

MAH MBA CET 2026 May 9 Shift 1

Question Paper with Solutions (Memory-Based)

Conducted by Maharashtra State CET Cell



General Instructions

- (i) MAH CET Question Paper typically consists of 200 multiple-choice questions, with a duration of 2.5 hours (150 minutes).
- (ii) The total maximum score in the exam is 200 marks.
- (iii) MAH CET Exam is an objective-type, multiple-choice test, including logical reasoning, quantitative aptitude, and verbal ability.
- (iv) Each correct answer is given as 1 mark, and there is no negative marking for incorrect answers.

1. Three numbers are in the ratio of 3 : 4 : 5, and their least common multiple (LCM) is 2400. Their highest common factor (HCF) is

- (A) 40
- (B) 80
- (C) 120
- (D) 200
- (E) 15

Correct Answer: (A) 40

Solution:

Step 1: Understanding the Question:

We are given the ratio of three numbers and their Least Common Multiple (LCM). We need to find their Highest Common Factor (HCF).

Step 2: Key Formula or Approach:

Let the three numbers be ax , bx , and cx , where a, b, c are the parts of the ratio and x represents their HCF (since the given ratio parts 3, 4, and 5 are co-prime).

The LCM of these numbers is given by $\text{LCM}(a, b, c) \times x$.

Step 3: Detailed Explanation:

Let the three numbers be $3x$, $4x$, and $5x$. Here, x is their HCF.

The LCM of the ratio parts 3, 4, and 5 is:

$$\text{LCM}(3, 4, 5) = 60$$

Therefore, the LCM of the numbers $3x$, $4x$, and $5x$ is $60x$.

We are given that the LCM is 2400. Equating the two:

$$60x = 2400$$

Solving for x :

$$x = \frac{2400}{60}$$

$$x = 40$$

Since x represents the HCF, the HCF of the numbers is 40.

Step 4: Final Answer:

The highest common factor (HCF) is 40.

Quick Tip: If numbers are in a ratio $a : b : c$ (where a, b, c are mutually co-prime), their actual values are ax, bx, cx where x is the HCF. The LCM is simply the product of their LCM(ratio) and the HCF.

2. Find the difference between the place value and the face value of the digit 7 in the number 4782.

- (A) 700
- (B) 7
- (C) 693

(D) 782

(E) 707

Correct Answer: (C) 693

Solution:

Step 1: Understanding the Question:

The problem asks for the mathematical difference between two distinct mathematical properties of a digit within a number: its place value and its face value.

Step 2: Key Formula or Approach:

Place value = Face value $\times$ Numerical value of its position (e.g., 10, 100, 1000).

Face value = The digit itself, irrespective of its position.

Step 3: Detailed Explanation:

The given number is 4782.

First, identify the position of the digit 7. It is situated in the hundreds place.

Therefore, the place value of 7 is:

$$7 \times 100 = 700$$

The face value of any digit is simply the value of the digit itself.

Therefore, the face value of 7 is 7.

The difference between the place value and the face value is:

$$700 - 7 = 693$$

Step 4: Final Answer:

The difference is 693.

Quick Tip: Place value changes depending on where the digit sits in the number, but face value is always just the digit itself. Always double-check the positional unit (ones, tens, hundreds) before subtracting.

3. If $A : B = 2 : 3$ and $B : C = 4 : 5$, find the ratio $A : C$.

- (A) 2 : 5
- (B) 8 : 15
- (C) 3 : 5
- (D) 8 : 12
- (E) 6 : 15

Correct Answer: (B) 8 : 15

Solution:

Step 1: Understanding the Question:

We are given two separate ratios that share a common element (B). We need to combine these to find the direct ratio between the first element (A) and the last element (C).

Step 2: Key Formula or Approach:

To find a compound ratio $\frac{A}{C}$ from $\frac{A}{B}$ and $\frac{B}{C}$, simply multiply the two given fractions together. The common variable B will cancel out.

Step 3: Detailed Explanation:

Given ratios:

$$\frac{A}{B} = \frac{2}{3}$$
$$\frac{B}{C} = \frac{4}{5}$$

Multiply the two ratios to find $\frac{A}{C}$:

$$\frac{A}{C} = \frac{A}{B} \times \frac{B}{C}$$

Substitute the given values:

$$\frac{A}{C} = \frac{2}{3} \times \frac{4}{5}$$
$$\frac{A}{C} = \frac{2 \times 4}{3 \times 5}$$
$$\frac{A}{C} = \frac{8}{15}$$

This gives the ratio $A : C = 8 : 15$.

Step 4: Final Answer:

The ratio A : C is 8 : 15.

Quick Tip: For finding the ratio of the first term to the last term in a chain of ratios, multiplying all the given fractions is the fastest and most direct method.

4. A and B started a partnership business investing some amount in the ratio of 3 : 5. C joined them after six months with an amount equal to that B. In what proportion should the profit at the end of one year be distributed among A, B and C?

- (A) 3 : 5 : 2
- (B) 3 : 5 : 5
- (C) 6 : 10 : 5
- (D) 3 : 7 : 8
- (E) 6 : 10 : 3

Correct Answer: (C) 6 : 10 : 5

Solution:**Step 1: Understanding the Question:**

Three individuals invest money for different durations. We need to determine the ratio in which the total profit should be divided after one year.

Step 2: Key Formula or Approach:

In a partnership, the profit is distributed based on the "Effective Capital", which is the product of the invested amount and the time duration for which it was invested.

$$\text{Profit Ratio} = (I_A \times T_A) : (I_B \times T_B) : (I_C \times T_C)$$

Step 3: Detailed Explanation:

Let the initial investments of A and B be $3x$ and $5x$ respectively.

Since the profit is calculated at the end of one year (12 months): - A's investment duration (T_A) = 12 months. - B's investment duration (T_B) = 12 months.

C joins after 6 months with an amount equal to B's investment. - C's investment = $5x$. - C's investment duration (T_C) = $12 - 6 = 6$ months.

Now, calculate the effective capital for each partner: - A's effective capital = $3x \times 12 = 36x$ -

B's effective capital = $5x \times 12 = 60x$ - C's effective capital = $5x \times 6 = 30x$

The profit-sharing ratio is the ratio of these effective capitals:

$$A : B : C = 36x : 60x : 30x$$

Divide the ratio by their greatest common divisor, which is $6x$:

$$\text{Ratio} = \frac{36x}{6x} : \frac{60x}{6x} : \frac{30x}{6x}$$

$$\text{Ratio} = 6 : 10 : 5$$

Step 4: Final Answer:

The profit should be distributed in the proportion $6 : 10 : 5$.

Quick Tip: Always multiply the investment ratio by the time duration ratio to get the profit ratio. Be careful to calculate the time the money remained in the business, not the time passed before joining.

5. A sum of money at simple interest doubles itself in 8 years. What is the rate of interest per annum?

- (A) 10.50%
- (B) 12%
- (C) 12.50%
- (D) 15%
- (E) 20%

Correct Answer: (C) 12.50%

Solution:

Step 1: Understanding the Question:

We need to find the annual rate of simple interest at which an initial principal amount becomes twice its value over a period of 8 years.

Step 2: Key Formula or Approach:

The formula for Simple Interest is:

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

When a sum doubles, the Amount (A) becomes $2P$, which implies the accumulated interest is equal to the principal ($SI = P$).

Step 3: Detailed Explanation:

Let the principal sum be P . Given that the sum doubles itself, the Amount (A) = $2P$. The Simple Interest (SI) earned is:

$$SI = A - P = 2P - P = P$$

The given time period (T) is 8 years. Substitute these values into the Simple Interest formula:

$$P = \frac{P \times R \times 8}{100}$$

Cancel P from both sides:

$$1 = \frac{8R}{100}$$

Rearrange to solve for the rate (R):

$$8R = 100$$

$$R = \frac{100}{8}$$

$$R = 12.5\%$$

Step 4: Final Answer:

The rate of interest per annum is 12.50%.

Quick Tip: If a sum becomes 'n' times itself in 'T' years at simple interest, you can use the direct shortcut formula: $R = \frac{(n-1) \times 100}{T}$. For doubling, $n = 2$, so $R = \frac{100}{T}$.

6. In the following sentence, one part of the sentence has an error. Find out that particular part and select the appropriate option. If there is no error in the sentence, choose E as your answer. The number of students (A)who has applied (B) for the scholarship (C)is increasing.(D)

- (A) A
- (B) B
- (C) C
- (D) D
- (E) E

Correct Answer: (B) B

Solution:

Step 1: Understanding the Question:

The task is to identify grammatical errors in a segmented sentence. The sentence involves subject-verb agreement with a relative clause.

Step 3: Detailed Explanation:

Let's analyze the grammatical structure of the sentence: - The main subject is "The number", which correctly takes the singular main verb "is" in part (D) ("is increasing"). - Part (B) contains the relative clause "who has applied". The relative pronoun "who" refers back to its immediate antecedent noun, which is "students". - Since "students" is a plural noun, the verb inside the relative clause must also be plural to maintain proper subject-verb agreement. - Therefore, the singular verb "has" is incorrect. It should be replaced with the plural verb "have". - The corrected segment should read: "who have applied".

Step 4: Final Answer:

The error lies in part B.

Quick Tip: A relative pronoun (who, which, that) takes a singular or plural verb depending on the noun immediately preceding it. "Students who have" is correct, even if the main subject of the sentence ("The number") is singular.

7. In each question, a part of the sentence is made bold. Below are given alternatives to the bold part at (A), (B), (C) and (D) which may improve the sentence. Choose the correct alternative. In case no replacement is needed, mark (E) as your answer. The committee expressed serious doubts on the feasibility of the proposal.

- (A) on feasibility of the proposal
- (B) about the feasibility of proposal
- (C) over feasibility of the proposal
- (D) about the feasibility of the proposal
- (E) No correction required

Correct Answer: (D) about the feasibility of the proposal

Solution:

Step 1: Understanding the Question:

We need to evaluate the prepositional phrase highlighted in the sentence and determine if another option is idiomatically and grammatically superior.

Step 3: Detailed Explanation:

The original phrase uses the preposition "on" after the noun "doubts". - Idiomatically, in standard English, one expresses "doubts about" something when questioning its truth, validity, or likelihood of success. The preposition "on" is generally incorrect in this specific context. - Let's evaluate the options containing "about": - Option (B): "about the feasibility of proposal". This option is incorrect because it is missing the definite article "the" before the specific noun "proposal". - Option (D): "about the feasibility of the proposal". This option uses the correct preposition "about" and maintains the necessary articles for both specific nouns ("the feasibility" and "the proposal").

Therefore, option (D) perfectly corrects the preposition error without introducing any new grammatical mistakes.

Step 4: Final Answer:

The correct replacement is "about the feasibility of the proposal".

Quick Tip: Prepositions are often fixed by convention. Memorize common collocations: you have "doubts about", not "doubts on" or "doubts over" a concept or idea.

8. Given below are sentences labelled A, B, C, D and E in jumbled order. Arrange them in the correct sequence to form a meaningful and coherent paragraph. A. This shift has forced organizations to rethink traditional management practices. B. For decades, productivity was measured primarily in terms of output per hour. C. Consequently, companies now emphasize innovation and adaptability over mere efficiency. D. However, the rise of the digital economy has altered the very definition of productivity. E. In knowledge-driven industries, creativity often outweighs routine efficiency.

- (A) B D A E C
- (B) B D E A C
- (C) D B A E C
- (D) B A D E C
- (E) D E B A C

Correct Answer: (A) B D A E C

Solution:

Step 1: Understanding the Question:

The question requires us to reorder five jumbled sentences into a logical, coherent paragraph by finding contextual links and transitions between them.

Step 3: Detailed Explanation:

- Finding the opening sentence: Sentence B sets a historical context ("For decades, productivity was measured..."). It acts as a general introductory statement, making it the ideal starting point.
- Establishing the first transition: Sentence D begins with the contrasting conjunction "However" and states that the "rise of the digital economy has altered the very definition of productivity." This directly opposes the historical view established in B. Thus, B-D form a strong logical pair.
- Tracking demonstrative pronouns: Sentence A starts with "This shift...". This phrase points directly back to the alteration of the definition of productivity mentioned in D. Therefore, A

must immediately follow D. Our sequence so far is B-D-A.

- Elaboration and Conclusion: Sentence E provides a specific operational example ("In knowledge-driven industries, creativity often outweighs...") of the new management realities caused by the shift discussed in A.

Finally, sentence C concludes the thought with "Consequently," summarizing the ultimate result of all previous points: companies emphasizing innovation over mere efficiency. The connection between "creativity" in E and "innovation" in C further solidifies the E-C pairing. - The complete logical sequence is B-D-A-E-C.

Step 4: Final Answer:

The correct sequence is B D A E C.

Quick Tip: Look for demonstrative pronouns like "This", "That", "These", or "Those". In this paragraph, "This shift" in sentence A is a huge clue that it must come directly after the sentence describing the change (sentence D).