

# Lockdown 3.0 Study Plan

## Day 8



1. Who among the following was NOT associated with the revolt of 1857?

- A. Begum Hazrat Mahal
- B. Kunwar Singh
- C. Mangal Pandey
- D. Bhagat Singh

Ans. D

Sol.

- Bhagat Singh was not associated with the revolt of 1857.
- Begum Hazrat Mahal led the revolt of 1857 in Awadh and Lucknow.
- Kunwar Singh led the revolt of 1857 in Bihar.
- Mangal Pandey was an Indian soldier who played a key part in the events immediately preceding the outbreak of the Indian rebellion of 1857

2. Which of the following martial art forms is practiced in the state of Punjab and West Bengal?

- A. Mardaani khel
- B. Thang-ta
- C. Kalaripayattu
- D. Lathi

Ans. D

Sol.

- Lathi is an ancient armed martial art of India.
- It also refers one of the world's oldest weapons used in martial arts.
- Lathi or stick martial arts practiced in Punjab and Bengal region of India.
- Lathi still remains a popular sport in Indian villages.
- Mardani khel is an armed Indian martial art from Maharashtra.
- Thang-ta is an Indian martial art from Manipur.
- Kalaripayattu also known simply as Kalari, is an Indian martial art and fighting style that originated in modern-day Kerala.

3. Which of the following days is observed as World Heritage Day?

- A. 15 April
- B. 18 April
- C. 2 March
- D. 16 April

Ans. B

Sol.

• **18 April every year is observed as World Heritage Day.**

- It is celebrated to create awareness about heritage sites.
- This year theme was Shared Culture, Shared heritage and Shared responsibility.

4. Which of the following is used for removing permanent hardness of water?

- A. Lime
- B. Baking soda
- C. Bleaching powder
- D. Washing soda

Ans. D

Sol.

- The permanent hardness present in the water can be removed by treating it with washing soda.
- Insoluble carbonates are formed when washing soda reacts with the sulfide and chloride salts of magnesium and **calcium** and thus hard water is converted to soft water.

5. Which of the following can be diagnosed with the Widal test?

- A. AIDS
- B. Cancer
- C. Typhoid fever
- D. Tuberculosis

Ans. C

Sol.

- The **Widal test** is one method that may be used to help make a presumptive diagnosis of enteric fever, also known as typhoid fever.
- The Widal test detects agglutinating antibodies against the O and H antigens of S. Typhi.
- The Widal test was developed over a century ago and remains one of the world's most widely used diagnostic tests.

6. Where was the 107<sup>th</sup> edition of the Indian Science Congress held?

- A. Chennai
- B. Dehradun
- C. Lucknow
- D. Bengaluru

Ans. D

Sol.



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- The 107th **edition** of **Indian Science Congress** was **held** in Bengaluru.

- Indian Science Congress Association (ISCA) is a premier scientific organisation of India with headquarters at Kolkata, West Bengal.

- The association started in the year 1914 in Kolkata and it meets annually in the first week of January.

7. What is called scattering of light by particles in a colloid?

- A. Tyndall effect
- B. Mie effect
- C. Quantum effect
- D. Doppler effect

Ans. A

Sol.

- Light scattering by particles in a colloid is called Tyndall effect.

- It is named after the physicist John Tyndall in the 19th century.

- This effect is used to determine whether a mixture is a true solution or colloid.

8. Who is known as the father of Botany?

- A. Leeuwenhoek
- B. Aristotle
- C. Ereky
- D. Theophrastus

Ans. D

Sol.

- The Greek scientist Theophrastus is known as the father of Botany.

- He was the first person to include the practice of agriculture into botany.

- He wrote two large books – "On the History of Plants and On the Causes of Plants."

9. By which method is turpentine oil purified?

- A. Evaporation
- B. Elevation
- C. Steam distillation
- D. Crystallization

Ans. C

Sol.

- Steam distillation is a separative process used to purify temperature sensitive materials.

- The boiling point of turpentine oil is 90°C to 115°C and it is immiscible with

water. So steam distillation is used to purify it.

10. Hiuen Tsang, hailed as the pilgrims, visited India during the reign of king \_\_\_\_\_.

- A. Ashoka
- B. Vishnugupta
- C. Harsha
- D. Samudragupta

Ans. C

Sol.

- The Chinese traveller **Hiuen Tsang** visited India during the reign of emperor **Harsha Vardhana**.

- He returned to China and wrote a detailed description of India during the rule of Harsha in his book '**Si-yu-ki**'.

11. Select the INCORRECTLY spelt word.

- A. occurrence
- B. fasineting
- C. grammatical
- D. professional

Ans. B

Sol.

Option B has the incorrectly spelt word. The correct spelling is fascinating which means capable of arousing and holding the attention.

12. Direction: Select the most appropriate meaning of the following idiom.

To take a back seat

- A. to go through a short but unpleasant period of time
- B. to be less successful in one's efforts
- C. to lecture or criticize the person who is actually in control of something
- D. to become less important or to give up control over things

Ans. D

Sol.

The idiom 'to take a back seat' means to become less important or to give up control over things or 'to take or be given a less important position or role'. Hence, option D is the correct answer.

13. Direction: Select the most appropriate ANTONYM of the given word. EXTOL



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- A. censure
- B. exposure
- C. realistic
- D. boorish

Ans. A

Sol.

Let's understand the meaning of the given words:

Extol: praise, glorify, or honour

E.g.: extol the virtues of one's children

Censure: harsh criticism or disapproval

E.g.: the parent was notified that her son received a censure from the principal for misbehaving.

Exposure: vulnerability to the elements; to the action of heat, cold, wind or rain

Realistic: aware or expressing awareness of things as they really are

Boorish: ill-mannered and coarse and contemptible in behaviour or appearance  
Hence, option A is the correct answer.

14. **Direction:** Select the most appropriate meaning of the given idiom.

Look down upon

- A. to consider someone inferior
- B. to be full of guilt
- C. to look for something underground
- D. to look down from a height

Ans. A

Sol. The idiom 'look down upon' means to consider someone inferior. Hence, option A is the correct answer.

15. **Direction:** Select the most appropriate meaning of the given idiom.

Cut and dried

- A. very old
- B. dead and gone
- C. badly hurt
- D. already decided

Ans. D

Sol.

The idiom 'cut and dried' means already decided

Hence, option D is the correct answer.

16. In the sentence identify the segment which contains the grammatical error.

The present what I buy for you yesterday was very expensive.

- A. was very expensive
- B. The present

- C. for you yesterday
- D. what I buy

Ans. D

Sol.

Here the error is in option D. "What I buy" will be replaced with "that I bought".

1) a relative pronoun is needed to connect the sentence

2) the sentence is in past tense (use of yesterday), thus V2 (bought) will be used here.

17. **Direction:** Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.

A) While he was doing this, he missed seeing a velvet purse full of gold coins lying on the road.

B) Ramesh always worried about how he would become sick and weak in old age.

C) To try how he would cope with blindness, Ramesh started walking with his eyes closed.

D) He feared that he might even lose his sight and go blind.

A. CABD

B. DBAC

C. BDCA

D. BCAD

Ans. C

Sol. Sentence B will be the first sentence of the sequence as all other sentences start with pronoun, 'he' which has been used for Ramesh. Sentence D is in continuation with the worried feelings that Ramesh was experiencing in sentence B. So, BD is a mandatory pair in option C. Hence, option C is the correct answer.

18. **Direction:** Fill in the blank with the most appropriate word.

The minister gave an \_\_\_\_\_ that strict action would be taken against the culprits.

A. insurance

B. assurance

C. ambition

D. admission

Ans. B

Sol. Let's understand the meaning of the given words:



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Insurance: protection against future loss  
 Assurance: a binding commitment to do, give or refrain from something  
 Ambition: a strong drive for success  
 Admission: the act of admitting someone to enter  
 The minister gave a commitment to take strict action against the culprit. So, assurance is the correct word here. Hence, option B is the correct answer.

19. Select the correct indirect form of the given sentence.  
 He said to me, "What are you doing?"  
 A. He said that what I was doing.  
 B. He said what I had been doing.  
 C. He asked me what I was doing.  
 D. He asked me that what was I doing.  
 Ans. C

Sol.  
 The given sentence is an interrogative sentence of direct narration and we will convert it into indirect narration. Said to will be changed to asked as the reporting speech has an object. The tense of the reported speech is present continuous tense and it will be converted to the past continuous tense in the indirect narration. The structure of reported speech will be changed to assertive form i.e. subject + verb. Also, 2<sup>nd</sup> person pronoun will change according to the object of the reporting speech i.e. you will change to I. Hence, option C is the correct answer.

20. Choose the most appropriate option to change the voice (active/passive) form of the given sentence.  
 Those apples tasted sweet.  
 A. Those apples were sweet when they were tasted.  
 B. The taste of apples was sweet.  
 C. Apples were sweet.  
 D. The taste of apples is sweet.  
 Ans. A

Sol.  
 The rule for the conversion to passive form is as follows:  
 Subject + verb (according to tense and number) + when + pronoun (according to number) + helping verb (according to tense and number) + V3(main verb in third form)

Hence, option A is the correct answer.

21. Select the option that is related to the third number in the same way as the second number is related to the first number.

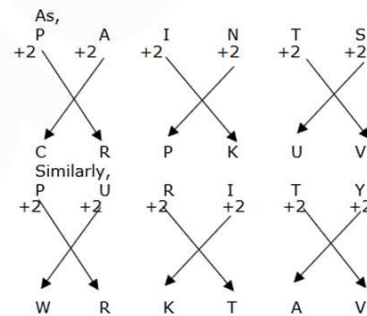
65 : 30 :: 78 : ?  
 A. 56  
 B. 53  
 C. 50  
 D. 61

Ans. A  
 Sol.  
 As,  $65 * 2 - 100 = 30$   
 Similarly,  $78 * 2 - 100 = 56$   
 Hence, option A is the correct answer.

22. In a certain code language, 'PAINTS' is written as 'CRPKUV'. How will 'PURITY' be written as in that language?

A. VSKTAZ  
 B. WRKTAV  
 C. WRKSNU  
 D. XSISBM

Ans. B  
 Sol.



Hence, option B is the correct answer.

23. Select the option in which the words share the same relationship as that shared by the given pair of words.

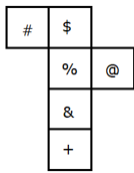
Office : Work  
 A. Court : Lawyer  
 B. School : Study  
 C. House : Bricks  
 D. Hospital : Director

Ans. B  
 Sol.  
 As, Office is the place to work.  
 Similarly, school is the place to study.  
 Hence, option B is the correct answer.





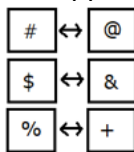
24. A cube is made by folding the given sheet. In the cube so formed, which of the following pairs of symbols will be on opposite sides?



- A. @ and %
- B. & and %
- C. # and @
- D. \$ and +

Ans. C  
Sol.



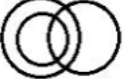

The opposite faces are:



In the above figure, '#' and '@' will be on opposite to each other. Hence, option C is the correct answer

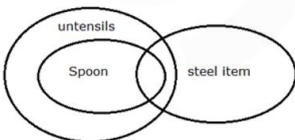
25. Which of the following Venn diagrams best represents the relationship between the following classes?

Utensils, Spoons, Steel items

- A. 
- B. 
- C. 
- D. 

Ans. C  
Sol.

The given class is represented by the given Venn-diagram as shown below:



Hence, option C is the correct answer.

26. Select the letter-cluster that can replace the question mark (?) in the following series.

eBd, hXi, kTn, nPs, ?

- A. pLw
- B. qKx
- C. Qlv
- D. qLx

Ans. D  
Sol.

Pattern follows here is -

$e + 3 = h \Rightarrow h + 3 = k \Rightarrow k + 3 = n \Rightarrow n + 3 = q$

$B - 4 = X \Rightarrow X - 4 = T \Rightarrow T - 4 = P \Rightarrow P - 4 = L$

$d + 5 = i \Rightarrow i + 5 = n \Rightarrow n + 5 = s \Rightarrow s + 5 = x$

qLx is the next term.

Hence, option D is the correct answer.

27. In a certain code language. CREATION' is written as RCAEITNO. How will SEQUENCE be written as in that language?

- A. QESEUENC
- B. ESUQNEEC
- C. QESEUCNE
- D. ESUQENEC

Ans. B  
Sol.

Logic- 1<sup>st</sup> letter is interchanged by 2<sup>nd</sup> and 3<sup>rd</sup> letter interchanged by 4<sup>th</sup> .....

CR = RC

EA = AE

TI = IT

ON = NO

CREATION is written as RCAEITNO.

Similarly,

SE = ES

QU = UQ

EN = NE

CE = EC

SEQUENCE is written as ESUQNEEC.

Hence, option B is the correct answer.

28. In a certain code language. CIRCULAR is coded as 24-3-9-24-1-15-5-9. How will VERTICAL be coded as in that language?

- A. 5-4-9-7-3-24-5-15
- B. 5-2-9-7-3-24-5-15
- C. 22-4-9-7-3-23-1-15
- D. 22-4-9-7-9-24-5-15



Ans. A

Sol.

Consonant coded as opposite letters  
place value and vowels are coded as -

A = 5, E = 4, I = 3, O = 2, U = 1

C = X = 24

I = 3

R = I = 9

C = X = 24

U = 1

L = O = 15

A = 5

R = I = 9

Similarly,

V = E = 5

E = 4

R = I = 9

T = G = 7

I = 3

C = X = 24

A = 5

L = O = 15

Vertical is coded as 5497324515

Hence, option A is the correct answer.

29. Select the option that is related to the third word in the same way as the second word is related to the first word.

Amusing : Humorous :: Moisture : ?

A. Water

B. Soak

C. Dry

D. Humid

Ans. B

Sol.

Humorous is a synonym of Amusing in the same way Soak is the synonym of Moisture.

Hence, option B is the correct answer.

30. 'Astronomy' is related to 'Stars' in the same way as 'Agronomy' is related to \_\_\_\_\_.

A. Mines

B. Crops

C. Planets

D. Emotions

Ans. B

Sol.

'Astronomy' is the branch of science which deals with celestial objects such as stars and the physical universe. Similarly, 'Agronomy' is the science and technology of producing and using plants in

agriculture for crops, fiber, fuel, and land restoration.

Hence, option B is the correct answer.

31. If  $x + 3y + 2 = 0$  then value of  $x^3 + 27y^3 + 8 - 18xy$  is

A. -2

B. 1

C. 2

D. 0

Ans. D

Sol.

Here  $x + 3y + 2 = 0$

If we substitute the value of  $x = 1$  and  $y = -1$  then

The value of  $x + 3y + 2$  becomes 0

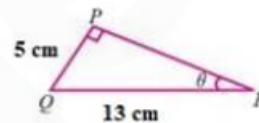
Hence by substituting the value in the given equation ;

We have  $x^3 + 27y^3 + 8 - 18xy = (1)^3 + 27(-1)^3 + 8 - 18(1)(-1)$

$= 1 - 27 + 8 + 18$

$= 0$

32. In the right triangle shown in the figure, what is the value of  $\operatorname{cosec} \theta$ ?



A.  $\frac{5}{11}$

B.  $\frac{5}{13}$

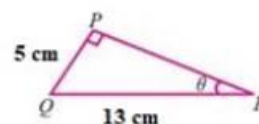
C.  $\frac{12}{13}$

D.  $\frac{13}{5}$

Ans. D

Sol.

Observe given figure carefully, we can write



Perpendicular = 5 cm

Hypotenuse = 13 cm

Using Pythagoras Theorem

$$\text{Base} = \sqrt{(\text{Hypotenuse})^2 - (\text{Perpendicular})^2} = \sqrt{(13)^2 - (5)^2} =$$

$$\sqrt{169 - 25} = \sqrt{144} = 12$$



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$$\operatorname{cosec} \theta = \frac{\text{Hypotenuse}}{\text{Perpendicular}} = \frac{13}{5}$$

33. Ram and Shyam can complete a task in  $6\frac{2}{3}$  days and 15 days, respectively. They work together for 4 days, and then Ram leaves. In how many days after Ram leaves, will Shyam complete the remaining task alone?

- A. 3 days
- B. 4 days
- C. 2 days
- D.  $1\frac{1}{2}$  days

Ans. C

Sol.

Given Ram and Shyam can complete a

task in  $\frac{20}{3}$  days and 15 days

Let total work = LCM(20,15)=60 unit

$$\frac{60}{20} = 9$$

Efficiency of Ram = 9 unit

$$\frac{60}{15} = 4$$

Efficiency of Shyam = 4 unit

Combined efficiency of Ram + Shyam = 9+4 = 13 unit

They work together for 4 days.

Work finished by Ram and Shyam in 4 days =  $13 \times 4 = 52$  unit

Remaining Work = 60 - 52 = 8 unit

Remaining work will be done by Shyam.

$$\frac{8}{4} = 2$$

Required number of days = 2

34. If  $5\cos^2\theta + 1 = 3\sin^2\theta$ ,  $0^\circ < \theta < 90^\circ$ ,

then what is the value of  $\frac{\tan \theta + \sec \theta}{\cot \theta + \operatorname{cosec} \theta}$  ?

- A.  $(2+3\sqrt{3})/3$
- B.  $(2+3\sqrt{3})/2$
- C.  $(3+2\sqrt{3})/3$

D.  $(3+2\sqrt{3})/2$

Ans. C

Sol.

Given,  $5\cos^2\theta + 1 = 3\sin^2\theta$

$\Rightarrow 5\cos^2\theta - 3\sin^2\theta + 1 = 0$

$\Rightarrow 5(1 - \sin^2\theta) - 3\sin^2\theta + 1 = 0$

$\Rightarrow 5 - 8\sin^2\theta + 1 = 0$

$\Rightarrow \sin^2\theta = 6/8 = 3/4$

$\Rightarrow \sin\theta = \sqrt{3}/2 = \sin 60^\circ$

Hence,  $\theta = 60^\circ$

Then,  $\frac{\tan \theta + \sec \theta}{\cot \theta + \operatorname{cosec} \theta} = \frac{\tan 60^\circ + \sec 60^\circ}{\cot 60^\circ + \operatorname{cosec} 60^\circ}$

$$\begin{aligned} & \frac{\sqrt{3} + 2}{\frac{1}{\sqrt{3}} + \frac{2}{\sqrt{3}}} \\ & = \frac{\sqrt{3} + 2}{\frac{1 + 2}{\sqrt{3}}} \\ & = (3+2\sqrt{3})/3. \end{aligned}$$

35. A man sold two gifts at Rs.30 each. On one gift he gained 18%, and on the other gift he lost 18%. What is his overall gain/loss (in Rs.)?

- A. Loss of Rs. 2.00
- B. Gain of Rs. 1.75
- C. Loss of Rs. 2.50
- D. Gain of Rs. 2.00

Ans. A

Sol.

Let, CP of each article = 50

Then,  $SP_1 = 50 \times (118/100) = 59$

$SP_2 = 50 \times (82/100) = 41$

We will make the SP equal,

CP = 50×41 and 50×59

SP = 59×41 and 41×59

Total CP = 5000 unit

Total SP = 4838 unit

Total Loss = 162 unit

A.T.Q.

Total SP = Rs. 60

Total loss 162 unit.

Since, S.P. = 4838 unit = Rs.60

Then, Loss = 162 unit =  $(60 \times 162)/4838$  = Rs. 2

Hence, he incurs a loss of Rs. 2.



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