. Saritha's annual salary is ₹1,60,000. She contributes ₹6,000 towards GPF and pays an LIC annual premium of ₹5,000. Calculate the income tax she will have to pay in the year.

- (a) ₹16,117.50 (b) ₹15,117.50
(c) ₹17,117.50 (d) ₹16,017.50

15. Ranjit purchased a refrigerator for the price of ₹8,910 which includes 10% rebate on marked price and 10% sales tax on the remaining price. If the sales tax is increased to 20% without allowing the 10% rebate on the marked price, how much more will the customer pay for a refrigerator?

- (a) ₹1,850 (b) ₹1,890
(c) ₹1,860 (d) ₹1,840

Level 2

16. The list price of an article is 50% more than its original cost price. The shopkeeper allowed a discount of 20% and charged a sales tax of 20% on it. Finally, the buyer paid ₹2880. What is the cost price of the article?

- (a) ₹2,500 (b) ₹3,500
(c) ₹3,000 (d) ₹2,000

17. If the tax to be paid is ₹12,700 and surcharge is calculated as 10% of the tax payable, then find the net tax payable.

- (a) ₹13,970 (b) ₹14,690
(c) ₹12,690 (d) ₹13,500

18. Mr Ranvir Patnikar earns an annual salary of ₹2,70,000. If his employer deducts ₹3,000 every month from his salary for the first 11 months, then calculate the amount he has to pay towards tax in the last month of the financial year.

Standard deduction is 40% of the salary or ₹30,000, whichever is less.

The income tax on his earnings is calculated based on the data given below.

Slabs for income tax:

- (i) Upto ₹50,000—Nil
(ii) From ₹50,000—10% of the amount ₹100,000 exceeding 50,000
(iii) From ₹1,00,001—₹5,000 + 20% of the ₹2,00,000 amount exceeding ₹1,00,000
(iv) Above ₹2,00,000—₹25,000 + 30% of the amount exceeding ₹2,00,000
(a) ₹3,000 (b) ₹4,000
(c) ₹5,000 (d) ₹6,000

19. The annual salary of Mr Ravi Teja is ₹1,78,500. He donates ₹750 per month towards the National Defence Fund (eligible for 100% exemption). If standard deduction is 30% of the gross salary income or ₹30,000, whichever is less, and then find his net taxable income.

- (a) ₹1,48,000
(b) ₹1,47,250
(c) ₹1,39,500
(d) ₹1,50,000



20. Siri's total income is ₹16,500. Of this, ₹5,000 is free from tax. Find the net income remaining with her after she paid the income tax at 5%. (in ₹)
- (a) 10,925 (b) 15,675
(c) 15,925 (d) 14,750
21. Bala bought a motorbike at ₹49,050 which included sales tax. The rate of sales tax was 9%. Find the listed price of the motorbike. (in ₹)
- (a) 44,000 (b) 45,000
(c) 46,000 (d) 47,000
22. David earns an annual salary of ₹1,60,000. If the standard deduction applicable to him is 30% of his gross salary or ₹50,000 whichever is less, find his net taxable income. (in ₹)
- (a) 1,10,000 (b) 1,18,000
(c) 1,12,000 (d) 1,08,000
23. Giri bought an auto for ₹89,880 which included a sales tax of ₹5,880. Find the rate of the sales tax.
- (a) 5% (b) 8%
(c) 9% (d) 7%
24. Hari bought a raincoat marked at ₹550. He received a 15% discount on it, but he had to pay 10% sales tax on the discounted price. Find the price which he paid for the raincoat (in ₹) inclusive of the sales tax.
- (a) 508.25 (b) 514.25
(c) 520.25 (d) 526.25
25. Amar bought a book listed at ₹350. The rate of sales tax was 6%. Find the sales tax paid by Amar. (in ₹)
- (a) 14 (b) 17.50
(c) 21 (d) 24.50

Level 3

26. Manish's annual income is ₹1,32,000. There is no income tax on the money donated to charity. On the remaining amount, he pays ₹4,480 as income tax at 4%. What amount did he denote to the charity?
- (a) ₹24,500 (b) ₹20,000
(c) ₹30,000 (d) ₹18,250
27. Amrit Raj bought a mobile handset for ₹5,040 which includes 10% discount on the market price and 12% sales tax on the remaining price. Find the marked price of the mobile phone.
- (a) ₹4,672 (b) ₹5,124
(c) ₹5,000 (d) ₹4,830
28. Laxmi's total income is ₹22,500. Of this, ₹7000 is free from tax. Find the net income remaining with her after she paid income tax at the rate of 8%. (in ₹)
- (a) 21,375 (b) 21,260
(c) 20,675 (d) 22,105
29. Rajnesh's annual income is ₹1,80,000. He pays no income tax on the money invested in premiums. On the remaining amount, he pays ₹10,920 as income tax at 7%. What amount does he invest in premiums?
- (a) ₹18,000 (b) ₹22,500
(c) ₹24,000 (d) ₹27,400
30. Karan bought a TV for ₹9,350 which includes 15% discount on the marked price, and then 10% sales tax on the remaining price. Find the marked price of the TV. (in ₹)
- (a) 9,000 (b) 9,750
(c) 10,200 (d) 10,000
31. Govind earned an annual salary of ₹3,30,000. His employer deducted ₹3,000 per month from his salary for the first 11 months of the financial year. Find the amount of tax he paid (in ₹) in the last month of that year using the following information. If standard deduction is 45% of salary or ₹1,50,000, whichever is less. Income tax on taxable income is calculated in the following manner.
- (i) Less than or equal to ₹50,000 – Nil
(ii) From ₹50,000 to ₹1,00,000: 20% of the amount exceeding ₹50,000
(iii) From ₹1,00,001 to ₹1,50,000: ₹10,000 + 30% of the amount exceeding ₹1,00,000
(iv) Above ₹1,50,000: ₹25,000 + 40% of the amount exceeding ₹1,50,000





- (a) 6,400 (b) 5,600
(c) 4,800 (d) 4,600

32. Eswar earned an annual salary of ₹1,02,000. The standard deduction was ₹30,000. Donations upto 10% of gross salary were exempt from tax. He donated ₹1,050 per month to the National Defence Fund. Find his net taxable income. (in ₹)

- (a) 59,400 (b) 61,800
(c) 60,200 (d) 60,800

33. An article was marked at ₹ m . A 10% discount was given on it. The sales tax was then charged at $y\%$. A person bought it for at ₹ p (where $p \geq m$) which included the sales tax. y must be at least _____.

- (a) 10 (b) $9\frac{1}{11}$
(c) $11\frac{1}{9}$ (d) $12\frac{1}{2}$

34. The sales tax to be paid for an article is ₹13,500. A surcharge of 8% of the sales tax was also payable. Find the total amount of tax payable. (in ₹)

- (a) 14,580
(b) 12,420
(c) 12,960
(d) 14,040

35. An article was marked at ₹ m . A discount of $x\%$ was given on it. A sales tax of $x\%$ was then charged. A person bought it for ₹ s which included the sales tax. Which of the following can be concluded?

- (a) $s < m$
(b) $s = m$
(c) $s > m$
(d) None of the previous choices

TEST YOUR CONCEPTS

Very Short Answer Type Questions

- | | |
|----------------------|-----------------------|
| 1. Central Sales Tax | 9. 30 |
| 2. 112 | 10. Income tax return |
| 3. Direct Tax | 11. False |
| 4. Income Tax | 12. 5% of income tax |
| 5. 1st April | 13. 7.5% |
| 6. ₹200 | 14. 28th February |
| 7. 100% | 15. ₹7500 |
| 8. Assessment | |

Short Answer Type Questions

- | | |
|-----------|------------|
| 16. ₹1450 | 19. ₹16800 |
| 17. 20% | 20. ₹7839 |
| 18. ₹1532 | |

Essay Type Questions

- | | |
|--------------------------------|------------|
| 21. ₹8400 | 24. ₹5250. |
| 22. $\approx$ ₹30503. | 25. ₹0 |
| 23. Percentage of loss = 6.58% | |

CONCEPT APPLICATION

Level 1

- | | | | | | | | | | |
|---------|---------|---------|---------|---------|--------|--------|--------|--------|---------|
| 1. (c) | 2. (b) | 3. (d) | 4. (c) | 5. (c) | 6. (c) | 7. (c) | 8. (b) | 9. (b) | 10. (c) |
| 11. (c) | 12. (c) | 13. (c) | 14. (a) | 15. (b) | | | | | |

Level 2

- | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 16. (d) | 17. (a) | 18. (b) | 19. (c) | 20. (c) | 21. (b) | 22. (c) | 23. (d) | 24. (b) | 25. (c) |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|

Level 3

- | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 26. (b) | 27. (c) | 28. (b) | 29. (c) | 30. (d) | 31. (d) | 32. (b) | 33. (c) | 34. (a) | 35. (a) |
| 36. (c) | | | | | | | | | |



CONCEPT APPLICATION

Level 1

- 108% of list price = cost price.
- Find 105% of 92% of 2500.
- Rate of sales tax is calculated on list price, and hence comes the list price.
- (i) Apply the concept of percentages.
(ii) Let the price after reduction be ₹ P .
(iii) Now, $P + \frac{8P}{100} = 378$, find P .
(iv) Discount needed = ₹ $(378 - P)$
- Tax is 8% of MRP.
- Deduct the savings (as per the norms) and standard deduction from the annual salary.
- (i) Add the sales tax and then add the central sales tax to the list price.
(ii) First, calculate 12% sales tax and add to list price.
(iii) Calculate 3% central sales tax and add to the above price.
- Taxable income = Annual salary – standard deduction. (in ₹)
- 105% of 88% of MP = 34,650.
- (i) Taxable income is obtained when standard deduction, donations and savings are deducted.
(ii) Find the standard deduction.
- (iii) Taxable income = Annual salary – (SD + GPF + LIC + NRP + 50% of donations).
- (i) Refer the introduction for slab on rebate amount on savings.
(ii) As his salary falls between ₹150,000 and ₹500,000, rate of rebate is 15% of his savings.
(iii) Calculate total savings and find 15% of it.
- What per cent of $9M/10$ is M .
- (i) Apply the concept of percentages.
(ii) Calculate 20% and 10% successive discounts on list price.
(iii) Calculate 20% sales tax on the amount after giving discounts.
 $X = \text{Sales tax} + \text{amount after giving discount}$.
(iv) Required amount = ₹ $(15,000 - X)$.
- Find the taxable income after deducting the eligible deductions and based on slab, calculate the amount of tax.
- (i) Calculate by using $x \times 0.9 \times 1.1 = 8910$
(ii) Now, use the value of x and calculate $x \times 1.2 = y$
(iii) Find the value of ₹ $(y - 8910)$.

Level 2

- (i) Assume the cost price as ₹100 and proceed.
(ii) Let the cost price be ₹ x , then
List price = ₹ $\frac{3x}{2}$
(iii) Price after discount = $\frac{3x}{2} \left(1 - \frac{20}{100}\right)$
(iv) Selling price with tax
 $= \frac{3x}{2} \left(1 - \frac{20}{100}\right) \left(1 + \frac{20}{100}\right) = 2880$.
- Apply the concept of percentages.
- Find the taxable income, and then find the net tax payable from the given slabs.
- Taxable income is obtained when both the standard deduction and total donation are deducted.
- Let the list price of the motorbike be ₹ m .
Sales tax = $\frac{9}{100}$ (₹ m) = ₹ $0.09m$.
The buying price of the bike = ₹ $(m + 0.09m)$ = ₹ $1.09m$.
 $1.09m = 49,050$
 $m = \frac{49050}{1.09} = \frac{49050}{109}(100)$
 $= (450)(100) = 45,000$.
- Gross salary = ₹160,000
30% of ₹160,000 = ₹48,000 which is < ₹50,000



∴ Standard deduction = ₹48,000

The net taxable income = ₹160,000 – ₹48,000 = ₹112,000.

23. List price of the auto = Buying price – Sales tax = ₹89,880 – ₹5880 = ₹84,000.

Rate of sales tax = $\frac{5880}{84000} \times (100) = 7\%$.

24. List price of the raincoat = ₹550

Rebate = $\frac{15}{100} (\text{₹}550) = \text{₹}82.50$

After deducting the rebate, its price (in ₹) = 467.50

Sales tax = $\frac{10}{100} (\text{₹}467.50) = \text{₹}46.75$

Buying price of the raincoat = ₹467.50 + ₹46.75 = ₹514.25.

25. Sales tax = $\frac{6}{100} (\text{₹}350) = \text{₹}21$.

Level 3

31. Gross salary = ₹330,000

45% of ₹330000 = $\frac{45}{100} (\text{₹}330000)$

= $\frac{90}{200} (\text{₹}330000)$

= $\frac{1}{2} (0.9 (\text{₹}330,000))$

= ₹148,500 which is less than ₹150,000.

∴ Standard deduction = ₹148500.

Taxable income (T1) = 330,000 – 148,500 = 181,500

The applicable tax rates and the tax are tabulated below:

Range of T1	Rate	Tax
0 to 50,000	0%	0
50,000 to 100,000	20%	10,000
100,000 to 150,000	30%	15,000
150,000 to 181,500	40%	12,600
		37,600

Total tax deducted by the employer (in ₹)

= (3,000)(11) = 33,000

Tax paid in the last month = ₹2,7600 – 33,000 = ₹4,600.

32. Gross salary = ₹102,000

Standard deduction for a salary of ₹1,02,000 is ₹30,000.

∴ Standard deduction = ₹30,000

The total amount donated (in ₹)

= (12)(1050) = 12,600

But, 10% of the total salary is ₹10,200 which is less than ₹12,600.

Net taxable income

= ₹102,000 – ₹(30,000 + 10,200) = ₹61,800.

33. List price of the article = ₹m

Rebate = $\frac{10}{100} (\text{₹}m) = \text{₹}0.1 m$

Price of the article after deducting the discount = ₹0.9m

Sales tax = $\frac{y}{100} (\text{₹}0.9 m)$

The final price of the article

= ₹0.9 m + $\frac{y}{100} (\text{₹}0.9 m)$

= ₹0.9 m $\left(1 + \frac{y}{100}\right)$

Which was at least ₹m

∴ $0.9 m \left(1 + \frac{y}{100}\right) \geq m$

$1 + \frac{y}{100} \geq \frac{1}{0.9}$

$y \geq \left(\frac{1}{0.9} - 1\right) 100 = \frac{100}{9} = 11\frac{1}{9},$

i.e., y must be at least $11\frac{1}{9}$.

34. Sales tax = ₹13,500

Surcharge = $\frac{8}{100} (\text{₹}13,500) = \text{₹}1,080$

Tax payable = ₹(13,500 + 1080) = ₹14,580.

35. The discount was x% of the marked price, m.

The sales tax was x% of the discounted price (which is less than M).

∴ The final price is less than m.

