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Simple & Compound Interest MCQs

100 FULLY SOLVED MCQs

PPSC, FPSC & ONE PAPER EXAMS

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Fast Methods • Four Options • Immediate Mathematical Solution

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PART 7 - SIMPLE & COMPOUND INTEREST | 100 SOLVED MCQs

Fast Simple & Compound Interest Foundation

Simple interest

$$SI = \frac{PRT}{100}$$

$$A = P + SI$$

where P is principal, R is annual rate in percent, and T is time in years.

Compounded half-yearly

$$R \rightarrow \frac{R}{2}, \quad n \rightarrow 2n$$

$$A = P \left(1 + \frac{R}{200} \right)^{2n}$$

Two-year SI/CI difference

$$CI - SI = P \left(\frac{R}{100} \right)^2$$

This shortcut is especially useful in one-paper MCQs.

Reverse simple-interest formulas

$$P = \frac{100 SI}{RT}, \quad R = \frac{100 SI}{PT}, \quad T = \frac{100 SI}{PR}$$

Growth and depreciation

$$V_n = V_0 \left(1 + \frac{r}{100} \right)^n$$

for growth, and

$$V_n = V_0 \left(1 - \frac{d}{100} \right)^n$$

for depreciation.

Compound amount

$$A = P \left(1 + \frac{R}{100} \right)^n$$

$$CI = A - P$$

100 Fully Solved MCQs

MCQ 1

A sum of \$1,000 is invested at simple interest of 9% per annum for 3 years. Find the simple interest.

- A. \$270 B. \$216
C. \$324 D. \$360

Adapted from FPSC SOPE-2024 Basic Mathematics & Statistics Q2(b)(i).

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{1,000 \times 9 \times 3}{100} \\ &= 270 \end{aligned}$$

Final Answer

Option A

MCQ 2

A sum of Rs. 1,500 is invested at simple interest of 8% per annum for 2 years. Find the simple interest.

- A. Rs. 192 B. Rs. 240
C. Rs. 288 D. Rs. 360

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{1,500 \times 8 \times 2}{100} \\ &= 240 \end{aligned}$$

Final Answer

Option B

MCQ 3

A sum of Rs. 2,400 is invested at simple interest of 5% per annum for 4 years. Find the simple interest.

- A. Rs. 384 B. Rs. 576
C. Rs. 480 D. Rs. 600

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{2,400 \times 5 \times 4}{100} \\ &= 480 \end{aligned}$$

Final Answer

Option C

MCQ 4

A sum of Rs. 3,200 is invested at simple interest of 7.5% per annum for 2 years. Find the simple interest.

- A. Rs. 384 B. Rs. 576
C. Rs. 720 D. Rs. 480

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{3,200 \times 7.5 \times 2}{100} \\ &= 480 \end{aligned}$$

Final Answer

Option D

MCQ 5

A sum of Rs. 5,000 is invested at simple interest of 6% per annum for 3 years. Find the simple interest.

- A. Rs. 900 B. Rs. 720
C. Rs. 1,080 D. Rs. 1,200

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{5,000 \times 6 \times 3}{100} \\ &= 900 \end{aligned}$$

Final Answer

Option A

MCQ 6

A sum of Rs. 1,200 is invested at simple interest of 10% per annum for 1.5 years. Find the simple interest.

- A. Rs. 144 B. Rs. 180
C. Rs. 216 D. Rs. 300

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{1,200 \times 10 \times 1.5}{100} \\ &= 180 \end{aligned}$$

Final Answer

Option B

MCQ 7

A sum of Rs. 8,000 is invested at simple interest of 4.5% per annum for 2 years. Find the simple interest.

- A. Rs. 576 B. Rs. 864
C. Rs. 720 D. Rs. 1,080

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{8,000 \times 4.5 \times 2}{100} \\ &= 720 \end{aligned}$$

Final Answer

Option C

MCQ 8

A sum of Rs. 2,500 is invested at simple interest of 12% per annum for 1 years. Find the simple interest.

- A. Rs. 240 B. Rs. 360
C. Rs. 600 D. Rs. 300

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{2,500 \times 12 \times 1}{100} \\ &= 300 \end{aligned}$$

Final Answer

Option D

MCQ 9

A sum of Rs. 3,600 is invested at simple interest of 5% per annum for 2.5 years. Find the simple interest.

- A. Rs. 450 B. Rs. 360
C. Rs. 540 D. Rs. 630

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{3,600 \times 5 \times 2.5}{100} \\ &= 450 \end{aligned}$$

Final Answer

Option A

MCQ 10

A sum of Rs. 6,000 is invested at simple interest of 7% per annum for 5 years. Find the simple interest.

- A. Rs. 1,680 B. Rs. 2,100
C. Rs. 2,520 D. Rs. 2,103

Solution

$$\begin{aligned} SI &= \frac{P \times R \times T}{100} \\ &= \frac{6,000 \times 7 \times 5}{100} \\ &= 2,100 \end{aligned}$$

Final Answer

Option B

MCQ 11

Find the amount on Rs. 2,000 at simple interest of 10% per annum for 2 years.

- A. Rs. 2,200 B. Rs. 2,800
C. Rs. 2,400 D. Rs. 2,000

Solution

$$\begin{aligned} SI &= \frac{2,000 \times 10 \times 2}{100} = 400 \\ A &= P + SI \\ &= 2,000 + 400 = 2,400 \end{aligned}$$

Final Answer

Option C

MCQ 12

Find the amount on Rs. 3,500 at simple interest of 6% per annum for 3 years.

- A. Rs. 3,815 B. Rs. 4,760
C. Rs. 3,500 D. Rs. 4,130

Solution

$$\begin{aligned} SI &= \frac{3,500 \times 6 \times 3}{100} = 630 \\ A &= P + SI \\ &= 3,500 + 630 = 4,130 \end{aligned}$$

Final Answer

Option D

MCQ 13

Find the amount on Rs. 4,800 at simple interest of 5% per annum for 2 years.

- A. Rs. 5,280 B. Rs. 5,040
C. Rs. 5,760 D. Rs. 4,800

Solution

$$\begin{aligned} SI &= \frac{4,800 \times 5 \times 2}{100} = 480 \\ A &= P + SI \\ &= 4,800 + 480 = 5,280 \end{aligned}$$

Final Answer

Option A

MCQ 14

Find the amount on Rs. 7,500 at simple interest of 8% per annum for 1.5 years.

- A. Rs. 7,950 B. Rs. 8,400
C. Rs. 9,300 D. Rs. 7,500

Solution

$$\begin{aligned} SI &= \frac{7,500 \times 8 \times 1.5}{100} = 900 \\ A &= P + SI \\ &= 7,500 + 900 = 8,400 \end{aligned}$$

Final Answer

Option B

MCQ 15

Find the amount on Rs. 10,000 at simple interest of 4% per annum for 5 years.

- A. Rs. 11,000 B. Rs. 14,000
C. Rs. 12,000 D. Rs. 10,000

Solution

$$\begin{aligned}SI &= \frac{10,000 \times 4 \times 5}{100} = 2,000 \\A &= P + SI \\&= 10,000 + 2,000 = 12,000\end{aligned}$$

Final Answer

Option C

MCQ 16

Find the amount on Rs. 1,250 at simple interest of 12% per annum for 2 years.

- A. Rs. 1,400 B. Rs. 1,850
C. Rs. 1,250 D. Rs. 1,550

Solution

$$\begin{aligned}SI &= \frac{1,250 \times 12 \times 2}{100} = 300 \\A &= P + SI \\&= 1,250 + 300 = 1,550\end{aligned}$$

Final Answer

Option D

MCQ 17

Find the amount on Rs. 9,000 at simple interest of 7% per annum for 2 years.

- A. Rs. 10,260 B. Rs. 9,630
C. Rs. 11,520 D. Rs. 9,000

Solution

$$\begin{aligned}SI &= \frac{9,000 \times 7 \times 2}{100} = 1,260 \\A &= P + SI \\&= 9,000 + 1,260 = 10,260\end{aligned}$$

Final Answer

Option A

MCQ 18

Find the amount on Rs. 1,600 at simple interest of 15% per annum for 1 years.

- A. Rs. 1,720 B. Rs. 1,840
C. Rs. 2,080 D. Rs. 1,600

Solution

$$\begin{aligned}SI &= \frac{1,600 \times 15 \times 1}{100} = 240 \\A &= P + SI \\&= 1,600 + 240 = 1,840\end{aligned}$$

Final Answer

Option B

MCQ 19

Find the amount on Rs. 6,000 at simple interest of 5.5% per annum for 4 years.

- A. Rs. 6,660 B. Rs. 8,640
C. Rs. 7,320 D. Rs. 6,000

Solution

$$\begin{aligned}SI &= \frac{6,000 \times 5.5 \times 4}{100} = 1,320 \\A &= P + SI \\&= 6,000 + 1,320 = 7,320\end{aligned}$$

Final Answer

Option C

MCQ 20

Find the amount on Rs. 2,400 at simple interest of 9% per annum for 2.5 years.

- A. Rs. 2,670 B. Rs. 3,480
C. Rs. 2,400 D. Rs. 2,940

Solution

$$\begin{aligned}SI &= \frac{2,400 \times 9 \times 2.5}{100} = 540 \\A &= P + SI \\&= 2,400 + 540 = 2,940\end{aligned}$$

Final Answer

Option D

MCQ 21

The simple interest is Rs. 300 at 5% per annum for 3 years. Find the principal.

- A. Rs. 2,000 B. Rs. 1,600
C. Rs. 2,400 D. Rs. 2,500

Solution

$$\begin{aligned} SI &= \frac{PRT}{100} \\ P &= \frac{100 SI}{RT} \\ &= \frac{100 \times 300}{5 \times 3} = 2,000 \end{aligned}$$

Final Answer

Option A

MCQ 22

The simple interest is Rs. 540 at 9% per annum for 2 years. Find the principal.

- A. Rs. 2,400 B. Rs. 3,000
C. Rs. 3,600 D. Rs. 3,500

Solution

$$\begin{aligned} SI &= \frac{PRT}{100} \\ P &= \frac{100 SI}{RT} \\ &= \frac{100 \times 540}{9 \times 2} = 3,000 \end{aligned}$$

Final Answer

Option B

MCQ 23

Rs. 2,400 earns Rs. 360 simple interest in 2 years. Find the annual rate.

- A. 6.5% B. 8.5%
C. 7.5% D. 9.5%

Solution

$$\begin{aligned} R &= \frac{100 SI}{PT} \\ &= \frac{100 \times 360}{2,400 \times 2} \\ &= 7.5\% \end{aligned}$$

Final Answer

Option C

MCQ 24

Rs. 5,000 earns Rs. 900 simple interest in 3 years. Find the annual rate.

- A. 5% B. 7%
C. 8% D. 6%

Solution

$$\begin{aligned} R &= \frac{100 SI}{PT} \\ &= \frac{100 \times 900}{5,000 \times 3} \\ &= 6\% \end{aligned}$$

Final Answer

Option D

MCQ 25

Farooq invests \$4,000 at simple interest of 2% per annum. How long will it take the investment to grow to \$4,400?

- A. 5 years B. 4 years
C. 6 years D. 7 years

Adapted from FPSC SOPE-2024 Basic Mathematics & Statistics Q2(b)(ii).

Solution

$$\begin{aligned} SI &= 4400 - 4000 = 400 \\ T &= \frac{100 \times 400}{4000 \times 2} \\ &= 5 \text{ years} \end{aligned}$$

Final Answer

Option A

MCQ 26

Rs. 2,500 earns Rs. 600 at simple interest of 8% per annum. Find the time.

- A. 2 years B. 3 years
C. 4 years D. 5 years

Solution

$$\begin{aligned} T &= \frac{100 SI}{PR} \\ &= \frac{100 \times 600}{2,500 \times 8} \\ &= 3 \text{ years} \end{aligned}$$

Final Answer

Option B

MCQ 27

The simple interest is Rs. 720 at 6% per annum for 4 years. Find the principal.

- A. Rs. 2,400 B. Rs. 3,600
C. Rs. 3,000 D. Rs. 3,500

Solution

$$\begin{aligned} SI &= \frac{PRT}{100} \\ P &= \frac{100 SI}{RT} \\ &= \frac{100 \times 720}{6 \times 4} = 3,000 \end{aligned}$$

Final Answer

Option C

MCQ 30

The simple interest is Rs. 450 at 12% per annum for 1.5 years. Find the principal.

- A. Rs. 2,000 B. Rs. 2,500
C. Rs. 3,000 D. Rs. 2,503

Solution

$$\begin{aligned} SI &= \frac{PRT}{100} \\ P &= \frac{100 SI}{RT} \\ &= \frac{100 \times 450}{12 \times 1.5} = 2,500 \end{aligned}$$

Final Answer

Option B

MCQ 28

Rs. 3,200 earns Rs. 640 simple interest in 4 years. Find the annual rate.

- A. 4% B. 6%
C. 7% D. 5%

Solution

$$\begin{aligned} R &= \frac{100 SI}{PT} \\ &= \frac{100 \times 640}{3,200 \times 4} \\ &= 5\% \end{aligned}$$

Final Answer

Option D

MCQ 31

Find the simple interest on Rs. 4,800 at 10% per annum for 9 months.

- A. Rs. 270 B. Rs. 450
C. Rs. 360 D. Rs. 400

Solution

$$\begin{aligned} T &= \frac{9}{12} \text{ year} \\ SI &= \frac{4,800 \times 10 \times 9}{100 \times 12} \\ &= 360 \end{aligned}$$

Final Answer

Option C

MCQ 29

Rs. 6,000 earns Rs. 1,800 at simple interest of 10% per annum. Find the time.

- A. 3 years B. 2 years
C. 4 years D. 5 years

Solution

$$\begin{aligned} T &= \frac{100 SI}{PR} \\ &= \frac{100 \times 1,800}{6,000 \times 10} \\ &= 3 \text{ years} \end{aligned}$$

Final Answer

Option A

MCQ 32

Find the simple interest on Rs. 6,000 at 8% per annum for 6 months.

- A. Rs. 180 B. Rs. 300
C. Rs. 280 D. Rs. 240

Solution

$$\begin{aligned} T &= \frac{6}{12} \text{ year} \\ SI &= \frac{6,000 \times 8 \times 6}{100 \times 12} \\ &= 240 \end{aligned}$$

Final Answer

Option D

MCQ 33

Find the simple interest on Rs. 3,600 at 12% per annum for 5 months.

- A. Rs. 180 B. Rs. 135
C. Rs. 225 D. Rs. 216

Solution

$$T = \frac{5}{12} \text{ year}$$
$$SI = \frac{3,600 \times 12 \times 5}{100 \times 12}$$
$$= 180$$

Final Answer

Option A

MCQ 36

Find the simple interest on Rs. 7,200 at 5% per annum for 18 months.

- A. Rs. 405 B. Rs. 675
C. Rs. 570 D. Rs. 540

Solution

$$T = \frac{18}{12} \text{ year}$$
$$SI = \frac{7,200 \times 5 \times 18}{100 \times 12}$$
$$= 540$$

Final Answer

Option D

MCQ 34

Find the simple interest on Rs. 9,000 at 6% per annum for 8 months.

- A. Rs. 270 B. Rs. 360
C. Rs. 450 D. Rs. 405

Solution

$$T = \frac{8}{12} \text{ year}$$
$$SI = \frac{9,000 \times 6 \times 8}{100 \times 12}$$
$$= 360$$

Final Answer

Option B

MCQ 37

Find the simple interest on Rs. 5,000 at 9% per annum for 16 months.

- A. Rs. 600 B. Rs. 450
C. Rs. 750 D. Rs. 637.5

Solution

$$T = \frac{16}{12} \text{ year}$$
$$SI = \frac{5,000 \times 9 \times 16}{100 \times 12}$$
$$= 600$$

Final Answer

Option A

MCQ 35

Find the simple interest on Rs. 2,400 at 15% per annum for 4 months.

- A. Rs. 90 B. Rs. 150
C. Rs. 120 D. Rs. 123

Solution

$$T = \frac{4}{12} \text{ year}$$
$$SI = \frac{2,400 \times 15 \times 4}{100 \times 12}$$
$$= 120$$

Final Answer

Option C

MCQ 38

Find the simple interest on Rs. 8,000 at 7.5% per annum for 20 months.

- A. Rs. 750 B. Rs. 1,000
C. Rs. 1,250 D. Rs. 1,050

Solution

$$T = \frac{20}{12} \text{ year}$$
$$SI = \frac{8,000 \times 7.5 \times 20}{100 \times 12}$$
$$= 1,000$$

Final Answer

Option B

MCQ 39

Find the simple interest on Rs. 3,000 at 10% per annum for 15 months.

- A. Rs. 281.25 B. Rs. 468.75
C. Rs. 375 D. Rs. 400

Solution

$$T = \frac{15}{12} \text{ year}$$

$$SI = \frac{3,000 \times 10 \times 15}{100 \times 12}$$

$$= 375$$

Final Answer

Option C

MCQ 40

Find the simple interest on Rs. 9,600 at 6.25% per annum for 24 months.

- A. Rs. 900 B. Rs. 1,500
C. Rs. 1,250 D. Rs. 1,200

Solution

$$T = \frac{24}{12} \text{ year}$$

$$SI = \frac{9,600 \times 6.25 \times 24}{100 \times 12}$$

$$= 1,200$$

Final Answer

Option D

MCQ 41

A sum doubles itself in 10 years at simple interest. Find the rate per annum.

- A. 5% B. 10%
C. 12% D. 20%

Solution

$$\text{If } A = 2P, \quad SI = P$$

$$P = \frac{P \times R \times 10}{100}$$

$$R = 10\%$$

Final Answer

Option B

MCQ 42

A sum triples itself in 10 years at simple interest. Find the rate per annum.

- A. 10% B. 15%
C. 20% D. 25%

Solution

$$A = 3P \Rightarrow SI = 2P$$

$$2P = \frac{P \times R \times 10}{100}$$

$$R = 20\%$$

Final Answer

Option C

MCQ 43

At what annual simple-interest rate will the interest equal the principal in 20 years?

- A. 4% B. 5%
C. 8% D. 10%

Solution

$$SI = P$$

$$P = \frac{P \times R \times 20}{100}$$

$$R = 5\%$$

Final Answer

Option B

MCQ 44

The simple interest for 4 years is 40% of the principal. Find the annual rate.

- A. 8% B. 10%
C. 12% D. 16%

Solution

$$\frac{PR(4)}{100} = 0.40P$$

$$4R = 40$$

$$R = 10\%$$

Final Answer

Option B

MCQ 45

On Rs. 5,000, the rate rises from 8% to 10% for 3 years. Find the extra simple interest.

- A. Rs. 200 B. Rs. 250
C. Rs. 300 D. Rs. 350

Solution

$$\begin{aligned}\Delta R &= 10\% - 8\% = 2\% \\ \Delta SI &= \frac{5000 \times 2 \times 3}{100} \\ &= 300\end{aligned}$$

Final Answer

Option C

MCQ 46

Two sums are equal and invested for the same time at simple interest rates 6% and 9%. Find the ratio of their interests.

- A. 2:3 B. 3:2
C. 6:5 D. 1:3

Solution

$$\begin{aligned}SI &\propto R \\ I_1 : I_2 &= 6 : 9 \\ &= 2 : 3\end{aligned}$$

Final Answer

Option A

MCQ 47

At the same simple-interest rate and for the same time, principals are in the ratio 3 : 5. Find the ratio of interests.

- A. 3:5 B. 5:3
C. 9:25 D. 1:1

Solution

$$\begin{aligned}SI &\propto P \\ I_1 : I_2 &= 3 : 5\end{aligned}$$

Final Answer

Option A

MCQ 48

The same principal is invested at the same simple-interest rate for 2 years and 5 years. Find the ratio of interests.

- A. 2:3 B. 2:5
C. 5:2 D. 4:25

Solution

$$\begin{aligned}SI &\propto T \\ I_1 : I_2 &= 2 : 5\end{aligned}$$

Final Answer

Option B

MCQ 49

If simple interest on a sum for 5 years is Rs. 1,250, what is the interest for 8 years at the same rate?

- A. Rs. 1,600 B. Rs. 1,800
C. Rs. 2,000 D. Rs. 2,250

Solution

$$\begin{aligned}\text{Interest per year} &= \frac{1250}{5} = 250 \\ \text{SI for 8 years} &= 250 \times 8 = 2000\end{aligned}$$

Final Answer

Option C

MCQ 50

A sum earns Rs. 720 simple interest in 3 years. At the same rate, how much interest will it earn in 7 years?

- A. Rs. 1,440 B. Rs. 1,560
C. Rs. 1,680 D. Rs. 1,800

Solution

$$\begin{aligned}\text{Interest per year} &= \frac{720}{3} = 240 \\ \text{SI for 7 years} &= 240 \times 7 = 1680\end{aligned}$$

Final Answer

Option C

MCQ 51

Find the compound interest on Rs. 1,000 at 10% per annum for 2 years.

- A. Rs. 189 B. Rs. 231
C. Rs. 210 D. Rs. 310

Solution

$$A = 1,000 \left(1 + \frac{10}{100}\right)^2$$

$$A = 1,210$$

$$CI = A - P = 1,210 - 1,000 = 210$$

Final Answer

Option C

MCQ 52

Find the amount on Rs. 2,000 at 5% compound interest per annum for 2 years.

- A. Rs. 1984.5 B. Rs. 2425.5
C. Rs. 2,305 D. Rs. 2,205

Solution

$$A = P \left(1 + \frac{R}{100}\right)^n$$

$$= 2,000 \left(1 + \frac{5}{100}\right)^2$$

$$= 2,205$$

Final Answer

Option D

MCQ 53

Find the compound interest on Rs. 4,000 at 10% per annum for 3 years.

- A. Rs. 1,324 B. Rs. 1191.6
C. Rs. 1456.4 D. Rs. 1,724

Solution

$$A = 4,000 \left(1 + \frac{10}{100}\right)^3$$

$$A = 5,324$$

$$CI = A - P = 5,324 - 4,000 = 1,324$$

Final Answer

Option A

MCQ 54

Find the amount on Rs. 8,000 at 25% compound interest per annum for 2 years.

- A. Rs. 11,250 B. Rs. 12,500
C. Rs. 13,750 D. Rs. 14,500

Solution

$$A = P \left(1 + \frac{R}{100}\right)^n$$

$$= 8,000 \left(1 + \frac{25}{100}\right)^2$$

$$= 12,500$$

Final Answer

Option B

MCQ 55

Find the compound interest on Rs. 5,000 at 20% per annum for 2 years.

- A. Rs. 1,980 B. Rs. 2,420
C. Rs. 2,200 D. Rs. 3,200

Solution

$$A = 5,000 \left(1 + \frac{20}{100}\right)^2$$

$$A = 7,200$$

$$CI = A - P = 7,200 - 5,000 = 2,200$$

Final Answer

Option C

MCQ 56

Find the amount on Rs. 10,000 at 10% compound interest per annum for 3 years.

- A. Rs. 11,979 B. Rs. 14,641
C. Rs. 14,310 D. Rs. 13,310

Solution

$$A = P \left(1 + \frac{R}{100}\right)^n$$

$$= 10,000 \left(1 + \frac{10}{100}\right)^3$$

$$= 13,310$$

Final Answer

Option D

MCQ 57

Find the compound interest on Rs. 6,400 at 25% per annum for 2 years.

- A. Rs. 3,600 B. Rs. 3,240
C. Rs. 3,960 D. Rs. 5,200

Solution

$$A = 6,400 \left(1 + \frac{25}{100}\right)^2$$

$$A = 10,000$$

$$CI = A - P = 10,000 - 6,400 = 3,600$$

Final Answer

Option A

MCQ 58

Find the amount on Rs. 2,500 at 20% compound interest per annum for 3 years.

- A. Rs. 3,888 B. Rs. 4,320
C. Rs. 4,752 D. Rs. 4,820

Solution

$$A = P \left(1 + \frac{R}{100}\right)^n$$

$$= 2,500 \left(1 + \frac{20}{100}\right)^3$$

$$= 4,320$$

Final Answer

Option B

MCQ 59

Find the compound interest on Rs. 1,600 at 25% per annum for 3 years.

- A. Rs. 1372.5 B. Rs. 1677.5
C. Rs. 1,525 D. Rs. 1,925

Solution

$$A = 1,600 \left(1 + \frac{25}{100}\right)^3$$

$$A = 3,125$$

$$CI = A - P = 3,125 - 1,600 = 1,525$$

Final Answer

Option C

MCQ 60

Find the amount on Rs. 10,000 at 5% compound interest per annum for 2 years.

- A. Rs. 9922.5 B. Rs. 12127.5
C. Rs. 11,525 D. Rs. 11,025

Solution

$$A = P \left(1 + \frac{R}{100}\right)^n$$

$$= 10,000 \left(1 + \frac{5}{100}\right)^2$$

$$= 11,025$$

Final Answer

Option D

MCQ 61

Find the difference between compound interest and simple interest on Rs. 10,000 for 2 years at 10% per annum.

- A. Rs. 100 B. Rs. 200
C. Rs. 50 D. Rs. 1,100

Solution

$$\text{For 2 years, } CI - SI = P \left(\frac{R}{100}\right)^2$$

$$= 10,000 \left(\frac{10}{100}\right)^2$$

$$= 100$$

Final Answer

Option A

MCQ 62

Find the difference between compound interest and simple interest on Rs. 8,000 for 2 years at 5% per annum.

- A. Rs. 40 B. Rs. 20
C. Rs. 10 D. Rs. 420

Solution

$$\text{For 2 years, } CI - SI = P \left(\frac{R}{100}\right)^2$$

$$= 8,000 \left(\frac{5}{100}\right)^2$$

$$= 20$$

Final Answer

Option B

MCQ 63

Find the difference between compound interest and simple interest on Rs. 5,000 for 2 years at 20% per annum.

- A. Rs. 400 B. Rs. 100
C. Rs. 200 D. Rs. 1,200

Solution

$$\begin{aligned}\text{For 2 years, CI} - \text{SI} &= P \left(\frac{R}{100} \right)^2 \\ &= 5,000 \left(\frac{20}{100} \right)^2 \\ &= 200\end{aligned}$$

Final Answer

Option C

MCQ 64

Find the difference between compound interest and simple interest on Rs. 6,400 for 2 years at 25% per annum.

- A. Rs. 800 B. Rs. 200
C. Rs. 2,000 D. Rs. 400

Solution

$$\begin{aligned}\text{For 2 years, CI} - \text{SI} &= P \left(\frac{R}{100} \right)^2 \\ &= 6,400 \left(\frac{25}{100} \right)^2 \\ &= 400\end{aligned}$$

Final Answer

Option D

MCQ 65

Find the difference between compound interest and simple interest on Rs. 2,500 for 2 years at 20% per annum.

- A. Rs. 100 B. Rs. 200
C. Rs. 50 D. Rs. 600

Solution

$$\begin{aligned}\text{For 2 years, CI} - \text{SI} &= P \left(\frac{R}{100} \right)^2 \\ &= 2,500 \left(\frac{20}{100} \right)^2 \\ &= 100\end{aligned}$$

Final Answer

Option A

MCQ 66

For 2 years at 10%, the excess of compound interest over simple interest is Rs. 80. Find the principal.

- A. Rs. 6,000 B. Rs. 8,000
C. Rs. 10,000 D. Rs. 12,000

Solution

$$\begin{aligned}80 &= P \left(\frac{10}{100} \right)^2 \\ 80 &= 0.01P \\ P &= 8000\end{aligned}$$

Final Answer

Option B

MCQ 67

For 2 years at 20%, the excess of compound interest over simple interest is Rs. 200. Find the principal.

- A. Rs. 4,000 B. Rs. 5,000
C. Rs. 6,000 D. Rs. 8,000

Solution

$$\begin{aligned}200 &= P \left(\frac{20}{100} \right)^2 \\ 200 &= 0.04P \\ P &= 5000\end{aligned}$$

Final Answer

Option B

MCQ 68

Find the difference between compound interest and simple interest on Rs. 10,000 at 10% for 3 years.

- A. Rs. 300 B. Rs. 310
C. Rs. 330 D. Rs. 360

Solution

$$\begin{aligned}\text{SI} &= \frac{10000 \times 10 \times 3}{100} = 3000 \\ \text{CI} &= 10000(1.1)^3 - 10000 \\ &= 13310 - 10000 = 3310\end{aligned}$$

$$\text{Difference} = 3310 - 3000 = 310$$

Final Answer

Option B

MCQ 69

On Rs. 10,000 at 10% compound interest, how much interest is earned during the second year alone?

- A. Rs. 1,000 B. Rs. 1,050
C. Rs. 1,100 D. Rs. 1,210

Solution

$$\text{Amount after 1 year} = 10000(1.10) = 11000$$

$$\begin{aligned}\text{Second-year interest} &= \frac{10}{100}(11000) \\ &= 1100\end{aligned}$$

Final Answer

Option C

MCQ 70

On Rs. 8,000 at 5% compound interest, find the increase in yearly interest from the first year to the second year.

- A. Rs. 10 B. Rs. 20
C. Rs. 40 D. Rs. 400

Solution

$$I_1 = \frac{5}{100}(8000) = 400$$

$$I_2 = \frac{5}{100}(8400) = 420$$

$$I_2 - I_1 = 420 - 400 = 20$$

Final Answer

Option B

MCQ 71

Find the amount on Rs. 10,000 at 10% per annum compounded half-yearly for 1 year.

- A. Rs. 11,000 B. Rs. 11,025
C. Rs. 11,050 D. Rs. 11,100

Solution

$$\text{Rate per half-year} = \frac{10\%}{2} = 5\%$$

$$\text{Periods} = 2$$

$$A = 10000(1.05)^2 = 11025$$

Final Answer

Option B

MCQ 72

Find the compound interest on Rs. 16,000 at 10% per annum compounded half-yearly for 1 year.

- A. Rs. 1,600 B. Rs. 1,640
C. Rs. 1,680 D. Rs. 1,760

Solution

$$A = 16000(1.05)^2$$

$$= 17640$$

$$\text{CI} = 17640 - 16000 = 1640$$

Final Answer

Option B

MCQ 73

Find the amount on Rs. 10,000 at 20% per annum compounded half-yearly for 1 year.

- A. Rs. 12,000 B. Rs. 12,100
C. Rs. 12,200 D. Rs. 12,400

Solution

$$\text{Half-year rate} = 10\%$$

$$A = 10000(1.10)^2$$

$$= 12100$$

Final Answer

Option B

MCQ 74

Rs. 2,500 is invested at 8% per annum compounded quarterly for 6 months. Find the amount.

- A. Rs. 2,550 B. Rs. 2,600
C. Rs. 2,601 D. Rs. 2,625

Solution

$$\text{Quarterly rate} = \frac{8\%}{4} = 2\%$$

$$6 \text{ months} = 2 \text{ quarters}$$

$$A = 2500(1.02)^2 = 2601$$

Final Answer

Option C

MCQ 75

A sum is compounded annually at 10% in the first year and 20% in the second year. If the principal is Rs. 10,000, find the amount after 2 years.

- A. Rs. 12,000 B. Rs. 13,000
C. Rs. 13,200 D. Rs. 13,500

Solution

$$A = 10000(1.10)(1.20) \\ = 10000(1.32) = 13200$$

Final Answer

Option C

MCQ 76

A sum is compounded annually at 20% in the first year and 10% in the second year. Compared with Q75, the final amount is:

- A. smaller B. greater
C. the same D. cannot be determined

Solution

$$(1.20)(1.10) = (1.10)(1.20) \\ = 1.32$$

Final amount is the same

Final Answer

Option C

MCQ 77

The effective annual rate corresponding to 10% nominal rate compounded half-yearly is:

- A. 10% B. 10.20%
C. 10.25% D. 10.50%

Solution

$$\text{Effective multiplier} = \left(1 + \frac{0.10}{2}\right)^2 \\ = (1.05)^2 = 1.1025 \\ \text{Effective rate} = 10.25\%$$

Final Answer

Option C

MCQ 78

The effective annual rate for 20% nominal rate compounded half-yearly is:

- A. 20% B. 20.5%
C. 21% D. 22%

Solution

$$\left(1 + \frac{20\%}{2}\right)^2 = (1.10)^2 = 1.21$$

Effective rate = 21%

Final Answer

Option C

MCQ 79

A sum of Rs. 5,000 is invested at 10% per annum compounded half-yearly for 6 months. Find the amount.

- A. Rs. 5,200 B. Rs. 5,250
C. Rs. 5,300 D. Rs. 5,500

Solution

$$\text{Half-yearly rate} = \frac{10\%}{2} = 5\%$$

6 months = 1 half-year period

$$A = 5000(1.05) = 5250$$

Final Answer

Option B

MCQ 80

A bank compounds interest half-yearly. At 12% per annum, what rate is used for each half-year?

- A. 3% B. 6%
C. 12% D. 24%

Solution

$$\text{Half-yearly rate} = \frac{12\%}{2} \\ = 6\%$$

Final Answer

Option B

MCQ 81

A population of 10,000 grows by 10% per year. Find the population after 2 years.

- A. 11,000 B. 12,000
C. 12,100 D. 12,200

Solution

$$P_2 = 10000(1.10)^2$$

$$= 12100$$

Final Answer

Option C

MCQ 82

A machine worth Rs. 50,000 depreciates by 10% per year. Find its value after 2 years.

- A. Rs. 40,000 B. Rs. 40,500
C. Rs. 41,000 D. Rs. 45,000

Solution

$$V = 50000(1 - 0.10)^2$$

$$= 50000(0.9)^2$$

$$= 40500$$

Final Answer

Option B

MCQ 83

An asset worth Rs. 80,000 depreciates by 20% per year. Find its value after 2 years.

- A. Rs. 48,000 B. Rs. 50,000
C. Rs. 51,200 D. Rs. 64,000

Solution

$$V = 80000(0.80)^2$$

$$= 80000(0.64) = 51200$$

Final Answer

Option C

MCQ 84

A bacterial culture of 2,000 grows by 25% in each period. Find the count after 2 periods.

- A. 2,500 B. 3,000
C. 3,125 D. 3,250

Solution

$$N = 2000(1.25)^2$$

$$= 2000(1.5625) = 3125$$

Final Answer

Option C

MCQ 85

A salary of Rs. 40,000 increases by 10% each year. Find it after 2 annual increases.

- A. Rs. 44,000 B. Rs. 48,000
C. Rs. 48,400 D. Rs. 49,000

Solution

$$S = 40000(1.10)^2$$

$$= 40000(1.21) = 48400$$

Final Answer

Option C

MCQ 86

A town has population 50,000 and grows by 4% annually. Find the population after 2 years.

- A. 52,000 B. 53,000
C. 54,000 D. 54,080

Solution

$$P_2 = 50000(1.04)^2$$

$$= 50000(1.0816) = 54080$$

Final Answer

Option D

MCQ 87

A vehicle worth Rs. 100,000 depreciates at 10% per year. Find its value after 3 years.

- A. Rs. 70,000 B. Rs. 72,900
C. Rs. 75,000 D. Rs. 81,000

Solution

$$V = 100000(0.9)^3$$

$$= 100000(0.729) = 72900$$

Final Answer

Option B

MCQ 88

A population becomes 12,100 after growing 10% per year for 2 years. Find the initial population.

- A. 9,000 B. 10,000
C. 11,000 D. 11,100

Solution

$$12100 = P(1.10)^2$$

$$12100 = 1.21P$$

$$P = 10000$$

Final Answer

Option B

MCQ 89

After 20% depreciation for one year, an asset is worth Rs. 64,000. Find its original value.

- A. Rs. 72,000 B. Rs. 76,800
C. Rs. 80,000 D. Rs. 84,000

Solution

$$64000 = 80\% \text{ of original value}$$

$$V = 64000 \times \frac{100}{80} = 80000$$

Final Answer

Option C

MCQ 90

A quantity increases by 20% in the first year and decreases by 10% in the second. Starting from 10,000, find the final value.

- A. 10,600 B. 10,800
C. 11,000 D. 12,000

Solution

$$10000(1.20) = 12000$$

$$12000(0.90) = 10800$$

Final Answer

Option B

MCQ 91

A sum becomes Rs. 12,100 in 2 years at compound interest. If the principal is Rs. 10,000, find the annual rate.

- A. 5% B. 8%
C. 10% D. 12%

Solution

$$12100 = 10000 \left(1 + \frac{R}{100}\right)^2$$

$$1.21 = \left(1 + \frac{R}{100}\right)^2$$

$$1 + \frac{R}{100} = 1.10$$

$$R = 10\%$$

Final Answer

Option C

MCQ 92

A sum becomes Rs. 13,310 in 3 years at 10% compound interest. Find the principal.

- A. Rs. 9,000 B. Rs. 10,000
C. Rs. 11,000 D. Rs. 12,100

Solution

$$13310 = P(1.10)^3$$

$$13310 = 1.331P$$

$$P = 10000$$

Final Answer

Option B

MCQ 93

Rs. 2,500 becomes Rs. 3,600 in 2 years at compound interest. Find the annual rate.

- A. 15% B. 18%
C. 20% D. 25%

Solution

$$3600 = 2500 \left(1 + \frac{R}{100}\right)^2$$

$$\frac{3600}{2500} = 1.44$$

$$1 + \frac{R}{100} = \sqrt{1.44} = 1.20$$

$$R = 20\%$$

Final Answer

Option C

MCQ 94

Rs. 1,000 becomes Rs. 1,331 at 10% compound interest. Find the time.

- A. 2 years B. 3 years
C. 4 years D. 5 years

Solution

$$1331 = 1000(1.10)^n$$

$$1.331 = (1.10)^n$$

$$1.331 = (1.10)^3$$

$$n = 3 \text{ years}$$

Final Answer

Option B

MCQ 95

The first-year compound interest on a sum at 12% is Rs. 600. Find the principal.

- A. Rs. 4,000 B. Rs. 5,000
C. Rs. 6,000 D. Rs. 7,200

Solution

$$600 = \frac{12}{100}P$$

$$P = 600 \times \frac{100}{12}$$

$$= 5000$$

Final Answer

Option B

MCQ 96

The first-year interest is Rs. 1,000 at 10% compound interest. What is the second-year interest?

- A. Rs. 1,000 B. Rs. 1,050
C. Rs. 1,100 D. Rs. 1,210

Solution

$$P = \frac{1000 \times 100}{10} = 10000$$

$$\text{Amount after 1 year} = 11000$$

$$I_2 = 10\% \text{ of } 11000 = 1100$$

Final Answer

Option C

MCQ 97

At 10% compound interest, the second-year interest exceeds the first-year interest by Rs. 50. Find the principal.

- A. Rs. 4,000 B. Rs. 5,000
C. Rs. 6,000 D. Rs. 10,000

Solution

$$I_2 - I_1 = P \left(\frac{10}{100} \right)^2$$

$$50 = 0.01P$$

$$P = 5000$$

Final Answer

Option B

MCQ 98

A principal of Rs. 10,000 earns 10% simple interest for 2 years. If the same sum were compounded annually, how much extra interest would be earned?

- A. Rs. 50 B. Rs. 100
C. Rs. 150 D. Rs. 200

Solution

$$\text{Extra} = P \left(\frac{R}{100} \right)^2$$

$$= 10000(0.10)^2$$

$$= 100$$

Final Answer

Option B

MCQ 99

A bank offers 8% simple interest. How much principal is needed to earn Rs. 1,200 in 3 years?

- A. Rs. 4,000 B. Rs. 5,000
C. Rs. 6,000 D. Rs. 7,500

Solution

$$P = \frac{100 \times 1200}{8 \times 3}$$

$$= \frac{120000}{24} = 5000$$

Final Answer

Option B

MCQ 100

A sum of Rs. 20,000 is invested at 10% per annum. Find the difference between the amount under compound interest and simple interest after 2 years.

A. Rs. 100**B.** Rs. 150**C.** Rs. 200**D.** Rs. 400**Solution**

$$\begin{aligned}\text{Difference} &= P \left(\frac{R}{100} \right)^2 \\ &= 20000(0.10)^2 \\ &= 200\end{aligned}$$

Final Answer

Option C

Two-year difference mental table

$$5\% \Rightarrow 0.25\%P, \quad 10\% \Rightarrow 1\%P$$

$$20\% \Rightarrow 4\%P, \quad 25\% \Rightarrow 6.25\%P$$

Common compound multipliers

$$5\% \Rightarrow 1.05, \quad 10\% \Rightarrow 1.10$$

$$20\% \Rightarrow 1.20, \quad 25\% \Rightarrow 1.25$$

Time conversion

$$3 \text{ months} = \frac{1}{4} \text{ year}, \quad 6 \text{ months} = \frac{1}{2} \text{ year}$$

$$9 \text{ months} = \frac{3}{4} \text{ year}, \quad 18 \text{ months} = 1.5 \text{ years}$$

Simple & Compound Interest - Rapid Revision Grid

Simple interest

$$SI = \frac{PRT}{100}$$

$$A = P + SI$$

For months, use $T = \frac{m}{12}$.

Compound interest

$$A = P \left(1 + \frac{R}{100} \right)^n$$

$$CI = A - P$$

Fast two-year comparison

$$CI - SI = P \left(\frac{R}{100} \right)^2$$

10% $\Rightarrow$ difference = 1% of P

20% $\Rightarrow$ difference = 4% of P

Half-yearly compounding

10% p.a. $\Rightarrow$ 5% per half-year

1 year $\Rightarrow$ 2 periods

Growth / depreciation multipliers

+10% $\Rightarrow \times 1.10$

-10% $\Rightarrow \times 0.90$

Apply the multiplier once for every period.

Exam-speed check Identify first whether the question is SI or CI. Then write only the needed multiplier/formula, convert months to years when required, and avoid expanding powers that have easy standard values such as $1.1^2 = 1.21$ and $1.1^3 = 1.331$.