

TANCET Data Analysis & Sufficiency

Sample Paper – 6

Duration: 24 Minutes

Maximum Marks: 20

Instructions

1. This paper contains **20 questions** modelled on the **Data Analysis & Sufficiency** section of TANCET MBA.
2. **Questions 1–10** are Data Interpretation questions with **4 options (A–D)**.
3. **Questions 11–20** are Data Sufficiency questions with **5 options (A–E)**.
4. For Data Sufficiency questions, the options are:
(A) Statement I alone is sufficient, but Statement II is not.
(B) Statement II alone is sufficient, but Statement I is not.
(C) Each statement alone is sufficient.
(D) Both statements together are not sufficient.
(E) Both statements together are sufficient, but neither alone is.
5. Each correct answer carries **+1 mark**. Each wrong answer carries a penalty of $-\frac{1}{3}$ **mark**.
6. Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Part A: Data Interpretation

The table below shows the annual electricity consumption (in Million Units) of three states from 2020 to 2023. Answer questions 1–5.

State	2020	2021	2022	2023
Tamil Nadu	850	900	950	1000
Andhra Pradesh	600	640	680	720
Karnataka	700	750	800	860

Q1. What is the total electricity consumption of Tamil Nadu across all four years (in Million Units)?

- (A) 3500
(B) 3600
(C) 3700
(D) 3800



Q2. Which state had the highest electricity consumption in 2023?

- (A) Tamil Nadu
- (B) Andhra Pradesh
- (C) Karnataka
- (D) All equal

Q3. By how many Million Units did Karnataka's consumption increase from 2020 to 2023?

- (A) 120
- (B) 140
- (C) 150
- (D) 160

Q4. What is the average annual electricity consumption of Andhra Pradesh across the four years?

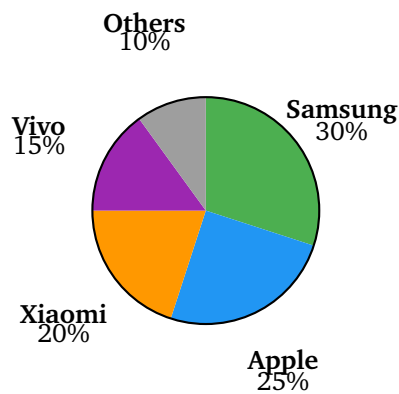
- (A) 640
- (B) 660
- (C) 680
- (D) 620

Q5. What is the ratio of Tamil Nadu's consumption in 2020 to Karnataka's consumption in 2023?

- (A) 85 : 86
- (B) 17 : 18
- (C) 5 : 6
- (D) 42 : 43

The pie chart below shows the market share of five smartphone brands in India in 2024. Total market = 80 million units. Answer questions 6–10.





Q6. What is the combined market share of Samsung and Apple?

- (A) 50%
- (B) 55%
- (C) 60%
- (D) 45%

Q7. How many million units did Xiaomi sell in 2024?

- (A) 14 million
- (B) 15 million
- (C) 16 million
- (D) 18 million

Q8. What is the ratio of Vivo's market share to Others' market share?

- (A) 1 : 1
- (B) 2 : 3
- (C) 4 : 5
- (D) 3 : 2

Q9. By how many percentage points does Samsung's market share exceed Xiaomi's?

- (A) 10



- (B) 5
- (C) 15
- (D) 8

Q10. If Apple's market share increases by 4 percentage points (Others decreasing by 4 percentage points, total unchanged), what would be Apple's new share?

- (A) 27%
- (B) 28%
- (C) 29%
- (D) 30%

Part B: Data Sufficiency

For each question below, decide which of the following options applies:

- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
- (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
- (C) Each statement alone is sufficient.
- (D) Both statements together are not sufficient to answer the question.
- (E) Both statements together are sufficient, but neither statement alone is sufficient.

Q11. What is the profit earned by a shopkeeper on selling an article?

- I. The cost price of the article is ₹800.
- II. The shopkeeper offers a 10% discount on the marked price of ₹1,200 and sells the article.



Profit = SP – CP (need both Stmts)



- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
- (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
- (C) Each statement alone is sufficient.
- (D) Both statements together are not sufficient.
- (E) Both statements together are sufficient, but neither alone is.

Q12. What is the value of x ?

- I. x is a positive multiple of 6 less than 20.
- II. $x = 12$.

- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
- (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
- (C) Each statement alone is sufficient.
- (D) Both statements together are not sufficient.
- (E) Both statements together are sufficient, but neither alone is.

Q13. In how many days can A and B together complete a piece of work?

- I. A can complete the work in 10 days and B can complete it in 15 days.
- II. B takes 5 more days than A to complete the same work.

Work

$$\begin{aligned} \text{A: } & \frac{1}{10} \text{ per day (Stmt I)} \quad \text{B: } \frac{1}{15} \text{ per day (Stmt I)} \\ \text{Together: } & \frac{1}{10} + \frac{1}{15} = \frac{1}{6} \text{ per day} \Rightarrow 6 \text{ days} \end{aligned}$$

- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
- (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
- (C) Each statement alone is sufficient.
- (D) Both statements together are not sufficient.
- (E) Both statements together are sufficient, but neither alone is.



Q14. What is the value of $(a + b)$ where a and b are positive integers?

I. $a = 7$ and $a + b = 15$.

II. $b = 8$ and $2a - b = 6$.

- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
(B) Statement II alone is sufficient, but Statement I alone is not sufficient.
(C) Each statement alone is sufficient.
(D) Both statements together are not sufficient.
(E) Both statements together are sufficient, but neither alone is.

Q15. What is the speed of a train?

I. The train crosses a stationary pole in 10 seconds.

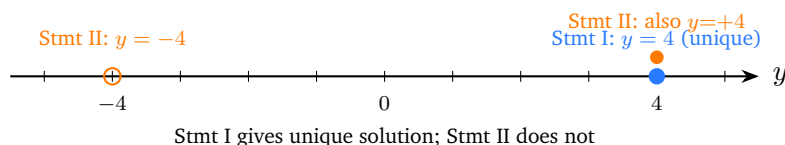
II. The length of the train is twice the length of a bus.

- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
(B) Statement II alone is sufficient, but Statement I alone is not sufficient.
(C) Each statement alone is sufficient.
(D) Both statements together are not sufficient.
(E) Both statements together are sufficient, but neither alone is.

Q16. What is the value of y ?

I. $3y + 6 = 18$.

II. $y^2 = 16$.



- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.



- (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
- (C) Each statement alone is sufficient.
- (D) Both statements together are not sufficient.
- (E) Both statements together are sufficient, but neither alone is.

Q17. What fraction of a container of juice remains?

- I. 3 litres of juice have been consumed from the container.
- II. The container originally held 12 litres and currently has 9 litres remaining.

- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
- (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
- (C) Each statement alone is sufficient.
- (D) Both statements together are not sufficient.
- (E) Both statements together are sufficient, but neither alone is.

Q18. What is the product of two numbers p and q ?

- I. $p + q = 10$ and $p - q = 4$.
- II. $2p = 14$ and $q = 3$.

- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
- (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
- (C) Each statement alone is sufficient.
- (D) Both statements together are not sufficient.
- (E) Both statements together are sufficient, but neither alone is.

Q19. What is the HCF of two numbers x and y ?

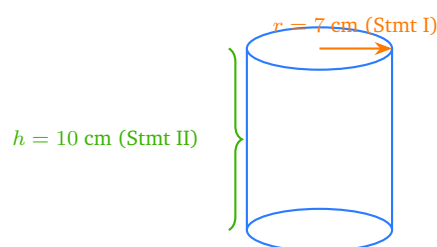
- I. x and y are both even numbers.
- II. x and y are both multiples of 6.



- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
 (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
 (C) Each statement alone is sufficient.
 (D) Both statements together are not sufficient.
 (E) Both statements together are sufficient, but neither alone is.

Q20. What is the volume of a cylinder?

- I. The radius of the cylinder's base is 7 cm.
 II. The height of the cylinder is 10 cm.



$$V = \pi r^2 h = 490\pi \text{ cm}^3 \text{ (both needed)}$$

- (A) Statement I alone is sufficient, but Statement II alone is not sufficient.
 (B) Statement II alone is sufficient, but Statement I alone is not sufficient.
 (C) Each statement alone is sufficient.
 (D) Both statements together are not sufficient.
 (E) Both statements together are sufficient, but neither alone is.

Part A (Data Interpretation – Q1 to Q10):

Q	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Ans	C	A	D	B	A	B	C	D	A	C

Part B (Data Sufficiency – Q11 to Q20):

Q	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
Ans	E	B	A	C	D	A	B	C	D	E



Detailed Solutions

Part A: Data Interpretation – Solutions

Solution 1 (*Q1 – Tamil Nadu total consumption*)

Solution

Tamil Nadu's consumption across all four years:

$$850 + 900 + 950 + 1000 = 3700 \text{ Million Units}$$

Answer: (C)

Solution 2 (*Q2 – Highest consumption in 2023*)

Solution

Consumption in 2023:

- Tamil Nadu: 1000 MU
- Andhra Pradesh: 720 MU
- Karnataka: 860 MU

Tamil Nadu had the highest electricity consumption in 2023 with 1000 Million Units.

Answer: (A)

Solution 3 (*Q3 – Karnataka increase 2020 to 2023*)

Solution

Karnataka in 2020 = 700 MU; Karnataka in 2023 = 860 MU.

$$\text{Increase} = 860 - 700 = 160 \text{ Million Units}$$

Answer: (D)

Solution 4 (*Q4 – Andhra Pradesh average*)



Solution

Andhra Pradesh consumption over four years: 600, 640, 680, 720.

$$\text{Average} = \frac{600 + 640 + 680 + 720}{4} = \frac{2640}{4} = 660 \text{ Million Units}$$

Answer: (B)

Solution 5 (Q5 – Ratio TN 2020 to KA 2023)**Solution**

Tamil Nadu in 2020 = 850 MU; Karnataka in 2023 = 860 MU.

$$\text{Ratio} = 850 : 860 = 85 : 86$$

(Dividing both by 10.)

Answer: (A)

Solution 6 (Q6 – Samsung and Apple combined share)**Solution**

Samsung market share = 30%; Apple market share = 25%.

$$\text{Combined} = 30 + 25 = 55\%$$

Answer: (B)

Solution 7 (Q7 – Xiaomi units sold)**Solution**

Xiaomi market share = 20% of total market = 80 million units.

$$\text{Xiaomi units} = 20\% \times 80 = \frac{20}{100} \times 80 = 16 \text{ million units}$$

Answer: (C)

Solution 8 (Q8 – Vivo to Others ratio)

Solution

Vivo market share = 15%; Others market share = 10%.

$$\text{Ratio} = 15 : 10 = 3 : 2$$

Answer: (D)

Solution 9 (Q9 – Samsung exceeds Xiaomi by)**Solution**

Samsung = 30%; Xiaomi = 20%.

$$\text{Difference} = 30 - 20 = 10 \text{ percentage points}$$

Answer: (A)

Solution 10 (Q10 – Apple new share)**Solution**

Apple's current share = 25%. It increases by 4 percentage points.

$$\text{New Apple share} = 25 + 4 = 29\%$$

(Others decrease from 10% to 6%; total remains 100%.)

Answer: (C)

Part B: Data Sufficiency – Solutions**Solution 11** (Q11 – Profit on article)**Solution**

Using Statement I alone: CP = ₹800. Selling price is unknown. Cannot compute profit. **Not sufficient.**

Using Statement II alone: SP = $1200 \times 0.9 = ₹1080$. Cost price is unknown. Cannot compute profit. **Not sufficient.**



Both together: CP = ₹800 and SP = ₹1080.

$$\text{Profit} = 1080 - 800 = 280$$

Sufficient. Neither statement alone is sufficient, but both together are.

Answer: (E)

Solution 12 (Q12 – Value of x)

Solution

Using Statement I alone: Positive multiples of 6 less than 20 are {6, 12, 18}. Three possible values; not unique. **Not sufficient.**

Using Statement II alone: $x = 12$ directly. Unique value. **Sufficient.**

Statement II alone is sufficient; Statement I alone is not.

Answer: (B)

Solution 13 (Q13 – A and B together complete work)

Solution

Using Statement I alone: A completes $\frac{1}{10}$ of the work per day; B completes $\frac{1}{15}$ per day.

$$\text{Together per day} = \frac{1}{10} + \frac{1}{15} = \frac{3}{30} + \frac{2}{30} = \frac{5}{30} = \frac{1}{6}$$

Together they complete the work in 6 days. **Sufficient.**

Using Statement II alone: B takes 5 more days than A, i.e. $B = A + 5$. No actual rates or number of days are known. Cannot determine the combined rate. **Not sufficient.**

Statement I alone is sufficient; Statement II alone is not.

Answer: (A)

Solution 14 (Q14 – Value of $(a + b)$)

Solution

Using Statement I alone: $a = 7$ and $a + b = 15$ is directly given. So $a + b = 15$. **Sufficient.**

Using Statement II alone: $b = 8$ and $2a - b = 6 \Rightarrow 2a = 14 \Rightarrow a = 7$. Therefore



$$a + b = 7 + 8 = 15. \text{ **Sufficient.**}$$

Each statement alone is sufficient.

Answer: (C)

Solution 15 (Q15 – Speed of train)

Solution

$$\text{Speed} = \frac{\text{Length of train}}{\text{Time to cross pole}}.$$

Using Statement I alone: Time = 10 seconds, but length of the train is unknown. Cannot compute speed. **Not sufficient.**

Using Statement II alone: Length of train = $2 \times$ length of bus, but length of bus is not given. Length of train is unknown. **Not sufficient.**

Both together: Length of train = $2 \times$ (bus length), but bus length remains unknown, so train length cannot be determined. Speed still cannot be computed. **Not sufficient.**

Both statements together are not sufficient.

Answer: (D)

Solution 16 (Q16 – Value of y)

Solution

Using Statement I alone:

$$3y + 6 = 18 \implies 3y = 12 \implies y = 4$$

Unique solution. **Sufficient.**

Using Statement II alone:

$$y^2 = 16 \implies y = +4 \text{ or } y = -4$$

Two possible values; not unique. **Not sufficient.**

Statement I alone is sufficient; Statement II alone is not.

Answer: (A)

Solution 17 (Q17 – Fraction of juice remaining)



Solution

Using Statement I alone: 3 litres consumed, but the original volume is unknown. Cannot find the fraction remaining. **Not sufficient.**

Using Statement II alone: Original volume = 12 litres; current volume = 9 litres.

$$\text{Fraction remaining} = \frac{9}{12} = \frac{3}{4}$$

Sufficient.

Statement II alone is sufficient; Statement I alone is not.

Answer: (B)

Solution 18 (Q18 – Product of p and q)**Solution**

Using Statement I alone: $p + q = 10$ and $p - q = 4$.

$$2p = 14 \implies p = 7, \quad q = 10 - 7 = 3, \quad pq = 7 \times 3 = 21$$

Sufficient.

Using Statement II alone: $2p = 14 \implies p = 7$ and $q = 3$.

$$pq = 7 \times 3 = 21$$

Sufficient.

Each statement alone is sufficient.

Answer: (C)

Solution 19 (Q19 – HCF of x and y)**Solution**

Using Statement I alone: Both x and y are even. The HCF is at least 2, but the exact HCF is unknown (e.g., $x = 2, y = 4$ gives HCF = 2; $x = 4, y = 8$ gives HCF = 4). **Not sufficient.**

Using Statement II alone: Both x and y are multiples of 6. HCF is at least 6, but the exact value is indeterminate (e.g., $x = 6, y = 12$ gives HCF = 6; $x = 12, y = 24$ gives HCF = 12). **Not sufficient.**

Both together: All multiples of 6 are even, so Stmt I adds no new information. The



exact HCF remains indeterminate. **Not sufficient.**

Both statements together are not sufficient.

Answer: (D)

Solution 20 (Q20 – Volume of cylinder)

Solution

Volume of a cylinder = $\pi r^2 h$.

Using Statement I alone: $r = 7$ cm, but height h is unknown. $V = \pi \times 49 \times h = 49\pi h$ – cannot be determined. **Not sufficient.**

Using Statement II alone: $h = 10$ cm, but radius r is unknown. $V = 10\pi r^2$ – cannot be determined. **Not sufficient.**

Both together: $r = 7$ cm and $h = 10$ cm.

$$V = \pi \times 7^2 \times 10 = \pi \times 49 \times 10 = 490\pi \text{ cm}^3$$

Sufficient. Neither statement alone is sufficient, but both together are.

Answer: (E)

— End of Paper —

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