



Venn Diagrams questions for NMAT

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Instructions

For the following questions answer them individually

Question 1

Choose the conclusion which logically follow from the given statement irrespective of commonly known facts.

Statement : All branches are leaves as well as flowers.

All leaves are flowers but not branches.

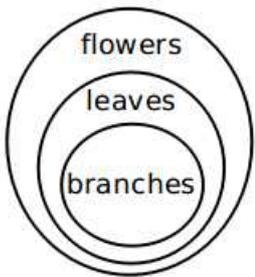
Conclusion :

- I. All branches are leaves**
- II. All leaves are branches**
- III. All flowers are branches**
- IV. Some leaves are branches**

- A** None follows
- B** Only I and IV follow
- C** Only II and III follow
- D** All follow

Answer: B

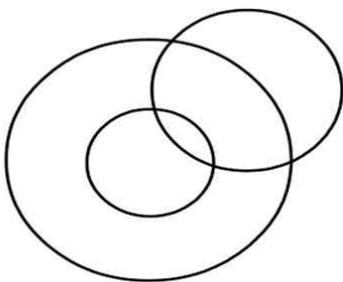
Explanation:



From the venn diagram, we can see that only conclusions I and IV follow. Hence, option B is the correct answer.

Question 2

The diagram below, explains which of the given relationship



- A** Judge, Thief, Criminal
- B** Tea, Coffee, Beverages
- C** Males, Fathers, Doctors
- D** Cabinet, Minister, Home Minister

Answer: C

Explanation:

Let us evaluate the options.

Option A:

Judge, thief, criminal

All thieves are criminals. Therefore, the circle representing thieves must be completely present within the circle representing criminals. No such circle is present in the given image. Therefore, we can eliminate option A.

Option B:

Tea, coffee, beverages

Tea and coffee are beverages. Tea and coffee must be represented by 2 non-intersecting circles. These 2 circles must be present completely within a larger circle. Therefore, we can eliminate option B as well.

Option D:

Cabinet, minister, home-minister

Ministers are present in the cabinet. Home-minister is minister who holds a particular portfolio (looks after internal affairs). Therefore, option D should be represented by 3 concentric circles. We can eliminate option C as well.

Option C:

Males, Fathers, Doctors

All fathers must be males. Therefore, the circle representing fathers must be present entirely within the circle representing the males. Some males and some fathers are doctors. Males, who are not fathers, can be doctor as well. Females can be doctors as well. Therefore, the circle representing doctors should intersect the circles representing both males and fathers. These things are represented perfectly by the given diagram and hence, option C is the right answer.

Question 3

From the given statements, choose the conclusions which follow logically:

Statements:

- i. Some iphones are mobiles**
- ii. Some mobiles are ipads**
- iii. Some ipads are tablets**

Conclusions:

- I. Some tablets are iphones**
- II. Some mobiles are tablets**
- III. Some ipads are iphones**
- IV. All iphones are tablets**

- A** Only I & II follow
- B** Only I, II & III follow
- C** Only II & III follow
- D** None of these

Answer: D

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Question 4

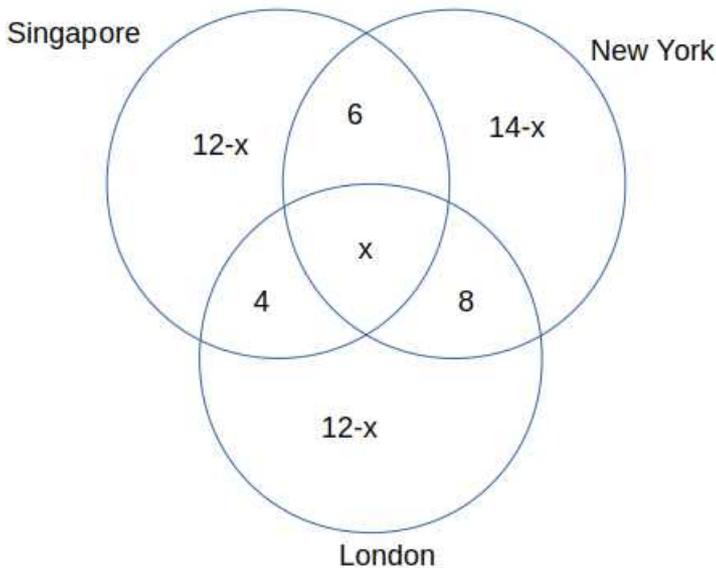
The business consulting division of TCS has overseas operations in 3 locations: Singapore, New York and London. The Company has 22 analysts covering Singapore, 28 covering New York and 24 covering London. 6 analysts cover Singapore and New York but not London, 4 analysts cover Singapore and London but not New York, and 8 analysts cover New York and London but not Singapore. If TCS has a total of 42 business analysts covering at least one of the three locations: Singapore, New York and London, then the number of analysts covering New York alone is:

- A 14
- B 28
- C 5
- D 7

Answer: D

Explanation:

On drawing the Venn diagram



It is given that TCS has a total of 42 business analysts covering at least one of the three locations: Singapore, New York and London.

Therefore, $(12 - x) + (14 - x) + (12 - x) + 6 + 4 + 8 + x = 42$

$\Rightarrow 56 - 2x = 42$ i.e. $x = 7$.

Therefore, the number of analysts covering New York alone = $14 - x = 14 - 7 = 7$.

Question 5

Choose the set in which the statements are most logically related.

- A. No lunatics are fit to serve on a jury.
- B. Everyone who is sane can do logic.
- C. None of your sons can do logic.
- D. Some who can do logic are fit to serve on a jury.
- E. All who can do logic are fit to serve on a jury.
- F. Everyone who is sane is fit to serve on a jury.

- A BDE
- B BEF
- C BDF

D ADE

Answer: B

Explanation:

Everyone who is sane can do logic and all who can do logic are fit to serve on a jury. So, all who can do logic are fit to serve on a jury. Hence, option B is the correct answer.

Question 6

Choose the set in which the statements are most logically related.

- A. Some beliefs are uncertain.
- B. Nothing uncertain is worth dying for.
- C. Some belief is worth dying for.
- D. All beliefs are uncertain.
- E. Some beliefs are certain.
- F. No belief is worth dying for.

A ABF

B BCD

C BEF

D BDF

Answer: D

Explanation:

Nothing uncertain is worth dying for. and all beliefs are uncertain. So, no belief is worth dying for. Hence, option D is the correct answer.

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Question 7

Choose the set in which the statements are most logically related.

- A. First-year students of this college like to enter for the prize.
- B. All students of this college rank as University students.
- C. First-year students of this college are entitled to enter for the prize.
- D. Some who rank as University students are First-year students.
- E. All University students are eligible to enter for the prize.
- F. All those who like to are entitled to enter for the prize.

A AEF

B ABC

C BEC

D CDF

Answer: C

Explanation:

All students of this college rank as University students and all University students are eligible to enter for the prize. Therefore, all first year students are entitled to enter for the prize. Hence, option C is the correct answer.

Question 8

Choose the set in which the statements are most logically related.

- A. Some mammals are carnivores.
- B. All whales are mammals.
- C. All whales are aquatic animals.
- D. All whales are carnivores.
- E. Some aquatic animals are mammals.
- F. Some mammals are whales.

A ADF

B ABC

C AEF

D BCE

Answer: D

Explanation:

ADF is false as we cannot infer F (Some mammals are whales.) even if A (Some mammals are carnivores.) and D (All whales are carnivores.) are true.

ABC and AEF all statements are different, the set is not related.

All whales are mammals and all whales are aquatic animals. So, some aquatic animals are mammals. Therefore, BCE is valid combination.

Hence, option D is the correct answer.

Question 9

Choose the set in which the statements are most logically related.

- A. No fishes breathe through lungs.
- B. All fishes have scales.
- C. Some fishes breed up stream.
- D. All whales breathe through lungs.
- E. No whales are fishes.
- F. All whales are mammals.

A ABC

B BCD

C ADE

D DEF

Answer: C

Explanation:

No fishes breathe through lungs but all whales breathe through lungs. So, no whale can be a fish. Therefore, ADE is a valid combination of logically connected statements.

Hence, option C is the correct answer.

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Question 10

Choose the set in which the statements are most logically related.

- A. All men are men of scientific ability.
- B. Some women are women of scientific ability.
- C. Some men are men of artistic genius.
- D. Some men and women are of scientific ability.
- E. All men of artistic genius are men of scientific ability.
- F. Some women of artistic genius are women of scientific ability.

A ACD

B ACE

C DEF

D ABC

Answer: B

Explanation:

Some men are men of artistic genius and all men are men of scientific ability. Therefore, all men of artistic genius are men of scientific ability.

Thus, ACE is the correct combination.

Hence, option B is the correct answer.

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