OJEE 2026 May 7 Shift 2 MBA

Question Paper (Memory-Based) with Solutions

Conducted by Odisha Joint Entrance Examination Committee (OJEEC)

General Instructions

(i) The examination will be conducted in Computer-Based Test (CBT) mode.

(ii) Each question carries +4 marks for correct answer and -1 mark for wrong answer.

(iii) The total number of questions are 120.

(iv) Duration of the exam is 2 hours (120 minutes).

1. Loan at 12% SI for 3 years gives Rs. 5400 interest. Find principal.

(A) Rs.2000

(B) Rs.10000

(C) Rs.15000

(D) Rs.20000

Correct Answer: (C) Rs.15000

Solution:

Step 1: Understanding the Question:

The problem asks to calculate the principal amount of a loan, given the simple interest earned, the interest rate, and the duration of the loan.

Step 2: Key Formula or Approach:

The formula for Simple Interest (SI) is:

$$\text{SI} = \frac{P \times R \times T}{100}$$

Where:

- P is the Principal amount.
- R is the Rate of interest per annum (in %).
- T is the Time period (in years).

Step 3: Detailed Explanation:

Given:

- Simple Interest (SI) = Rs. 5400.
- Rate of interest (R) = 12% per annum.
- Time period (T) = 3 years.

We need to find the Principal (P). Rearrange the SI formula:

$$P = \frac{\text{SI} \times 100}{R \times T}$$

Substitute the given values:

$$P = \frac{5400 \times 100}{12 \times 3}$$

$$P = \frac{5400 \times 100}{36}$$

First, simplify $\frac{5400}{36}$:

$5400 \div 36 = 150$.

$$P = 150 \times 100$$

$$P = \text{Rs. } 15,000$$

Step 4: Final Answer:

The principal amount is Rs. 15,000.

Quick Tip: Remember the simple interest formula and be able to rearrange it to find any variable. Always double-check that the rate and time units are consistent (e.g., rate per annum, time in years).

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2. Salaries ratio 2:3. After adding Rs.4000 each → ratio 40:57. Find Jimmy's salary.

(A) Rs.34000

(B) Rs.46800

(C) Rs.36700

(D) Rs.50000

Correct Answer: (A) Rs.34000

Solution:

Step 1: Understanding the Question:

The salaries of two persons are in the ratio $2:3$. After adding Rs.4000 to each salary, the ratio becomes $40:57$. We need to find Jimmy's salary.

Step 2: Key Formula or Approach:

If two quantities are in the ratio $2:3$, they can be written as:

$$2x \text{ and } 3x$$

After adding Rs.4000 to each:

$$\frac{2x+4000}{3x+4000} = \frac{40}{57}$$

Step 3: Detailed Explanation:

Let the original salaries be:

$$2x \text{ and } 3x$$

According to the question:

$$\frac{2x+4000}{3x+4000} = \frac{40}{57}$$

Cross multiply:

$$57(2x + 4000) = 40(3x + 4000)$$

Expand both sides:

$$114x + 228000 = 120x + 160000$$

Bring like terms together:

$$228000 - 160000 = 120x - 114x$$

$$68000 = 6x$$

$$x = \frac{68000}{6} = \frac{34000}{3}$$

Now calculate the salaries:

$$2x = \frac{68000}{3} \approx 22666.67$$

$$3x = 34000$$

Thus, the larger salary (Jimmy's salary) is:

$$\text{Rs. } 34000$$

Step 4: Final Answer:

Jimmy's original salary is:

$$\boxed{\text{Rs. } 34000}$$

Quick Tip: For ratio problems, assume the quantities as multiples of a common variable (like $2x$ and $3x$). Then form an equation using the changed ratio and solve systematically.

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3. Selling at Rs.1140 gives 5% loss. Find SP for 5% profit.

(A) Rs.1200

(B) Rs.1230

(C) Rs.1260

(D) Rs.1290

Correct Answer: (C) Rs.1260

Solution:

Step 1: Understanding the Question:

The problem requires finding the Cost Price (CP) from a given selling price (SP) and loss percentage, and then calculating a new selling price (SP') to achieve a specified profit percentage.

Step 2: Key Formula or Approach:

1. If SP and Loss2. If CP and Profit

Step 3: Detailed Explanation:

Given:

- Selling Price (SP) = Rs. 1140.
- Loss Percentage = 5%.
- Desired Profit Percentage = 5%.

Part 1: Calculate the Cost Price (CP)

If there is a 5% loss, it means SP is 95% of CP.

$$SP = CP \times \left(1 - \frac{5}{100}\right) = CP \times 0.95$$

$$1140 = CP \times 0.95$$

$$CP = \frac{1140}{0.95}$$

$$CP = \text{Rs. } 1200$$

Part 2: Calculate the new Selling Price (SP') for 5% profit

Desired profit is 5%, so SP' will be 105% of CP.

$$SP' = CP \times \left(1 + \frac{5}{100}\right) = CP \times 1.05$$

$$SP' = 1200 \times 1.05$$

$$SP' = 1260$$

Step 4: Final Answer:

The article should be sold for Rs. 1260 to make a 5% profit.

Quick Tip: Remember the relationships:

- Loss: SP = CP × (100 - Loss- Profit: SP = CP × (100 + ProfitThese allow you to quickly move between CP and SP given a percentage loss or profit.

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4. Two trains meet. After meeting reach in 4h and 9h. Find speed ratio.

(A) 2:1

(B) 3:2

(C) 4:3

(D) 5:4

Correct Answer: (B) 3:2

Solution:

Step 1: Understanding the Question:

The problem describes two trains traveling towards each other, meeting at a point, and then continuing to their respective destinations. The times taken by each train *after* meeting to reach the other train's starting point are given. We need to find the ratio of their speeds.

Step 2: Key Formula or Approach:

For two objects starting at points A and B, traveling towards each other, meeting at point M, and then continuing their journeys such that they reach the opposite starting points in times t_1 and t_2 respectively (time *after* meeting), the ratio of their speeds (v_A and v_B) is given by the formula:

$$\frac{v_A}{v_B} = \sqrt{\frac{t_2}{t_1}}$$

Step 3: Detailed Explanation:

Let v_A be the speed of the first train and v_B be the speed of the second train.

Let t_1 be the time taken by the first train *after* meeting to reach the other's starting point = 4 hours.

Let t_2 be the time taken by the second train *after* meeting to reach the other's starting point = 9 hours.

Applying the formula:

$$\frac{v_A}{v_B} = \sqrt{\frac{9}{4}}$$

$$\frac{v_A}{v_B} = \frac{3}{2}$$

So the speed ratio is 3:2.

Step 4: Final Answer:

The speed ratio is 3:2.

Quick Tip: Memorize this specific formula for "after meeting" train problems. It's a common shortcut that saves significant time compared to setting up complex simultaneous equations. Ensure you correctly identify t_1 and t_2 (time taken by *first* train after meeting, and time taken by *second* train after meeting, respectively).

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5. Sum of squares of two numbers is 3341 and difference is 891. Find numbers.

(A) 35 and 46

(B) 35 and 50

(C) 40 and 55

(D) 45 and 60

Correct Answer: (A) 35 and 46

Solution:

Step 1: Understanding the Question:

The sum of the squares of two numbers is 3341 and the difference of their squares is 891. We need to find the two numbers.

Step 2: Key Formula or Approach:

Let the numbers be x and y.

Given:

$$x^2 + y^2 = 3341$$

$$x^2 - y^2 = 891$$

Using addition of equations:

$$(x^2 + y^2) + (x^2 - y^2) = 3341 + 891$$

Step 3: Detailed Explanation:

Add the two equations:

$$2x^2 = 4232$$

$$x^2 = 2116$$

$$x = \sqrt{2116} = 46$$

Now substitute into:

$$x^2 + y^2 = 3341$$

$$2116 + y^2 = 3341$$

$$y^2 = 3341 - 2116$$

$$y^2 = 1225$$

$$y = \sqrt{1225} = 35$$

Therefore, the two numbers are:

35 and 46

Step 4: Final Answer:

Hence, the correct option is:

$$\boxed{\text{(A) 35 and 46}}$$

Quick Tip: When both sum and difference of squares are given, add the equations first to eliminate one variable quickly.

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6. In each of the following, arrange the words in a meaningful sequence

A. Pay B. Choose C. Print D. Fly E. Board

(A) BADEC

(B) BACED

(C) BCEAD

(D) BDEAC

Correct Answer: (B) BACED

Solution:

Step 1: Understanding the Question:

We need to arrange the given words in a logical and meaningful sequence related to the process of air travel.

Given words:

- A. Pay
- B. Choose
- C. Print
- D. Fly
- E. Board

Step 2: Key Formula or Approach:

Think about the natural order of actions while booking and taking a flight:

1. Choose the flight
2. Pay for the ticket
3. Print the ticket/boarding pass
4. Board the flight
5. Fly

Step 3: Detailed Explanation:

The correct sequence is:

$$\text{Choose} \rightarrow \text{Pay} \rightarrow \text{Print} \rightarrow \text{Board} \rightarrow \text{Fly}$$

Using the corresponding letters:

$$B \rightarrow A \rightarrow C \rightarrow E \rightarrow D$$

Thus, the sequence becomes:

$$\boxed{BACED}$$

Step 4: Final Answer:

The correct arrangement is:

$$\boxed{\text{(B) BACED}}$$

Quick Tip: For sequencing questions, identify the starting event first and then arrange the remaining actions in their natural real-life order.

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7. Find the least possible 3 digit number which when successively divided by 2, 5, 4 and 3 leaves the remainders 1, 1, 3 and 1 respectively.

(A) 273

(B) 197

(C) 193

(D) 527

Correct Answer: (C) 193

Solution:

Step 1: Understanding the Question:

The problem asks for the smallest 3-digit number that, when subjected to a sequence of successive divisions by 2, 5, 4, and 3, yields specific remainders (1, 1, 3, and 1, respectively). This is a number theory problem involving successive division.

Step 2: Key Formula or Approach:

Work backward from the last division.

If a number N is successively divided by $d_1, d_2, d_3, \ldots$ leaving remainders $r_1, r_2, r_3, \ldots$ and the final quotient is q_k, then:

- The number before the last division is $d_k \times q_k + r_k$.

- Continue working backward.

To find the least possible number, start with the smallest possible non-negative final quotient (usually 0 or 1).

Step 3: Detailed Explanation:

Let the number be N.

Divisors: 2, 5, 4, 3.

Remainders: 1, 1, 3, 1.

Let's denote the quotients as q_1, q_2, q_3, q_4.

$N \div 2 \rightarrow q_1$, remainder 1. So $N = 2q_1 + 1$.

$q_1 \div 5 \rightarrow q_2$, remainder 1. So $q_1 = 5q_2 + 1$.

$q_2 \div 4 \rightarrow q_3$, remainder 3. So $q_2 = 4q_3 + 3$.

$q_3 \div 3 \rightarrow q_4$, remainder 1. So $q_3 = 3q_4 + 1$.

To find the least possible N, we start with the least possible non-negative value for the final quotient, q_4.

Let $q_4 = 1$ (If $q_4 = 0$, $q_3 = 1$, $q_2 = 7$, $q_1 = 36$, $N = 73$, which is not a 3-digit number).

If $q_4 = 1$:

$q_3 = 3(1) + 1 = 4$.

$q_2 = 4(4) + 3 = 16 + 3 = 19$.

$q_1 = 5(19) + 1 = 95 + 1 = 96$.

$N = 2(96) + 1 = 192 + 1 = 193$.

This number 193 is a 3-digit number. We can verify it:

$193 \div 2 = 96$ remainder 1.

$96 \div 5 = 19$ remainder 1.

$19 \div 4 = 4$ remainder 3.

$4 \div 3 = 1$ remainder 1.

All conditions are satisfied.

Since we started with the smallest possible q_4 (that yields a 3-digit number), 193 is the least possible 3-digit number.

Step 4: Final Answer:

The least possible 3-digit number is 193.

Quick Tip: For successive division problems, always work backward from the last division. Choose the smallest non-negative final quotient (usually 0 or 1) that will eventually lead to a number in the desired range (e.g., 3-digit number).

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8. The average age of 100 teachers in a college in 2000 was 50 years. In 2002, 20 teachers superannuated from their jobs, whose average age was 60 years. In 2005, 40 new teachers joined the college whose average age was 38 years. What was the average age of all the teachers in 2008?

(A) 54 years

(B) 49 years

(C) 51 years

(D) 50 years

Correct Answer: (C) 51 years

Solution:

Step 1: Understanding the Question:

The average age of 100 teachers in the year 2000 was 50 years. Some teachers retired in 2002 and new teachers joined in 2005. We need to find the average age of all teachers in 2008.

Step 2: Key Formula or Approach:

Use:

$$\text{Total Age} = \text{Average Age} \times \text{Number of Persons}$$

Track the total ages after retirement, new appointments, and yearly increase in age.

Step 3: Detailed Explanation:

Initial situation in 2000:

$$\text{Total age} = 100 \times 50 = 5000$$

In 2002:

After 2 years, every teacher becomes 2 years older:

$$5000 + (100 \times 2) = 5200$$

Now, 20 teachers retire whose average age is 60 years.

$$\text{Age removed} = 20 \times 60 = 1200$$

Remaining total age:

$$5200 - 1200 = 4000$$

Remaining teachers:

$$100 - 20 = 80$$

From 2002 to 2005:

3 more years pass, so:

$$4000 + (80 \times 3) = 4240$$

In 2005:

40 new teachers join with average age 38 years.

$$\text{Added age} = 40 \times 38 = 1520$$

New total age:

$$4240 + 1520 = 5760$$

Total teachers:

$$80 + 40 = 120$$

From 2005 to 2008:

3 more years pass:

$$5760 + (120 \times 3) = 6120$$

Average age in 2008:

$$\frac{6120}{120} = 51$$

Step 4: Final Answer:

The average age of all teachers in 2008 was:

$$\boxed{51 \text{ years}}$$

Hence, the correct option is:

$$\boxed{\text{(C) } 51 \text{ years}}$$

Quick Tip: In average age problems, always convert averages into total ages first. Then adjust totals whenever people leave, join, or grow older.

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9. The Kalinga war was fought in

(A) 221 BC

(B) 265 BC

(C) 261 BC

(D) 316 BC

Correct Answer: (C) 261 BC

Solution:

Step 1: Understanding the Question:

The question asks for the historical date of the Kalinga War.

Step 3: Detailed Explanation:

The Kalinga War was a pivotal event in ancient Indian history. It was fought between the Mauryan Empire under Emperor Ashoka and the state of Kalinga (modern-day Odisha). The war is famously known for its brutal scale and for profoundly impacting Emperor Ashoka, leading to his conversion to Buddhism and his subsequent embrace of non-violence (Dhamma-vijaya).

Historical records, particularly Ashokan edicts, confirm that the Kalinga War took place in **261**

BC.

Step 4: Final Answer:

The Kalinga War was fought in 261 BC.

Quick Tip: For historical dates, direct factual recall is necessary. Focus on key battles and events associated with major historical figures like Ashoka.

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10. A qataa, very simply, is a poem of four lines—a quatrain. It may occur in the middle of a ghazal (where the poet is unable to finish a thought in two lines, and chooses to use four). It may also be a stand-alone verse, un-embedded in any long poem. Here is an example of a stand-alone qataa from Faiz:

Raat yoon dil mein teri khoi hui yaad aayi
Jaise veerane mein chupke se bahaar aa jaaye
Jaise sehraaon mein haule se chale baad-e naseem
Jaise beemar ko be-vajah qaraar aa jaaye

Translation:

Your faded memory visited my heart last night,
As if the spring came to the ruins, real quiet.
As if the zephyr silently cooled the desert,
And the sick, miraculously, gained some respite.

Which of these is not true of a qataa?

(A) It is a four-line poem
(B) It is a stand-alone quatrain
(C) It is not a long poem
(D) It is embellished

Correct Answer: (D) It is embellished

Solution:

Step 1: Understanding the Question:

The question provides a definition and example of a "qataa" poem and asks to identify the statement that is NOT true about it.

Step 3: Detailed Explanation:

Let's analyze the definition provided in the passage:

"A qataa, very simply, is a poem of four lines—a quatrain. It may occur in the middle of a ghazal... It may also be a stand-alone verse, un-embedded in any long poem."

1. **It is a four-line poem:** The definition explicitly states, "a qataa, very simply, is a poem of four lines—a quatrain." This statement is **True**.
2. **It is a stand-alone quatrain:** The definition states, "It may also be a stand-alone verse, un-embedded in any long poem." A quatrain is a four-line stanza. This statement is **True**.
3. **It is not a long poem:** The definition states it's a "poem of four lines" and can be "un-embedded in any long poem." This implies it is a short poetic form, not a long poem itself. This statement is **True**.
4. **It is embellished:** The passage does not provide any information about qataas being inherently "embellished" (decorated with elaborate details or ornamentation). The description focuses on its structure and placement within larger works. The example poem, while evocative, does not necessarily define "qataa" as an embellished form. In fact, the "very simply" in the definition might suggest the opposite. This statement is **Not True** based on the provided text.

Step 4: Final Answer:

The statement that is not true of a qataa is "It is embellished."

Quick Tip: For comprehension-based questions, rely strictly on the information provided in the passage. Avoid bringing in external knowledge unless explicitly required. Look for keywords and direct statements to verify each option.

