IBSAT Data Adequacy & Data Interpretation

Sample Paper – 7

Duration: 26 Minutes **Maximum Marks: 30**

Instructions

- This paper contains **30** Multiple Choice Questions (Single Correct Answer), modelled on the Data Adequacy and Data Interpretation section of **IBSAT** (ICFAI Business School Aptitude Test).
- Each correct answer carries **+1 mark**. There is **no negative marking** for incorrect or unattempted answers, so attempt every question.
- Only **one** option is correct. Choose the most appropriate answer.
- IBSAT is a computer-based test with no sectional time limit; attempt this practice paper in one timed sitting of about **26 minutes**.
- Use of mobile phones, calculators, log tables, or electronic gadgets is strictly prohibited.

Part A: Table Interpretation

Directions (Q1–Q5): The table below shows the number of employees in four skill areas across the five offices of NovaByte Solutions, a software company. Study it and answer the questions.

Office	Developers	Testers	Designers	Managers	Total
Pune	60	30	20	10	120
Bengaluru	80	40	30	20	170
Hyderabad	70	35	25	15	145
Chennai	50	45	30	25	150
Noida	65	25	20	30	140

Q1. What is the total number of employees in the Bengaluru office?

(A) 145

(B) 170

(C) 150

(D) 160

Q2. Which office has the highest number of Developers?

(A) Hyderabad

(B) Noida

(C) Pune

(D) Bengaluru

Q3. What is the total number of Testers across all five offices?

(A) 175

(B) 165

(C) 185

(D) 170

Q4. What is the ratio of Developers in the Hyderabad office to Managers in the Noida office?

(A) 3 : 7

(B) 2 : 3

(C) 7 : 3

(D) 7 : 2

Q5. What is the average number of Designers per office?

(A) 24

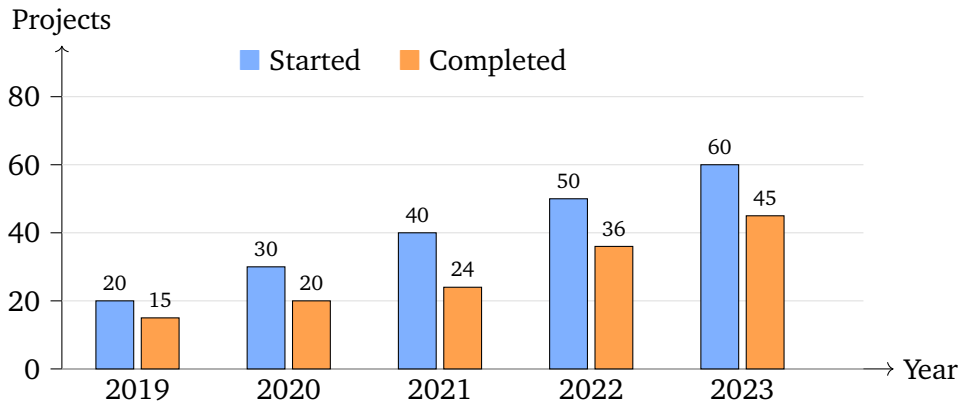
(B) 25

(C) 30

(D) 26

Part B: Bar Graph Interpretation

Directions (Q6–Q10): The bar graph shows the number of software projects Started and Completed by NovaByte Solutions over five years. Study it and answer the questions.



Q6. What is the total number of projects Completed over the five years?

(A) 140

(B) 150

(C) 130

(D) 145

Q7. In which year were the most projects Completed?

(A) 2021

(B) 2022

(C) 2020

(D) 2023

Q8. What is the percentage increase in projects Started from 2019 to 2023?

(A) 150%

(B) 250%

(C) 200%

(D) 300%

Q9. What is the total number of projects Started over the five years?

(A) 200

(B) 190

(C) 210

(D) 180

Q10. What is the ratio of projects Completed to projects Started in the year 2020?

(A) 3 : 2

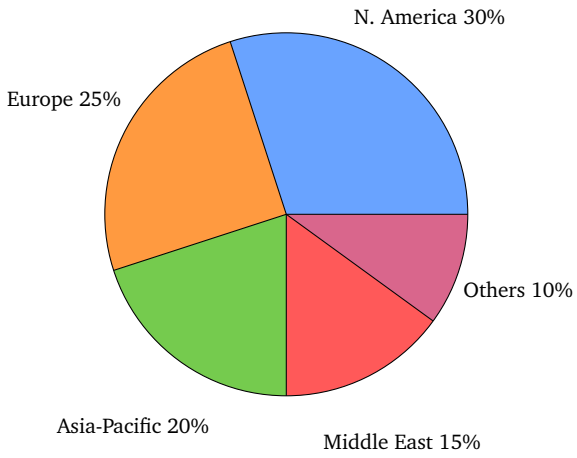
(B) 2 : 3

(C) 3 : 4

(D) 4 : 5

Part C: Pie Chart Interpretation

Directions (Q11–Q14): The pie chart shows the percentage distribution of the total annual revenue of NovaByte Solutions by client region. The total revenue is Rs. 800 crore. Study it and answer the questions.



Q11. How much revenue does NovaByte Solutions earn from Europe (in Rs. crore)?

(A) 240

(B) 160

(C) 200

(D) 180

Q12. Which client region has the second highest share of the total revenue?

(A) North America

(B) Asia-Pacific

(C) Middle East

(D) Europe

Q13. By how much does the North America revenue exceed the Middle East revenue (in Rs. crore)?

(A) 120

(B) 100

(C) 80

(D) 160

Q14. What is the central angle of the Asia-Pacific slice in the pie chart?

(A) 54°

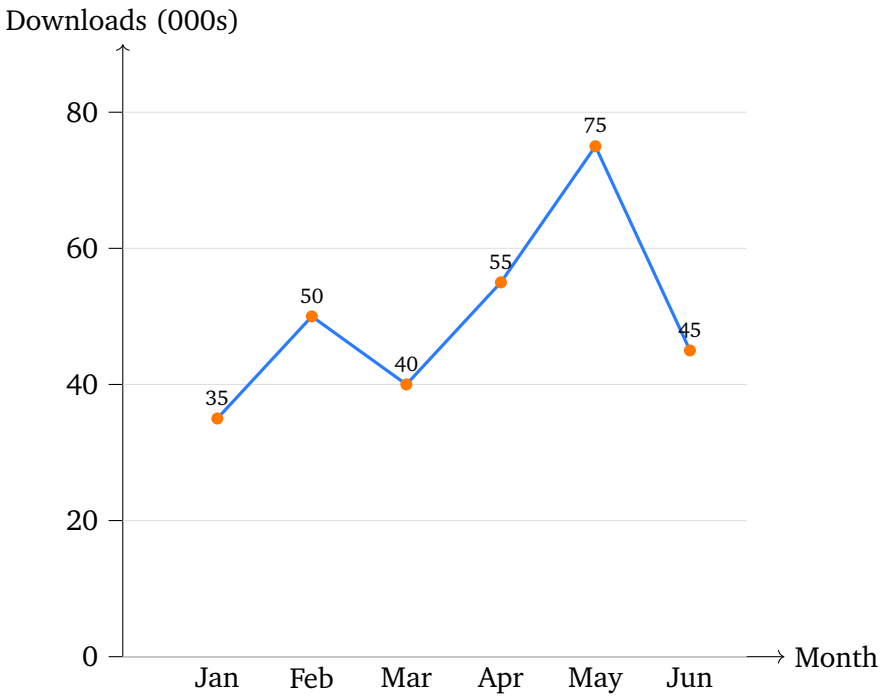
(B) 72°

(C) 90°

(D) 60°

Part D: Line Graph Interpretation

Directions (Q15–Q18): The line graph shows the monthly downloads (in thousands) of the NovaByte mobile app from January to June. Study it and answer the questions.



Q15. What is the total number of downloads over the six months (in thousands)?

(A) 280

(B) 290

(C) 300

(D) 310

Q16. In which month was the increase in downloads over the previous month the highest?

(A) May

(B) April

(C) February

(D) June

Q17. What is the percentage drop in downloads from February to March?

(A) 25%

(B) 10%

(C) 15%

(D) 20%

Q18. What is the average monthly downloads over the six months (in thousands)?

(A) 45

(B) 48

(C) 50

(D) 55

Part E: Caselet Interpretation

Directions (Q19–Q22): Read the caselet and answer the questions.

NovaByte Solutions employs **800** engineers. Of these, **60%** work in the Product team and the rest work in the Services team. Among the Product engineers, **25%** are senior and the remaining are junior. Among the Services engineers, **30%** are senior and the remaining are junior.

Q19. How many engineers work in the Services team?

(A) 320

(B) 480

(C) 360

(D) 300

Q20. How many junior engineers are there in the Product team?

(A) 120

(B) 360

(C) 320

(D) 480

Q21. What is the total number of senior engineers in the company?

(A) 248

(B) 224

(C) 216

(D) 200

Q22. What is the ratio of senior engineers in the Product team to senior engineers in the Services team?

(A) 4 : 5

(B) 6 : 5

(C) 3 : 2

(D) 5 : 4

Part F: Data Sufficiency

Directions (Q23–Q30): Each question is followed by two statements, I and II. Decide whether the data given in the statements are sufficient to answer the question, and mark:

(A) if Statement I alone is sufficient, but Statement II alone is not;

(B) if Statement II alone is sufficient, but Statement I alone is not;

(C) if both statements together are sufficient, but neither alone is sufficient;

(D) if even both statements together are not sufficient.

Q23. What is the present age of the son?

I. The father is 30 years older than the son. **II.** The father's age is 4 times the son's age.

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

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

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q24. What is the value of y?

I. $5y + 10 = 45$. **II.** y is a positive number.

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

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

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q25. What is the two-digit number?

I. The sum of its digits is 9. **II.** The number is divisible by 3.

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

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

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q26. Is the integer P divisible by 6?

I. P is divisible by 3. **II.** P is divisible by 12.

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

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

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q27. What is the selling price of the article?

I. The cost price is Rs. 500 and the profit is 15%. **II.** The profit earned is Rs. 75.

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

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

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q28. What is the total number of students in the class?

I. There are 18 boys in the class. **II.** The ratio of boys to girls is $3 : 2$.

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

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

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q29. What is the area of the rectangle?

I. The length is 12 cm. **II.** The length is twice the breadth and the perimeter is 36 cm.

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

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

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Q30. What is the value of the positive integer n?

I. n is a prime number less than 10. **II.** n is an odd number.

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

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

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Even both statements together are not sufficient.

Detailed Solutions

Q1.

Solution

Concept — Table Reading: The total for an office is the sum of its four skill-area values, which is already given in the last column.

Step 1 — Locate the Bengaluru row:

$$\text{Developers} = 80,\ \text{Testers} = 40,\ \text{Designers} = 30,\ \text{Managers} = 20.$$

Step 2 — Add the first two values:

$$80 + 40 = 120.$$

Step 3 — Continue the addition:

$$120 + 30 = 150, \qquad 150 + 20 = 170.$$

Why other options are wrong:

- Option A: 145 is the Hyderabad total.
- Option C: 150 is the Chennai total.
- Option D: 160 does not match any office.

Final Answer: Bengaluru total $= 170$ employees $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q1

Q2.

Solution

Concept — Column Maximum: Scan the Developers column and pick the largest value.

Step 1 — List the Developer counts:

$$\text{Pune} = 60,\ \text{Bengaluru} = 80,\ \text{Hyderabad} = 70,\ \text{Chennai} = 50,\ \text{Noida} = 65.$$

Step 2 — Compare the values:

$$80 > 70 > 65 > 60 > 50.$$

Step 3 — Identify the highest:

$$\text{Bengaluru} = 80 \text{ is the maximum.}$$

Why other options are wrong:

- Option A: Hyderabad has 70.
- Option B: Noida has 65.
- Option C: Pune has 60.

Final Answer: Bengaluru has the most Developers $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q2

Q3.

Solution

Concept — Column Sum: Add the Testers value down every office row.

Step 1 — List the Testers values:

$$30,\ 40,\ 35,\ 45,\ 25.$$

Step 2 — Add in pairs:

$$30 + 45 = 75, \qquad 40 + 35 = 75.$$

Step 3 — Combine the running totals:

$$75 + 75 = 150, \qquad 150 + 25 = 175.$$

Why other options are wrong:

- Option B: 165 undercounts the column.
- Option C: 185 overcounts the column.
- Option D: 170 drops 5 somewhere.

Final Answer: Total Testers $= 175 \Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q3

Q4.

Solution

Concept — Ratio: Write the two required values as a ratio, then divide both by their common factor.

Step 1 — Read the two values:

$$\text{Hyderabad Developers} = 70, \qquad \text{Noida Managers} = 30.$$

Step 2 — Form the ratio:

$$70 : 30.$$

Step 3 — Divide both parts by 10:

$$70 : 30 = 7 : 3.$$

Why other options are wrong:

- Option A: $3 : 7$ inverts the ratio.
- Option B: $2 : 3$ uses the wrong values.
- Option D: $7 : 2$ misreads the Managers value.

Final Answer: Ratio $= 70 : 30 = 7 : 3 \Rightarrow$ C

Answer: (C) Go Back to Q4

Q5.

Solution

Concept — Average: $\text{Average} = \dfrac{\text{sum of the values}}{\text{number of values}}$.

Step 1 — List the Designers values:

$$20,\ 30,\ 25,\ 30,\ 20.$$

Step 2 — Add them:

$$20 + 30 + 25 + 30 + 20 = 125.$$

Step 3 — Divide by the 5 offices:

$$\frac{125}{5} = 25.$$

Why other options are wrong:

- Option A: 24 divides a smaller total.
- Option C: 30 divides a larger total.
- Option D: 26 rounds incorrectly.

Final Answer: Average Designers $= \frac{125}{5} = 25 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q5

Q6.

Solution

Concept — Series Sum: Add the Completed bar across all five years.

Step 1 — List the Completed values:

$$15,\ 20,\ 24,\ 36,\ 45.$$

Step 2 — Add in pairs:

$$15 + 45 = 60, \qquad 20 + 36 = 56.$$

Step 3 — Combine the running totals:

$$60 + 56 = 116, \qquad 116 + 24 = 140.$$

Why other options are wrong:

- Option B: 150 overcounts the series.
- Option C: 130 undercounts the series.
- Option D: 145 adds an extra 5.

Final Answer: Total Completed $= 140 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q6

Q7.

Solution

Concept — Bar Maximum: Find the year whose Completed (orange) bar is the tallest.

Step 1 — List the Completed values:

$$2019{:}15,\ 2020{:}20,\ 2021{:}24,\ 2022{:}36,\ 2023{:}45.$$

Step 2 — Compare the values:

$$45 > 36 > 24 > 20 > 15.$$

Step 3 — Identify the year:

$$\text{The maximum } 45 \text{ occurs in } 2023.$$

Why other options are wrong:

- Option A: 2021 completed only 24.
- Option B: 2022 completed 36, which is second.
- Option C: 2020 completed only 20.

Final Answer: Most projects completed in 2023 $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q7

Q8.

Solution

Concept — Percentage Increase: Percentage increase $= \dfrac{\text{final} - \text{initial}}{\text{initial}} \times 100.$

Step 1 — Read the two Started values:

$$2019 = 20, \qquad 2023 = 60.$$

Step 2 — Find the increase:

$$60 - 20 = 40.$$

Step 3 — Divide by the initial value and multiply by 100:

$$\frac{40}{20} \times 100 = 200\%.$$

Why other options are wrong:

- Option A: 150% uses an increase of 30.
- Option B: 250% has no valid basis here.
- Option D: 300% divides by a smaller base.

Final Answer: Increase $= \frac{40}{20} \times 100 = 200\% \Rightarrow$ C

Answer: (C) Go Back to Q8

Q9.

Solution

Concept — Series Sum: Add the Started bar across all five years.

Step 1 — List the Started values:

$$20,\ 30,\ 40,\ 50,\ 60.$$

Step 2 — Add in pairs:

$$20 + 60 = 80, \qquad 30 + 50 = 80.$$

Step 3 — Combine the running totals:

$$80 + 80 = 160, \qquad 160 + 40 = 200.$$

Why other options are wrong:

- Option B: 190 undercounts the series.
- Option C: 210 overcounts the series.
- Option D: 180 drops 20 somewhere.

Final Answer: Total Started $= 200 \Rightarrow$ A

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Ratio from a Bar Graph: Read both bars for the year and reduce the ratio.

Step 1 — Read the 2020 bars:

$$\text{Completed} = 20, \qquad \text{Started} = 30.$$

Step 2 — Form the ratio (Completed : Started):

$$20 : 30.$$

Step 3 — Divide both parts by 10:

$$20 : 30 = 2 : 3.$$

Why other options are wrong:

- Option A: $3 : 2$ inverts the ratio.
- Option C: $3 : 4$ does not reduce from $20 : 30$.
- Option D: $4 : 5$ misreads the bars.

Final Answer: Ratio $= 20 : 30 = 2 : 3 \Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q10

Q11.

Solution

Concept — Percentage of a Total: A slice value = slice percent $\times$ total.

Step 1 — Read the Europe share:

$$\text{Europe} = 25\%.$$

Step 2 — Apply it to the total revenue Rs. 800 crore:

$$\frac{25}{100} \times 800.$$

Step 3 — Compute:

$$0.25 \times 800 = 200.$$

Why other options are wrong:

- Option A: 240 is the North America (30%) revenue.
- Option B: 160 is the Asia-Pacific (20%) revenue.
- Option D: 180 has no valid basis.

Final Answer: Europe revenue $= 25\%$ of $800 = 200$ Rs. crore $\Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q11

Q12.

Solution

Concept — Ranking Shares: Order the percentages and pick the second largest.

Step 1 — List the shares:

$$\text{N. America} = 30,\ \text{Europe} = 25,\ \text{Asia-Pacific} = 20,\ \text{Middle East} = 15,\ \text{Others} = 10.$$

Step 2 — Identify the top two:

$$\text{Largest} = \text{N. America } 30\%, \qquad \text{Second} = \text{Europe } 25\%.$$

Why other options are wrong:

- Option A: North America is the largest, not the second.
- Option B: Asia-Pacific (20%) is third.
- Option C: Middle East (15%) is fourth.

Final Answer: Europe (25%) is the second highest $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q12

Q13.

Solution

Concept — Difference of Two Shares: Convert the percentage gap into a value using the total.

Step 1 — Find the gap in percentage:

$$30\% - 15\% = 15\%.$$

Step 2 — Apply the gap to Rs. 800 crore:

$$\frac{15}{100} \times 800.$$

Step 3 — Compute:

$$0.15 \times 800 = 120.$$

Why other options are wrong:

- Option B: 100 uses a 12.5% gap.
- Option C: 80 uses a 10% gap.
- Option D: 160 uses a 20% gap.

Final Answer: N. America exceeds Middle East by 15% of $800 = 120$ Rs. crore $\Rightarrow$ A

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Percentage to Angle: A full circle is $360°$, so a slice angle $=$ slice percent $\times 360°$.

Step 1 — Read the Asia-Pacific share:

$$\text{Asia-Pacific} = 20\%.$$

Step 2 — Multiply by $360°$:

$$\frac{20}{100} \times 360.$$

Step 3 — Compute:

$$0.20 \times 360 = 72^\circ.$$

Why other options are wrong:

- Option A: 54° is the Middle East (15%) angle.
- Option C: 90° uses a 25% share.
- Option D: 60° uses a 16.67% share.

Final Answer: Asia-Pacific angle $= 20\%$ of $360^\circ = 72^\circ \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q14

Q15.

Solution

Concept — Series Sum: Add the download value read at each of the six points.

Step 1 — List the monthly values:

$$35,\ 50,\ 40,\ 55,\ 75,\ 45.$$

Step 2 — Add in convenient pairs:

$$35 + 45 = 80, \qquad 50 + 40 = 90, \qquad 55 + 75 = 130.$$

Step 3 — Combine the partial sums:

$$80 + 90 + 130 = 300.$$

Why other options are wrong:

- Option A: 280 drops 20 from the total.
- Option B: 290 undercounts.
- Option D: 310 adds an extra 10.

Final Answer: Total downloads $= 300$ thousand $\Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Month-on-Month Change: Subtract each month's value from the previous month and find the largest positive jump.

Step 1 — Compute each change:

$$\text{Feb} : 50 - 35 = +15, \quad \text{Mar} : 40 - 50 = -10, \quad \text{Apr} : 55 - 40 = +15.$$

Step 2 — Continue for the last two months:

$$\text{May} : 75 - 55 = +20, \qquad \text{Jun} : 45 - 75 = -30.$$

Step 3 — Pick the largest rise:

$+20$ in May is the highest.

Why other options are wrong:

- Option B: April rose only 15.
- Option C: February rose only 15.
- Option D: June fell by 30.

Final Answer: The largest rise $(+20)$ occurs in May $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q16

Q17.

Solution

Concept — Percentage Drop: Percentage drop $= \dfrac{\text{fall}}{\text{original}} \times 100$, where the original is the earlier value.

Step 1 — Read February and March:

$$\text{February} = 50, \qquad \text{March} = 40.$$

Step 2 — Find the fall:

$$50 - 40 = 10.$$

Step 3 — Divide by February and multiply by 100:

$$\frac{10}{50} \times 100 = 20\%.$$

Why other options are wrong:

- Option A: 25% divides by 40 instead of 50.
- Option B: 10% understates the drop.
- Option C: 15% has no valid basis.

Final Answer: Drop $= \frac{10}{50} \times 100 = 20\% \Rightarrow$ D

Answer: (D) Go Back to Q17

Q18.

Solution

Concept — Average of a Series: Average $= \dfrac{\text{total}}{\text{number of months}}$.

Step 1 — Use the total from Q15:

$$\text{Total} = 300.$$

Step 2 — Divide by the 6 months:

$$\frac{300}{6} = 50.$$

Why other options are wrong:

- Option A: 45 divides a smaller total.
- Option B: 48 divides a smaller total.
- Option D: 55 divides a larger total.

Final Answer: Average downloads $= \frac{300}{6} = 50$ thousand $\Rightarrow$ C

Answer: (C) Go Back to Q18

Q19.

Solution

Concept — Percentage of a Whole: The Services team is the part of the workforce left after removing the Product share.

Step 1 — Services are $100\% - 60\% = 40\%$ of the engineers:

$$\text{Services} = 40\% \text{ of } 800.$$

Step 2 — Compute the value:

$$\frac{40}{100} \times 800 = 320.$$

Why other options are wrong:

- Option B: 480 is the Product team (60%).
- Option C: 360 is the Product juniors.
- Option D: 300 does not match any group.

Final Answer: Services $= 40\%$ of $800 = 320 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q19

Q20.

Solution

Concept — Successive Percentages: First find the Product team, then the share of them who are junior.

Step 1 — Number in the Product team:

$$60\% \text{ of } 800 = 480.$$

Step 2 — Juniors are the $100\% - 25\% = 75\%$ who are not senior:

$$75\% \text{ of } 480.$$

Step 3 — Compute:

$$\frac{75}{100} \times 480 = 360.$$

Why other options are wrong:

- Option A: 120 is the Product seniors (25%).
- Option C: 320 is the whole Services team.
- Option D: 480 is the whole Product team, not just juniors.

Final Answer: Product juniors $= 75\%$ of $480 = 360 \Rightarrow \boxed{B}$

Answer: (B) Go Back to Q20

Q21.

Solution

Concept — Combining Two Groups: Add the Product seniors and the Services seniors.

Step 1 — Product seniors:

$$25\% \text{ of } 480 = 120.$$

Step 2 — Services seniors:

$$30\% \text{ of } 320 = 96.$$

Step 3 — Add the two:

$$120 + 96 = 216.$$

Why other options are wrong:

- Option A: 248 overcounts one group.
- Option B: 224 uses a wrong Services share.
- Option D: 200 undercounts the seniors.

Final Answer: Total seniors $= 120 + 96 = 216 \Rightarrow \boxed{C}$

Answer: (C) Go Back to Q21

Q22.

Solution

Concept — Ratio of Two Counts: Form the ratio of the two senior figures and reduce it.

Step 1 — Recall the two counts:

$$\text{Product seniors} = 120, \qquad \text{Services seniors} = 96.$$

Step 2 — Form the ratio:

$$120 : 96.$$

Step 3 — Divide both parts by 24:

$$120 : 96 = 5 : 4.$$

Why other options are wrong:

- Option A: $4 : 5$ inverts the ratio.
- Option B: $6 : 5$ misreads the counts.
- Option C: $3 : 2$ does not reduce from $120 : 96$.

Final Answer: Ratio $= 120 : 96 = 5 : 4 \Rightarrow$ D

Answer: (D) Go Back to Q22

Q23.

Solution

Concept — Data Sufficiency: The son's age is fixed only when the two conditions pin down a single value.

Step 1 — Test Statement I:

$F = S + 30$ has two unknowns $\Rightarrow$ not sufficient.

Step 2 — Test Statement II:

$F = 4S$ also has two unknowns $\Rightarrow$ not sufficient.

Step 3 — Combine I and II:

$$4S = S + 30 \;\Rightarrow\; 3S = 30 \;\Rightarrow\; S = 10.$$

Together they give a unique age.

Step 4 — Conclusion:

$$\text{Both needed, neither alone} \Rightarrow \text{answer (C)}.$$

Final Answer: Both statements together are needed $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q23

Q24.

Solution

Concept — Data Sufficiency: A statement is sufficient if it fixes a single value of y.

Step 1 — Test Statement I:

$$5y + 10 = 45 \;\Rightarrow\; 5y = 35 \;\Rightarrow\; y = 7.$$

This gives one value, so I alone is sufficient.

Step 2 — Test Statement II:

$$y > 0 \text{ allows } 1, 2, 3, \ldots \text{ (many values)}.$$

So II alone is not sufficient.

Step 3 — Conclusion:

$$\text{I alone works, II alone does not} \Rightarrow \text{answer (A)}.$$

Final Answer: Statement I alone is sufficient $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q24

Q25.

Solution

Concept — Multiple Solutions: If the conditions allow more than one number, the data is not sufficient.

Step 1 — Test Statement I:

$$\text{Digit sum} = 9: \text{ many numbers } (18, 27, 36, 45, \ldots).$$

Step 2 — Test Statement II:

$$\text{Divisible by } 3: \text{ many numbers } (12, 15, 18, \ldots).$$

Step 3 — Combine I and II:

$$\text{A digit sum of } 9 \text{ already forces divisibility by } 3, \text{ so II adds nothing.}$$

Numbers like $18, 27, 36, 45$ still all qualify.

Step 4 — Conclusion:

$$\text{Even together, many numbers remain} \Rightarrow \text{answer (D).}$$

Final Answer: Even both statements together are not sufficient $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q25

Q26.

Solution

Concept — Divisibility and Sufficiency: Check whether each statement forces P to be a multiple of 6.

Step 1 — Test Statement I:

$$P \text{ divisible by } 3\text{: e.g. } 9 \text{ (not by 6) or } 12 \text{ (by 6).}$$

So I alone does not decide it.

Step 2 — Test Statement II:

$$P \text{ divisible by } 12 \Rightarrow P \text{ is a multiple of } 6 \text{ as well.}$$

So II alone is sufficient (the answer is always "yes").

Step 3 — Conclusion:

$$\text{Only II settles it} \Rightarrow \text{answer (B).}$$

Final Answer: Statement II alone is sufficient $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q26

Q27.

Solution

Concept — Selling Price from Cost: If the cost price and profit percent are both known, the selling price is fixed.

Step 1 — Test Statement I:

$$\text{CP} = 500 \text{ at } 15\% \text{ profit} \Rightarrow \text{SP} = 500 \times 1.15 = 575.$$

So I alone is sufficient.

Step 2 — Test Statement II:

$$\text{Profit} = \text{Rs. } 75 \text{ only; no cost price} \Rightarrow \text{SP unknown.}$$

So II alone is not sufficient.

Step 3 — Conclusion:

$$\text{Only I fixes the selling price} \Rightarrow \text{answer (A).}$$

Final Answer: Statement I alone is sufficient $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q27

Q28.

Solution

Concept — Ratio Needs an Actual Count: A ratio gives the total only when one actual count is also known.

Step 1 — Test Statement I:

$$\text{Boys} = 18 \text{ only; girls unknown} \Rightarrow \text{not sufficient.}$$

Step 2 — Test Statement II:

$$\text{Boys} : \text{Girls} = 3 : 2 \text{ only; no actual count} \Rightarrow \text{not sufficient.}$$

Step 3 — Combine I and II:

$$3 \text{ parts} = 18 \Rightarrow 1 \text{ part} = 6 \Rightarrow \text{Girls} = 12, \ \text{Total} = 18 + 12 = 30.$$

Together they give a unique total.

Step 4 — Conclusion:

$$\text{Both needed, neither alone} \Rightarrow \text{answer (C)}.$$

Final Answer: Both statements together are needed $\Rightarrow$ C

Answer: (C) Go Back to Q28

Q29.

Solution

Concept — Area Needs Both Sides: The area of a rectangle is fixed once both length and breadth are known.

Step 1 — Test Statement I:

$$\text{Length} = 12 \text{ only; breadth unknown} \Rightarrow \text{not sufficient}.$$

Step 2 — Test Statement II:

$$L = 2B \text{ and } 2(L+B) = 36 \Rightarrow L + B = 18 \Rightarrow 2B + B = 18 \Rightarrow B = 6,\ L = 12.$$

So area $= 12 \times 6 = 72$, and II alone is sufficient.

Step 3 — Conclusion:

$$\text{Only II fixes the area} \Rightarrow \text{answer (B)}.$$

Final Answer: Statement II alone is sufficient $\Rightarrow$ B

Answer: (B) Go Back to Q29

Q30.

Solution

Concept — Multiple Solutions: If the conditions allow more than one value, the data is not sufficient.

Step 1 — Test Statement I:

$$n \text{ prime and } < 10 : \{2, 3, 5, 7\} \text{ — many values.}$$

Step 2 — Test Statement II:

$$n \text{ odd} : 1, 3, 5, 7, 9, \ldots \text{ — many values.}$$

Step 3 — Combine I and II:

$$\text{Odd primes below } 10 \text{ are } \{3, 5, 7\} \text{ — still three values.}$$

Step 4 — Conclusion:

$$\text{Even together, no single value} \Rightarrow \text{answer (D).}$$

Final Answer: Even both statements together are not sufficient $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q30

Answer Key

IBSAT Data Adequacy & Data Interpretation – Sample Paper 7									
Q	**Ans**	**Q**	**Ans**	**Q**	**Ans**	**Q**	**Ans**	**Q**	**Ans**
1	B	2	D	3	A	4	C	5	B
6	A	7	D	8	C	9	A	10	B
11	C	12	D	13	A	14	B	15	C
16	A	17	D	18	C	19	A	20	B
21	C	22	D	23	C	24	A	25	D
26	B	27	A	28	C	29	B	30	D