



# 21 Day Study Plan

## Day -16



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1. \_\_\_\_\_ assumed the title of 'Gangaikondachola' or the conqueror of the river Ganga.

- A. Vijjalalay Chola
- B. Rajaraja Chola I
- C. Rajadhiraja Chola
- D. Rajendra Chola I

Ans. D

Sol.

• **The title of 'GANGAIKONDACHOLA' is assumed by Rajendra Chola I.**

• He defeated Mahipala, the Pala king of Gauda in present day Bengal and Bihar, and to commemorate his victory he assumed the title of Gangaikondachola.

• Cholas built a new capital city called Gangaikonda Cholapuram.

2. In which year was the 'Battle of Goa' fought?

- A. 1510
- B. 1524
- C. 1502
- D. 1514

Ans. A

Sol.

• **The battle of Goa was occurred in 1510** between Portuguese Empire and Bijapur Sultanate.

• The Portuguese conquest of Goa occurred when the governor of Portuguese India Afonso de Albuquerque captured the city in 1510.

3. Manipur, Meghalaya and Tripura became states under \_\_\_\_\_.

- A. North Eastern Republic of India Act, 1972
- B. North Eastern Areas (Reorganisation) Act, 1971
- C. North Eastern Retention (Reconstruction) Act, 1971
- D. North Eastern Region New State Act, 1972

Ans. B

Sol.

• **North Eastern Areas (Reorganisation) Act, 1971** was an act to provide for the establishment of the States of Manipur and Tripura and to provide for the formation of the State of Meghalaya.

• It also recommended for formation of Union territories of Mizoram and Arunachal Pradesh.

4. How much energy in kJ is present per gram of carbohydrate?

- A. Approx 15-20kJ
- B. Approx 25-30kJ
- C. Approx 50-55kJ
- D. Approx 9-12kJ

Ans. A

Sol. 1 gm of carbohydrate contain around **17 kilojoule** of energy.

\* 1gm of fat contain around **35 kilojoule** of energy.

\* 1gm of protein contain around **15 kilojoule** of energy.

5. What is recommended dietary allowance of vitamin D?

- A. 15 µg
- B. 100 µg
- C. 30 µg
- D. 85 µg

Ans. A

Sol. 15 µg is the recommended dietary allowance of vitamin D while the upper limit is 100 µg.

Following are the rich sources of vitamin D:-

\* Cod liver oil, mushrooms (if exposed to ultraviolet light), halibut, mackerel, canned sockeye salmon etc.

6. Anemophily is the pollination by \_\_\_\_\_.

- A. Sunlight
- B. Wind
- C. Both wind and sunlight
- D. None of the above

Ans. B

Sol.

• Anemophily or wind pollination is a form of pollination whereby pollen is distributed by wind.

• Almost all gymnosperms are anemophilous, as are many plants in the order Poales, including grasses, sedges and rushes.

7. How is the term "hypotonic and hypertonic" different to each other?

- A. Hypotonic means less concentrated, whereas hypertonic means not concentrated.
- B. Hypotonic means less concentrated, whereas hypertonic means more concentrated.
- C. Hypotonic means not concentrated, whereas hypertonic means more concentrated.
- D. None of above



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Ans. B

Sol. **Hypertonic** refers to a greater concentration. In **biology**, a **hypertonic** solution is one with a higher concentration of solutes outside the cell than inside the cell. **Hypotonic** refers to a lesser concentration. In **biology**, a **hypotonic** solution has a lower concentration of solutes outside the cell than inside the cell. **For hypertonic solutions**, it can be used for treatment of a cerebral hemorrhage. **For hypotonic solutions**, it can be used for treatment of dehydration and hypernatremia, or increased sodium in the blood.

8. Which of the following was a port city of the Indus Valley Civilization?

- A. Lothal                      B. Dholavira  
C. Rakhigarhi                D. Kalibangan

Ans. A

Sol.

• **Lothal is located in coastal areas of Gujrat** and it was major port city of Indus valley civilization.

• Lothal was key port to trade with Persia and Middle East countries.

• Lothal was excavated from 13 February 1955 to 19 May 1960 by the Archaeological Survey of India.

9. Who was the president of the Indian National Congress during the Swadeshi Movement?

- A. Tilak  
B. Gopal Krishna Gokhale  
C. Feroz Mehta  
D. Aurobindo Ghosh

Ans. B

Sol.

• **Gopal Krishna Gokhale was the president of the Indian National Congress** during the session of 1905.

• The congress under his leadership unanimously boycotted the partition of Bengal.

• Partition of Bengal came into effect on 16 Oct 1905.

• Gopal Krishna Gokhale was a moderate leader and political teacher of Mahatma Gandhi.

10. Academy of Fine Arts is situated in which state?

- A. West Bengal                B. Tamil Nadu  
C. Rajasthan                  D. Bihar

Ans. A

Sol.

• **Academy of Fine Arts is situated in Kolkata, West Bengal.**

• The academy was formally established in 1933 by Lady Ranu Mukherjee.

• At present Mr. Prasun Mukherjee is the chairman of board of trustees of this institute.

11. Venice is famous city in which country?

- A. Germany                    B. Norway  
C. Italy                          D. France

Ans. C

Sol.

• Venice is a city in **northeastern Italy**.

• It is the capital of the Veneto region.

• It is situated on a group of **118 small islands**.

• The city was historically the capital of the **Republic of Venice** for a millennium and more, **from 697 to 1797**.

12. Which city of India is known as city of bridges?

- A. Surat                         B. Mumbai  
C. Coimbatore                D. Chandigarh

Ans. A

Sol.

• **Surat** is known as the **city of bridges**.

• Surat has so many bridges that is the only reason Surat is known as the city of bridges.

• It is a port city situated on the banks of the **Tapi river**.

• Surat was awarded "best city" by the Annual Survey of India's City-Systems (ASICS) in 2013.

13. In Oscilloscopes the observed waveform can be analyzed for which of the following properties?

- A. Amplitude                 B. Rise time  
C. Frequency                 D. All of the above

Ans. D

Sol. **Oscilloscopes** are used to observe the change of an electrical signal over time, such that voltage and time describe



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a shape which is continuously graphed against a calibrated scale.

• The observed **waveform** can be analyzed for such properties as **amplitude, frequency, rise time, time interval, distortion** and others.

14. Choose the most appropriate option to change the narration (direct/indirect) of the given sentence.

She said, "Alas!, I am lost in the wilderness."

A. She said that Alas!, as she was lost in the wilderness.

B. She said Alas!, as she was lost in the wilderness.

C. She exclaimed with sorrow that she was lost in the wilderness.

D. She sadly said that she was lost in the wilderness.

Ans. C

Sol. The given sentence is in exclamatory form. The rules of changing exclamatory words are the following-

**Direct**

said Alas!

said Fi/Ugh!

said Wow/Hurray!

**Indirect form**

exclaimed with sorrow

exclaimed with despise/ disgust

exclaimed with joy

The conjunction 'that' will be used to connect the reported and reporting part of the sentence. The pronoun of the reported speech 'I' is changed as per the subject of the reporting speech 'she'. The reporting verb is in simple past tense. The reported speech will be changed from simple present to simple past tense i.e. 'was lost'. Hence, the correct answer is in option C.

15. Identify the best way to improve the underlined part of the given sentence. If there is no improvement required, select 'no Improvement'.

One should be aware of their right to speech as per the article 19(1) of Indian constitution.

A. his

B. one's

C. our

D. No improvement

Ans. B

Sol.

The underlined segment must be replaced by option B. If one is the subject we must use one's as its possessive adjective. Hence option B is correct answer.

16. **Direction:** Choose the most appropriate option to change the voice (active / passive) form of the given sentence.

How were they managing the school for one year without a Principal?

A. How was the school managed for one year without a Principal?

B. How was the school being managed for one year without a Principal?

C. How was the Principal managed for one year without a School?

D. How was the Principal being managed for one year without a School?

Ans. B

Sol.

The given sentence is in active form of past interrogative tense. The structures for active/passive voices are:

Active: How + were + Subject + verb (-ing form) + object...

Passive: How + Was/Were + Object + being + verb (passive form) + by + subject...

So, with the help of the above structures, we can convert the given sentence into passive voice: 'How was the school managed for one year without a Principal?'

Hence, option B is the correct choice.

17. **Direction:** Select the most appropriate idiom (in the context) to fill in the sentence.

Many old projects are \_\_\_\_\_ with a change in company policies.

A. beating around the bush

B. caught red handed

C. breaking the ice

D. getting a new lease of life

Ans. D

Sol.

Beat around the bush means to avoid talking about a thing.

Caught red handed means getting discovered after doing something wrong.



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Break the ice means to start talking.  
Get a new lease of life- a substantially improved prospect of life after repair.  
Hence, option D is the correct answer.

18. Identify the word that is misspelt.  
A. idiosyncrasy      B. recalcitrant  
C. conscientious      D. exhilaration

Ans. A  
Sol.

The wrongly spelt word is given in option A. The correct spelling is idiosyncrasy which means mannerism.  
Recalcitrant means disobedient.  
Exhilaration means excitement.  
Conscientious means careful.  
Hence, option A is the correct choice.

19. **Direction:** Find a word that is the ANTONYM OF PIQUANT  
A. peppery      B. pungent  
C. bland      D. interesting

Ans. C  
Sol.

Let's first learn the meanings of the words:  
Piquant = savoury or tasty. Therefore, bland is the correct antonym for it.  
Pungent = strong.  
Hence, option C is the correct answer.

20. **Direction:** Select the most appropriate idiom (in the context) to fill in the sentence.  
The government has decided to \_\_\_\_\_ GST on some items in order to help small traders.  
A. crack down on  
B. roll back  
C. steer clear of  
D. wash away

Ans. B  
Sol.

Roll back = a reduction or decrease.  
crack down on = to take severe measures.  
Steer clear of = keep away from.  
Wash away = to get rid of (something).  
The given sentence talks about decrease in the tax rate of GST in order to help small traders.  
Hence, option B is the correct answer.

21. Select the most appropriate meaning of the given idiom in the given sentence.  
When Anshul told everyone that he had resigned his job, all the members in the family were at their wits' end.

- A. quite angry  
B. very serious  
C. absolutely satisfied  
D. quite perplexed

Ans. D  
Sol.

The idiom 'At his wit's end' means to be so worried, confused, or annoyed that you do not know what to do next.  
*For example: I'm at my wits' end. I don't know how to help him.*  
Therefore, option D is the correct choice.

22. The value of:  
 $3.8 + (8.2 \div 4.1 \times 2) - 4 \times 3 \div 1.2$   
A. 1.2      B. - 1.2  
C. 2.2      D. - 2.2

Ans. D

$$\begin{aligned} \text{Sol.} &= 3.8 + \left(\frac{8.2}{4.1} \times 2\right) - 4 \times \frac{3}{1.2} \\ &= 3.8 + (2 \times 2) - 10 \\ &= 3.8 + 4 - 10 \\ &= -2.2 \end{aligned}$$

Hence, option B is the correct answer.

23. If  $\tan 4\theta = \cot (40^\circ - 2\theta)$ , then  $\theta$  is equal to:  
A.  $30^\circ$       B.  $20^\circ$   
C.  $25^\circ$       D.  $35^\circ$

Ans. C

$$\begin{aligned} \text{Sol.} \quad \tan 4\theta &= \cot(40^\circ - 2\theta) \\ \tan 4\theta &= \tan (90^\circ - (40^\circ - 2\theta)), \\ \tan 4\theta &= \tan (50^\circ + 2\theta), \\ 4\theta &= 50^\circ + 2\theta \\ 2\theta &= 50^\circ \\ \theta &= 25^\circ \end{aligned}$$

Hence, option C is the correct answer.

24. Chords AB and CD of a circle intersect at a point P inside the circle. If AB = 10 cm, AP = 4 cm and PC = 5 cm, then CD is equal to:

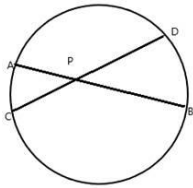
- A. 4.8 cm      B. 7.8 cm  
C. 6.8 cm      D. 9.8 cm

Ans. D



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Sol. Given, AB = 10 cm  
 PA + PB = 10  
 PB = 10 - PA  
 PB = 10 - 4 = 6



PA x PB = PC x PD  
 4 x 6 = 5 x PD  
 PD = 24/5 = 4.8  
 CD = PC + PD = 5 + 4.8 = 9.8  
 Hence, option D is the correct answer.

25. In a class of 60 students, 40% are girls. The average weight of the boys is 62kg and that of the girls is 55kg. What is the average weight of the whole class?  
 A. 59kg                      B. 58.8kg  
 C. 59.2kg                    D. 58.6kg

Ans. C  
 Sol. Given 40% are girls in class of 60 students.  
 No. of girls = (40/100) x 60 = 24  
 No. of boys = 60 - 24 = 36  
 Avg. weight of boys = 62 kg  
 Total weight of boys = 62 x 36 = 2232 kg  
 Total weight of girls = 55 x 24 = 1320 kg  
 Total weight of class = 2232 + 1320 = 3552 kg  
 Avg. weight of class = 3552/60 = 59.2 kg  
 Hence, option C is the correct answer.

26. An article is sold for Rs. 547.40 after successive discounts of 30% and 15%. What is the marked price of the article?  
 A. Rs. 900                    B. Rs. 960  
 C. 920                        D. Rs. 940

Ans. C  
 Sol. S.P. of an article = 547.40 after two successive discounts of 30% and 15%  
 Selling Price = Marked Price - Net Discount  
 If two successive discounts of a and b is given,

$$Net\ Discount = a + b + \frac{ab}{100}$$

$$Net\ Discount = -30 - 15 + \frac{(-30 \times -15)}{100}$$

$$Net\ Discount = -45 + 4.5$$

$$Net\ Discount = -40.5\%$$

$$Net\ Discount = \frac{Net\ Discount\ \%}{100} \times Marked\ Price$$

$$Net\ Discount = \frac{40.5}{100} \times Marked\ Price$$

Since, S.P. = M.P. - Net Discount  
 Selling Price = Marked Price -  $\frac{40.5}{100} \times Marked\ Price$

$$547.40 = \frac{59.5}{100} \times Marked\ Price$$

$$Marked\ Price = 547.50 \times \frac{100}{59.5}$$

M.P. = Rs. 920

27. The radii of the two circular faces of the frustum of a cone of height 21 cm are 5 cm and 3 cm. What is its volume in cm<sup>3</sup>?

$$\left(\pi = \frac{22}{7}\right)$$

- A. 1025                      B. 1078  
 C. 1020                    D. 1058

Ans. B  
 Sol. Given height of the frustum = 21 and r<sub>1</sub> = 5 and r<sub>2</sub> = 3

$$Volume\ of\ the\ frustum = \frac{\pi}{3} h ((r_1)^2 + (r_2)^2 + r_1 * r_2)$$

$$Volume\ of\ the\ frustum = \frac{1}{3} \times \frac{22}{7} \times 21 (5^2 + 3^2 + 5 * 3)$$

$$Volume\ of\ the\ frustum = \frac{1}{3} \times \frac{22}{7} \times 21 \times 49$$

$$Volume\ of\ the\ frustum = 22 \times 49$$

$$Volume\ of\ the\ frustum = 1078$$

Hence, option B is the correct answer.

28. If (a + b) = 6 and ab = 8, then (a<sup>3</sup> + b<sup>3</sup>) is equal to:

- A. 108                      B. 72  
 C. 216                    D. 144

Ans. B

Sol. Given (a + b) = 6 and ab = 8

$$(a+b)^3 = a^3 + b^3 + 3ab(a+b)$$

$$a^3 + b^3 = 6^3 - 3 \times 8 \times 6$$

$$a^3 + b^3 = 216 - 144$$

$$a^3 + b^3 = 72$$

Hence, option B is the correct answer.

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

V, A, H, Q, B, ?

- A. P                              B. G  
 C. O                            D. S

Ans. C

Sol.



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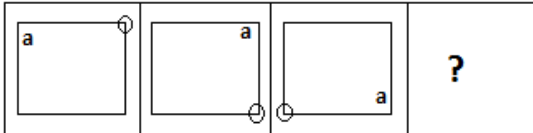
Given series follows the pattern given below:

$$V \xrightarrow{+5} A \xrightarrow{+7} H \xrightarrow{+9} Q \xrightarrow{+11} B \xrightarrow{+13} O$$

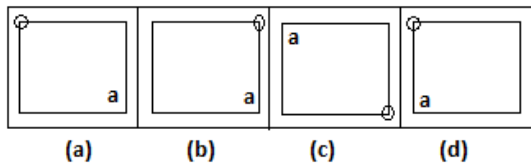
Hence, option C is the correct answer.

30. In the question given below which of the option figures will come after the problem figures, if the sequence were continued?

**Question Figure:**



**Answer figure:**



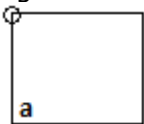
- A. (a)                      B. (b)  
C. (c)                      D. (d)

Ans. D

Sol.

Both the elements are moving one step forward in the clockwise direction.

According to the sequence, the next figure in the series will be -



Hence, option D is the correct response.

31. Which two symbols should be interchanged to make the equation correct?

$$15 - 3 + 10 \div 5 \times 2 = 5$$

- A. + and -                      B. - and ÷  
C. × and +                      D. - and ×

Ans. B

Sol.

According to the question, If we interchange - and ÷ the above equation becomes correct.

$$15 \div 3 + 10 - 5 \times 2 \text{ (Applying BODMAS)}$$

$$\Rightarrow 5 + 10 - 10$$

$$\Rightarrow 15 - 10$$

$$\Rightarrow 5$$

Hence, option (b) is correct.

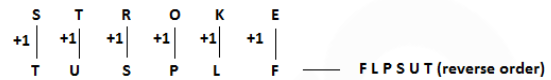
32. in a code language. STROKE is written as FLPSUT How would BRIGHT be written in the same code language?

- A. UJHHCS                      B. SGFHQA  
C. CSJHIU                      D. UIHJSC

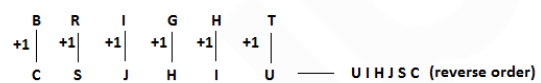
Ans. D

Sol.

In the code language, Each letter of the word replaced by its succeeding alphabet and then the formed word written in reverse order.



Similarly,



Hence, option (D) is correct.

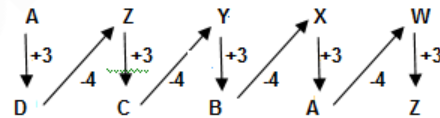
33. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

AD, ZC, YB, XA, ?

- A. WZ                              B. YA  
C. PZ                              D. QA

Ans. A

Sol. The series will be,



So ? = WZ

Hence, option A is the correct response.

34. In the following question, select the missing number from the given series.

3, 7, 16, 35, ?

- A. 73                              B. 74  
C. 78                              D. 82

Ans. B

$$\text{Sol. } 3 \times 2 + 1 = 7$$

$$7 \times 2 + 2 = 16$$

$$16 \times 2 + 3 = 35$$

$$\mathbf{35 \times 2 + 4 = 74}$$

Hence, the correct option is **B**

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

- A. 11 - 121                      B. 13 - 169  
C. 19 - 391                      D. 21 - 441

Ans. C

Sol.  $11^2 = 121,$

$13^2 = 169,$

$19^2 = 361 \neq 391,$

$21^2 = 441.$

As above 391 is not the perfect square of 19.

Hence, option C is the right answer.



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