



# 21 Day Study Plan

## Day -19



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1. The viscosity can be considered as an internal \_\_\_\_\_ of the fluid in the motion.
- A. Friction                      B. Velocity  
C. Stress                         D. None

Ans. A

Sol.

- The viscosity can be considered as an Internal Friction of the fluid in the motion.
- Viscosity is a measure of a fluid's resistance to flow.
- A fluid with large viscosity resists motion because its molecular makeup gives it a lot of internal friction.

2. In which year, India & Pakistan became members of Shanghai Corporation Organisation(SCO)?

- A. 2016                              B. 2017  
C. 2018                              D. 2019

Ans. B

Sol.

• **India & Pakistan became members of Shanghai Corporation Organisation(SCO) on 9 June ,2017.**

- The SCO is a China-led eight-member economic and security bloc. Its founding members include China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan.
- This Corporation was formed on 26 April 1996.

3. The State tree of Andhra Pradesh is \_\_\_\_\_.

- A. Peepal                              B. Neem  
C. Deodar                             D. Sal

Ans. B

Sol.

The state tree of Andhra Pradesh is **Neem**.

- The state animal of Andhra Pradesh is **Blackbuck**.
- The state bird of Andhra Pradesh is **Indian Roller**.
- The scientific name of Neem is **Azadirachta indica**.
- It is classified under **least concern** in IUCN List.

4. The Indian Ocean Rim Association has how many member states?

- A. 12                                      B. 22  
C. 52                                      D. 62

Ans. B

Sol.

The Indian Ocean Rim Association is an international organization of **22 member states**.

- It also has **9** Dialogue partners.
- It was formed in **1997**; the vision of IORA was originated by **Nelson Mandela** when he visited India in 1995.
- To become members, States must adhere to the principles and objectives enshrined in the Charter of the Association.

5. What of the following instrument is used to measure gas volume?

- A. Calorimeter                      B. Seismometer  
C. Micrometer                      D. Eudimeter

Ans. D

Sol.

**Eudimeter** instrument is used to measure gas volume.

- **Micrometer** is an instrument used for accurate measurement of components of machines, tools etc.
- **Calorimeter** is an apparatus for measuring the amount of heat involved in a chemical reaction.
- **Seismometer** is an instrument that responds to ground motions such as earthquakes, volcanic eruption and explosions.

6. Athlete's foot is a disease caused by which vector?

- A. Bacteria                              B. Protozoa  
C. Fungi                                 D. Virus

Ans. C

Sol.

Athlete's foot is a disease caused by **Fungus**.

- Athlete's foot is caused by a number of different fungi, for ex. Microsporum, Trichophyton etc.
- Generally, over the counter (OTC) medications can treat the athlete's foot.
- Other major diseases caused by Fungus are- Asthma and Ringworm by fungi Aspergillus fumigates and Trycophyton Lerucosum respectively.

7. What is the group of stamens known as?

- A. Androecium                      B. Gynoecium



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C. Catkin                      D. Symnoecium

Ans. A

Sol.

**The group of stamen is known as Androecium.**

• A stamen is the unit of an androecium. An androecium is usually made up of multiple stamens; each is composed of two parts-

a) **Filament:** the long, thin stalk of a stamen

b) **Anther:** the top of a stamen that produces pollen grains

• It generally surrounds the gynoecium and is surrounded by the perianth.

• A flower with only stamens is called **androecious**. A flower with only carpels is called **gynoecious**.

8. Hindu Rate of Growth is associated with\_\_\_\_\_.

A. Population

B. National Income

C. Birth Rate

D. Per Capita Income

Ans. B

Sol.

• **The Hindu rate of growth is a term referring to the low annual growth rate of the economy of India.**

• The term "Hindu Rate of Growth" was coined by Indian economist **Raj Krishna**.

9. Which is the 2nd largest peninsular river?

A. Godawari

B. Krishna

C. Kaveri

D. Mahanadi

Ans. B

Sol.

**The three largest Rivers of peninsular India are as follows-**

a) The **Godavari** is the **largest river system of the Peninsular India** with a total length of 1465 kms.

b) The **Krishna** is the second largest river of Peninsular India with total length of 1400 kms.

c) The **Kaveri River** is the third largest river of Peninsular India with a total length of 765 kms.

• All the three rivers Godawari, Krishna and Kaveri originate from Western Ghats area and drain into Bay of Bengal.

10. Vitta Ayoga is name of \_\_\_\_\_.

A. Finance Commission

B. Planning Commission

C. Parliament

D. Supreme Court

Ans. A

Sol.

• The Finance Commission is also known as 'Vitta Ayoga'. It was established in 1951. It was formed to define the financial relations between the central government of India and the individual state governments.

11. Which enterprises are recognised as 'Sunrise Industries' in an economy?

A. New industries with potential of rapid boom

B. Industries depending directly or indirectly on Solar power

C. Renewable Energy Sector

D. Revived Insolvent Industries

Ans. A

Sol.

'Sunrise Industries' are those industries which are new or infant industries but has a potential of rapid growth.

• A sunrise industry is typically characterized by high growth rates, numerous start-ups and an abundance of venture capital funding.

• **Examples of Sunrise Industries are-** Hydrogen fuel production, petrochemical industry, food processing industry, space tourism, and online encyclopedias etc.

12. Which part of the Indian Constitution deals with the citizenship provisions?

A. Part IV

B. Part III

C. Part V

D. Part II

Ans. D

Sol.

• **Articles 5 to 11 under Part II of the Constitution** deals with the citizenship provisions.

• This part does not define the term 'citizen' but it only identifies the persons who became citizens of India at its commencement.

• It empowers the Parliament to enact law to provide for such matters and any other matter relating to citizenship.



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Accordingly the Parliament has enacted the Citizenship Act, 1955, which has been amended many times.

13. Under which article, Parliament may by law regulate the procedure relating to the removal of a Judge of the Supreme Court?

- A. Article 124 (5)      B. Article 153  
C. Article 61 (1)      D. Article 148

Ans. A

Sol.

• **Under Article 124 (5)** Parliament may by law regulate the procedure relating to the removal of a Judge of the Supreme Court.

• Justice Saumitra Sen became the first judge in Indian History, against whom an impeachment motion was passed in the Rajya Sabha.

• Under this Article Parliament provides the procedure for removal by the Judges Enquiry Act (1968).

14. Which was the first nuclear reactor established?

- A. CP-3  
B. X-10  
C. Chicago Pile Inception  
D. Chicago Pile 1

Ans. D

Sol.

• **Chicago Pile 1 was the world's first nuclear reactor**, built in 1942 by Nobel Prize winner Enrico Fermi.

• In 1948 Fermi and his team succeeded in establishing the world's first man-made controlled nuclear chain reaction.

• The X-10 was designed by the Argonne Laboratory team. It operated from 1943 to 1963.

• As of early 2019, the IAEA reports there are 454 nuclear power reactors and 226 nuclear research reactors in operation around the world.

15. Which of the following is the largest ecosystem of the earth?

- A. Biome                      B. Lithosphere  
C. Biosphere                 D. Hydrosphere

Ans. C

Sol.

• **Biosphere is the largest ecosystem of the earth.**

• Biosphere is life zone of earth or part of earth where life exists. It represents integrated and interacting zone comprising of atmosphere, hydrosphere and lithosphere.

• The energy required to support life in Biosphere comes from sun and the necessary nutrients come from soil, air and water.

16. **Direction:** Select the word which means the same as the group of words given.

The belief that events are predetermined and therefore cannot be changed

- A. autism                      B. prism  
C. fatalism                    D. chasm

Ans. C

Sol.

Fatalism- The belief that events are predetermined and therefore cannot be changed

Autism- a disorder where communication is hampered.

Chasm- a deep opening on earth's surface

Prism- a polyhedron

Therefore, option C is the correct choice.

17. **Direction:** Select the segment which has an error.

Please go out and check if it is yet raining.

- A. Please go out              B. and check  
C. if it is                      D. yet raining

Ans. D

Sol.

Yet is incorrectly placed in the sentence. It is used to show contrast. It should be 'it is still raining' in place of 'it is yet raining.' Hence, option D is the correct answer.

18. Given below are four Jumbled sentences. Pick the option that gives their correct order.

A) Creating a relaxing bedroom environment is very important too, and this can be done using a calming, subtle fragrance.

B) it is possible to retrain your brain to have a sound sleep.



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C) This is possible if you make sure your room is undisturbed, quiet and dark.

D) Start by regulating the times you go to bed and get up.

- A. BCAD                      B. DACB  
C. BDCA                      D. ADBC

Ans. C

Sol.

If you look at the given sentences, you will find that presence of 'too' in sentence A, pronoun 'This' in sentence C give us the idea that there is some sentence prior to these sentences. And hence these sentences do not make the right choice for the introductory sentence. Sentence D provides the solution to the problem and thus it can also not be the first sentence. The first sentence will be sentence C which starts with a sentence. The argument is taken further by C where the 'how it is possible' element is taken into consideration. The third sentence is D and the last sentence is A where the importance of ambience is discussed. Therefore, option D is the correct answer.

19. **Direction:** Choose the most appropriate option to change the narration (Direct / Indirect) of the given sentence.

The commander said, "Keep marching till you reach the border."

- A. The commander said the men should keep marching till they reach the border.  
B. The commander said to his men they should keep marching till you reach the border.  
C. The commander requested the men keep marching till they reach the border.  
D. The commander ordered his men to keep marching till they reached the border.

Ans. D

Sol.

The sentence is in direct form. We need to change it into indirect form. The sentence is imperative. Hence, 'said' will change to 'ordered.' The sentence will undergo the following modifications:

- 'Commas' gets replaced with 'to'
- 'You' gets changed to 'they'.
- 'Reach' gets changed to 'reached'

Out of all the alternatives, only option D adheres to the given rules. Hence, option D is the correct choice.

20. Select the most appropriate option in the blank.

If your actions are \_\_\_\_\_ what you say, no one is going to believe you.

- A. contrary for                      B. contrary with  
C. contrary at                      D. contrary to

Ans. D

Sol.

The correct word that will come in the place of blank is 'contrary to'. Contrary to means conflicting with or running counter to. Hence, option D is the correct answer.

21. Select the most appropriate antonym of the given word.

PUBLIC

- A. private                      B. restricted  
C. ready                      D. common

Ans. A

Sol.

The meanings of the words are:

Public(सार्वजनिक): of or concerning the people as a whole.

Private(निजी): belonging to or for the use of one particular person or group of people only.

Restricted(सीमित): limited in extent, number, scope, or action.

Ready(तैयार): in a suitable state for an action or situation; fully prepared.

Common(सामान्य): occurring, found, or done often; prevalent.

Hence, **option A** is the correct answer.

22. Select the correctly spelt word.

- A. mantion                      B. mention  
C. mension                      D. mentoin

Ans. B

Sol.

'**Mention**' meaning 'refer to (something) briefly and without going into detail' is the correctly spelt word. Hence, **option B** is the correct answer.

23. Find a word that is the antonym of - TYRANT

- A. Rival                      B. Champion  
C. Patron                      D. Benefactor



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Ans. D

Sol.

The meanings of the words are:

Tyrant (तानाशाह): a cruel and oppressive ruler.

Rival (प्रतिद्वंद्वी) : a person or thing competing with another for the same objective or for superiority in the same field of activity.

Champion (उत्तम दर्जे का) : a person who has surpassed all rivals in a sporting contest or other competition.

Patron (सहायक): a person who gives financial or other support to a person, organization, or cause.

Benefactor (दान करनेवाला) : a person who gives money or other help to a person or cause.

Hence, **option D** is the correct answer.

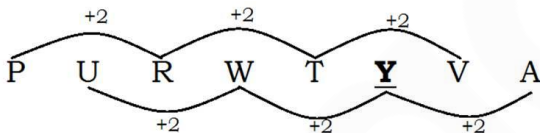
24. Which letter will replace the question mark (?) in the following series?

P, U, R, W, T, ?, V, A,

- A. W
- B. Y
- C. X
- D. Z

Ans. B

Sol.

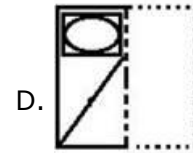
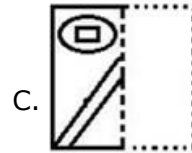
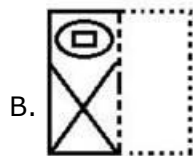
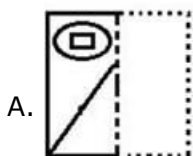


Here 1<sup>st</sup>, 3<sup>rd</sup>, fifth and seventh no. are following a certain pattern and going up with 2 places.

Same pattern is followed by second, fourth and sixth numbers.

Hence, option (B) is the correct answer.

25. Select the option that depicts how the given transparent sheet of paper would appear if it is folded at the dotted line.



Ans. A

Sol.

When the transparent sheet of paper will be folded the line will overlap the other line because it is just mirror image of it. The square box will inside the circle because it is smaller in size.

Here all conditions can be seen in the picture can be seen in the picture given in option (A)

Hence, option (A) is the correct answer.

26. Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

- A. OQTXC
- B. SUXBG
- C. BDGKP
- D. JLKRW

Ans. D

Sol.

+2 +3 +4 +5  
 O Q T X C  
 +2 +3 +4 +5  
 S U X B G  
 +2 +3 +4 +5  
 B D G K P  
 +2 -1 +7 +5  
 J L K R W

Here we can see that except option 'D' all letter cluster are following a certain pattern.

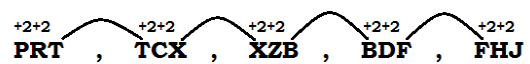
27. Which letter-cluster will replace the question mark (?) in the following series.

PRT, TVX, ?, BDF, FHJ

- A. XZB
- B. YZB
- C. XAB
- D. XZC

Ans. A

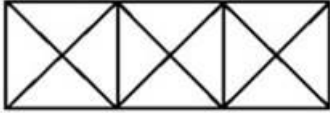
Sol.



There is a gap of two places in each letter of every letter cluster, and the next letter cluster is starting with the last alphabet of the previous letter cluster.

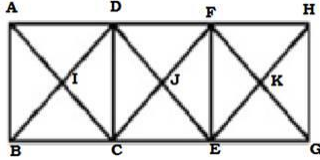
Hence, the correct option is A.

28. How many triangles are there in the following?



- A. 30
- B. 26
- C. 24
- D. 28

Ans. D  
Sol.



Triangle ABI , BIC , CID , DIA , DCJ , CJE , EJF , FJD , EKF , EKG , GKH , HKE = 12  
BAD , ADC , CBA , BCD , DCE , CEF , EFD , FDC , FEG , EGH , HFE , GHF = 12  
BDE , CFG , HED , ECA = 4  
Total Triangles = 28  
Hence, option (D) is the correct answer.

29. In the following question, select the odd number pair from the given alternatives.

- A. 7 : 48
- B. 11 : 120
- C. 13 : 170
- D. 5 : 24

Ans. C  
Sol.

$7^2 - 1 = 48$   
 $11^2 - 1 = 120$   
 $13^2 + 1 = 170$  (odd number pair)  
 $5^2 - 1 = 24$

Hence, option (C) is odd one out.

30. Two statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusion logically follow(s) from the statements.

**Statements:**

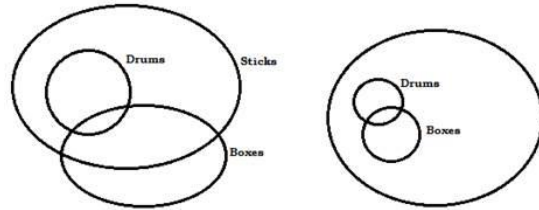
- All drums are sticks.
- Some drums are boxes.

**Conclusions:**

- I. Some boxes are sticks.
- II. Some sticks are drums.
- III. All sticks are drums.
- A. Only conclusions I and II follow
- B. Only conclusions I and III follow.
- C. Only conclusions II and III follow
- D. All the conclusions, I, II and III follow

Ans. A

Sol.



From the above diagrams , it is clear that only conclusion I and II follows.  
Hence, option (A) is the correct answer.

31. How many natural numbers less than 1000 are divisible by 5 or 7 but not by 35?

- A. 243
- B. 341
- C. 285
- D. 313

Ans. C  
Sol.

Numbers that are divisible by 5 less than 1000 = 5, 10, 15, ..... , 995.

$$\frac{995-5}{5} = 198$$

Numbers that are divisible by 5 less than 1000 = 7, 14, 21, ..... , 994.

$$\frac{994-7}{7} = 141$$

Similarly, there are numbers that are divisible by 7. Now we will delete the numbers that are divisible by 35 which are less than 1000 = 35, 70, 105, ..... , 980

$$\frac{980-35}{35} = 27$$

35, 70, 105, ..... are the numbers divisible by 35 and they occur in both numbers divisible by 5 and 7.

so total numbers are = 198 + 141 - 2(27) = 198 + 141 - 54 = 285.

32. The total number of students in sections A and B of a class is 72. The ratio of the number of students in A and B is 7 : 5. The average weight (in kg) of the students in section B is 20% more than that of the students in section A. If the average weight of all the students in the class is 52 kg, then what is the average weight (in kg) of the students in section B?

- A. 57.6
- B. 57.9
- C. 56.4
- D. 58.2

Ans. A  
Sol.



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The total number of students in sections A and B of a class is 72.

The ratio of the number of students in A and B is 7 : 5.

$$\text{So Students in section A} = \frac{7}{12} \times 72 = 42$$

$$\text{And, students in section B} = \frac{5}{12} \times 72 = 30$$

Average weight of students of B = 20% + Average weight of students of A

$$20\% = \frac{1}{5}$$

A : B

$$5x : 6x$$

$$(5x \times 42 + 6x \times 30) = 72 \times 52$$

$$78x = \frac{72 \times 52}{5}$$

$$x = \frac{72 \times 52}{5 \times 78} = \frac{48}{5}$$

Average weight of section B = 6x

$$\Rightarrow 6 \times \frac{48}{5} = \frac{288}{5} = 57.6$$

33. PT is a tangent at the point R on a circle with centre O. SQ is a diameter, which when produced meets the tangent PT at P. If  $\angle SPT = 32^\circ$ , what will be the measure of  $\angle QRP$ ?

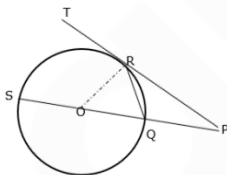
- A.  $58^\circ$
- B.  $30^\circ$
- C.  $29^\circ$
- D.  $32^\circ$

Ans. C

Sol.

Here PT is tangent .

$$\angle SPT = 32^\circ$$



Let us suppose that  $\angle PRQ = \theta$   
 OR = radius and  $\angle ORP = 90^\circ$  and  $\angle SPT = 32^\circ$

$$\angle ROP = 180^\circ - (90^\circ + 32^\circ) = 58^\circ$$

Since OR = OQ = r

$$\angle ORQ = \angle OQR = x$$

By angle sum property of triangle :

$$58^\circ + x + x = 180^\circ$$

$$58^\circ + 2x = 180^\circ$$

$$\Rightarrow x = 61^\circ$$

Now in  $\Delta RPQ$

$$\theta + 32^\circ = 61^\circ$$

$$\theta = 29^\circ$$

34. A field is in the shape of a trapezium whose parallel sides are 200 m and 400 m long, whereas each of other two sides is 260 m long. What is the area (in) of the field?

- A. 72000
- B. 52000
- C. 48000
- D. 60000

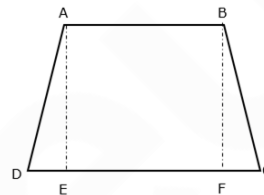
Ans. A

Sol.

$$\text{Area of trapezium} = \frac{1}{2} (\text{sum of parallel sides}) \times \text{height}$$

$$\text{Parallel sides} = 200 + 400 = 600 \text{ m}$$

$$\text{Other two sides} = 260 \text{ m}$$



$$\text{Here DE} = 100 \text{ cm}$$

$$\text{DE} = \text{CF} = 100 \text{ cm and EF} = 200 \text{ cm}$$

So here by Pythagoras theorem :

$$AE^2 = AD^2 - DE^2$$

$$AE^2 = 260^2 - 100^2$$

$$AE = 240 \text{ cm}$$

$$\text{Area of trapezium} = \frac{1}{2} (\text{sum of parallel sides}) \times \text{height}$$

$$= \frac{1}{2} (200 + 400) \times 240$$

$$= 72000$$

35. A certain sum (in Rs.) is invested at simple interest at x% p.a. for 5 years. Had it been invested at (x + 5)% p.a., the simple interest would have been Rs. 9,200 more than the earlier one. What is the sum?

- A. Rs. 36,800
- B. Rs. 36,400
- C. Rs. 35,800
- D. Rs. 40,000

Ans. A

Sol.

Let I is the simple interest on Rs. P invested at simple interest at x% p.a. for 5 years.

$$\text{Hence, } I = \frac{P \times x \times 5}{100} \dots\dots\dots(1)$$



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Also,  $(I + 9200) = \frac{P \times (x+5) \times 5}{100}$   
 .....(2)

Subtract (1) from (2), we get

$$9200 = \frac{P \times 5}{100} (x + 5 - x)$$

$$\Rightarrow P = \frac{9200 \times 100}{2.5} = 36800$$

36. If  $\operatorname{cosec} \theta = 1.25$ , then  
 $\frac{4 \tan \theta - 5 \cos \theta + 1}{\sec \theta + 4 \cot \theta - 1} = ?$

- A.  $\frac{9}{10}$                       B. 2  
 C.  $\frac{10}{11}$                       D.  $\frac{1}{2}$

Ans. C  
 Sol.

$$\operatorname{cosec} \theta = 1.25 = \frac{5}{4}$$

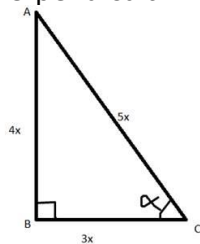
$$\operatorname{cosec} \theta = \frac{\text{Hypotenuse}}{\text{Perpendicular}}$$

We know that

Consider a triangle ABC

Let Hypotenuse = AC = 5x

Perpendicular = AB = 4x



Using Pythagoras Theorem

So,  $\frac{\text{Hypotenuse}}{\text{Base}} = \frac{5x}{3x} = \frac{5}{3}$

$$\sqrt{25x^2 - 16x^2} = \sqrt{9x^2} = 3x$$

Hence,  $\tan \theta = \frac{4}{3}$

$$\cos \theta = \frac{3}{5}$$

$$\sec \theta = \frac{5}{3}$$

$$\cot \theta = \frac{3}{4}$$

So

$$\frac{4 \tan \theta - 5 \cos \theta + 1}{\sec \theta + 4 \cot \theta - 1} = \frac{4 \times \frac{4}{3} - 5 \times \frac{3}{5} + 1}{\frac{5}{3} + 4 \times \frac{3}{4} - 1} = \frac{10}{11}$$

37. If the 5-digit number 538xy is divisible by 3, 7 and 11, then the value of  $(x^2 + y^2)$  is:

- A. 25                      B. 10  
 C. 17                      D. 13

Ans. D  
 Sol.

Given that the 5-digit number 538xy is divisible by 3, 7 and 11.

So we will first evaluate:  $\text{LCM}(3, 7, 11) = 3 \times 7 \times 11 = 231$

Largest possible value of 538xy is 53899  
 When we divide 53899 by 231 we obtain 76 as remainder.

So required number =  $53899 - 76 = 53823$

Hence,  $x = 2$  and  $y = 3$

$$\Rightarrow x^2 + y^2 = (2)^2 + (3)^2 = 13$$

38. The value of  $\tan^2 48^\circ - \operatorname{cosec}^2 42^\circ + \operatorname{cosec}(67^\circ + \theta) - \sec(23^\circ - \theta)$  is :

- A. -2                      B. -1  
 C. 0                      D. 1

Ans. B  
 Sol.

$$\tan^2 48^\circ - \operatorname{cosec}^2 42^\circ + \operatorname{cosec}(67^\circ + \theta) - \sec(23^\circ - \theta)$$

$$\tan^2 48^\circ - (1 + \cot^2 42^\circ) + \operatorname{cosec}(67^\circ + \theta) - \sec(23^\circ - \theta)$$

$$\tan^2(90 - 48) - 1 - \cot^2 42^\circ + \operatorname{cosec}(90^\circ - 67^\circ - \theta) - \sec(23^\circ - \theta)$$

$$\cot^2 42^\circ - 1 - \cot^2 42^\circ + \sec(23^\circ - \theta) - \sec(23^\circ - \theta) = -1$$

39. A can complete one-third of a work in 10 days and B can do  $\frac{3}{5}$  of the same

work in 24 days. They worked together for 10 days. The remaining work was completed by C alone in 15 days. In how many days can C alone do  $\frac{2}{3}$  of the same work?

- A. 32                      B. 30  
 C. 24                      D. 27

Ans. C  
 Sol.

$$A = \frac{1}{3} \text{ work} = 10 \text{ days}$$

Whole work in 30 days

$$B = \frac{3}{5} \text{ work} = 24 \text{ days}$$

Whole work in = 40 days  
 $\text{LCM}(30, 40) = 120 \text{ unit}$



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$$\text{Efficiency of A} = \frac{120}{30} = 4 \text{ unit}$$

$$\text{Efficiency of B} = \frac{120}{40} = 3 \text{ unit}$$

Together they can work =  $4 + 3 = 7$  unit

Total time they worked together = 10 days.

The remaining work was completed by C alone in 15 days.

Remaining work =  $120 - 70 = 50$  unit

So 50 units of work will be completed by C alone

$$1 \text{ days work} = \frac{50}{15} = \frac{10}{3} \text{ units}$$

$$\Rightarrow 1 \text{ unit} = \frac{3}{10} \text{ days}$$

$$\text{So } \frac{2}{3} \text{ of } 120 \text{ work} = 80 \text{ unit}$$

$$80 \text{ units} = 80 \times \frac{3}{10} = 24 \text{ days}$$

40. A train of length 342 m is running at 54 km/h. In how much time (in seconds) will it cross a bridge of length 438 m?

- A. 54
- B. 52
- C. 48
- D. 50

Ans. B

Sol.

Length of train = 342 m

Length of bridge = 438 m

Total length =  $438 + 342 = 780$  m

Speed = 54 km/hr =

$$54 \times \frac{5}{18} = 15 \text{ m/sec}$$

Time required to cover the distance =

$$\frac{\text{distance}}{\text{speed}} = \frac{780}{15} = 52 \text{ sec}$$



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