GRADE: 7

SUBJECT: Mathematics SUBJECT: Percentage and Its Applications (Section 7.3 and 7.4)
DURATION: 2½ hrs
MAX MARKS: 80

Instructions:

1. The time given at the head of this Paper is the time allowed for writing the answers.
2. You will not be allowed to write during the first 10 minutes. Use this time to read the question paper carefully.
3. Attempt **all questions from Section A** and **any four questions from Section B**.
4. All working, including rough work, must be clearly shown.
5. Omission of essential working will result in loss of marks.

SECTION A (4 × 10 = 40 marks)

(Answer all questions)

1. Choose the correct option:

a) If a man buys an article for ₹120 and sells it for ₹100, then his loss percentage is:
- (i) 10%
- (ii) 15%
- (iii) 20%
- (iv) 25%

b) The simple interest on ₹6000 at **8% p.a.** for one year is:
- (i) ₹400
- (ii) ₹480
- (iii) ₹5040
- (iv) ₹5280

c) A salary increased from ₹24,000 to ₹30,000. The percentage increase is:
- (i) 15%
- (ii) 20%

- (iii) 25%
- (iv) 30%

d) A shopkeeper sells an article at ₹300, thus earning a profit of 20%. Find the cost price:
- (i) ₹250
- (ii) ₹280
- (iii) ₹320
- (iv) ₹350

2. Solve the following:

a) Rohan bought a calculator for ₹760 and sold it for ₹874. Find his **profit** and **profit percentage**.

b) Kirti bought a saree for ₹2500 and sold it for ₹2300. Find her **loss** and **loss percentage**.

c) By selling a **steel almirah** for ₹3906, a manufacturer suffers a **loss of ₹294**. Find the **cost price** of the almirah and the **loss percentage**.

3. Solve the following equations:

a) A trader **sold some damaged garments** for ₹7360 at a **loss of 8%**. Find the **cost price** of the garments.

b) By selling a **table for ₹3168**, Rashid **loses 12%**. Find the **cost price**. What percent would he gain or lose by selling the table for **₹3870**?

c) A **fan** is sold for ₹810, making a **profit of ₹60**. Find the **cost price** of the fan and the **profit percentage**.

4. State whether the following statements are TRUE or FALSE:

a) The simple interest on ₹5,600 at 8% p.a. for **one year** is **₹448**.
b) If an item is **sold at a 10% loss**, then its cost price is **more than its selling price**.
c) If a shopkeeper sells a shirt for ₹320 at **20% loss**, then the **cost price is ₹400**.
d) ₹135% converted to decimals is **1.35**.

5. Solve the following problems:

a) **Find the simple interest** on:

- ₹350 for **2 years** at **11% p.a.**
- ₹20,000 for **4 years** at **8.5% p.a.**

b) A sum of ₹6,000 amounts to ₹6,900 in **3 years**. What will it amount to if the rate of interest is **increased by 2%**?

c) A sum of **₹14,000** is invested at **4% per annum simple interest**. How long will it take for the amount to reach **₹16,240**?

SECTION B (4 × 10 = 40 marks)

(Answer any four questions)

6. Graph-Based Question:

The table below shows **discount percentages** on different items:

Item	Discount %
Clothing	20%
Electronics	10%
Furniture	15%
Groceries	5%

a) Represent this data using a **bar graph**.
b) Which item has the **highest discount**?

7. Selling Price and Cost Price Calculations:

a) A **shopkeeper** sells an **article for ₹4825**, incurring a **loss of 9%**. What would be the **cost price**?

b) The cost price of a **flower vase** is ₹120. The shopkeeper sells it at a **loss of 10%**. Find the **selling price**.

c) Find the **profit or loss percentage** in the following transactions:

- Gardening shears bought for ₹250 and sold for ₹325.
- A shirt bought for ₹250 and sold at ₹150.

8. Simple Interest Problems:

a) Find the **time** when:

- The **simple interest** on ₹2,500 at **4% per annum** is **₹200**.
- The **simple interest** on ₹12,000 at **6.5% per annum** is **₹2,730**.

b) Find the **principal amount** when:

- The **simple interest** at **16% per annum for 2.5 years** is ₹3,840.
- A **final amount** is ₹4,500 at **20% per annum for 5 years**.

9. Application-Based Questions:

a) Medha deposited **20%** of her money in a bank. After spending **20% of the remainder**, she has **₹48,000** left. How much did she originally have?

b) Rohit borrows **₹4,800 at 5% p.a.** simple interest. Find the **amount he has to return at the end of 2 years**.

c) A manufacturer sells an item to an **agency** at a **profit of 25%**. The agency sells the item to a **shopkeeper** at **10% profit**, and the **shopkeeper** sells the item at a **profit of 20%**. If the **selling price of the item is ₹594**, find the **manufacturing price**.

10. Higher Order Thinking Skills (HOTS):

a) An amount of money invested **tripled in 6 years**. Find the **rate of interest earned**.

b) A **person preparing medicine** wants to convert a **15% alcohol solution into a 32% alcohol solution**. Find how much **pure alcohol should be mixed with 400 mL** of **15% alcohol solution** to obtain it.

c) A **shopkeeper marks the price** of an article **20% above the cost price**. After **giving a discount of 10%**, he makes a **profit of ₹54**. Find the **cost price** of the article.

END OF THE QUESTION PAPER