

PREVIOUS YEAR PAPER

SSC CHSL 2023 Tier I — 9 August 2023, Shift 1

SSC CHSL · 9 August 2023 · 9:00 AM - 10:00 AM

81 of the paper's 100 questions · +2 for a correct answer, -0.5 for a wrong one · 60 minutes

Left out of the original paper: 19 (any question that needs a figure or formatting we cannot show, has no answer in the response sheet, or could not be checked against a second copy of the paper).

Questions from the Staff Selection Commission's paper of 9 August 2023, 9:00 AM - 10:00 AM. Each question is followed by its answer, and the answer key is repeated on the last page.

Take it as a timed practice test: exambharo.com/ssc-chsl/previous-year-papers/ssc-chsl-2023-tier-1-9-aug-shift-1/

English Language

1. Select the most appropriate synonym of the given word.

Makeshift

- (a) Resourceful
- (b) Provisional
- (c) Perpetual
- (d) Inconsiderate

Answer: (b)

2. Select the most appropriate synonym of the given word from the following sentence. Ambitious
He aspires to be a future diplomat but he will have to improve his decision-making skills.

- (a) aspires
- (b) improve
- (c) decision
- (d) skills

Answer: (a)

3. Select the most appropriate option that can substitute the underlined word in the given sentence.

The fall of Ranjith for the petty material benefit was really ignominious.

- (a) unfaltering
- (b) amusing
- (c) reprehensible
- (d) ignorable

Answer: (c)

4. Select the option that can be used as a one-word substitute for the underlined group of words.

WHO is an organisation that raises money for a particular cause.

- (a) donation
- (b) volunteer
- (c) charity
- (d) fundraiser

Answer: (d)

5. Select the most appropriate option that can substitute the underlined words in the given sentence.

The new restaurant is more better than the old one.

- (a) most better
- (b) better
- (c) much more better
- (d) the best

Answer: (b)

7. Select the most appropriate idiom for the underlined segment in the following sentence.

The servants know the secrets of the family they are working for.

- (a) Ins and outs
- (b) Latin and Greek
- (c) Hornet's nest
- (d) Long and short

Answer: (a)

8. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

Washington Irving's writing career started at / the tender age of nineteen when he joined / his brother Peter's newspaper The Morning Chronical / as journalist.

- (a) his brother Peter's newspaper The Morning Chronical
- (b) Washington Irving's writing career started at
- (c) as journalist
- (d) the tender age of nineteen when he joined

Answer: (c)

9. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

- A. Isabel saw a strange rabbit running through the bushes.
- B. Following it, she found a door which she opened with the help of keys.
- C. After that, she felt a strange sensation in her body.
- D. She thought as if she was in a dream.

- (a) CDAB
- (b) DCAB
- (c) BCDA
- (d) ABCD

Answer: (d)

10. Select the most appropriate ANTONYM of the word in brackets to fill in the blank.

After the rain stopped, the air smelled fresh and clean, and the sun _____ (stared) out from behind the clouds.

- (a) peeked
- (b) observed
- (c) spied
- (d) surveyed

Answer: (a)

11. Select the most appropriate homophone to fill in the blank.

Developers _____ the old buildings on the site _____ make way for new construction.

- (a) raze
- (b) rays
- (c) raise
- (d) rase

Answer: (a)

12. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

- (A) The new movie was highly anticipated by fans of the franchise.
- (B) As the lights dimmed, the audience grew quiet in anticipation.
- (C) The movie began with an exciting action sequence that had the audience on the edge of their seats.
- (D) The movie theatre was packed with people eager to see it.

- (a) CBDA
- (b) BCDA
- (c) ADBC
- (d) DBAC

Answer: (c)

13. Select the correctly spelt word.

- (a) Suspicion
- (b) Susspicion
- (c) Susppicion
- (d) Suspicon

Answer: (a)

14. Select the most appropriate idiom for the underlined segment in the following sentence.

Shruti is a strange person because of her attitude.

- (a) A one man
- (b) A scarlet woman
- (c) Queer fish
- (d) A straw man

Answer: (c)

15. Parts of a sentence are given below in jumbled order. Select the option that arranges the parts in the correct order to form a meaningful sentence.

- A) the importance
- B) to be treated
- C) of treating other people
- D) now he knows
- E) as he would like

- (a) D, A, C, E, B
- (b) B, D, C, A, E
- (c) C, D, B, A, E
- (d) C, E, B, A, D

Answer: (a)

16. Select the option that can be used as a one-word substitute for the given group of words. A form of government in which power is held by the nobility

- (a) Democracy
- (b) Aristocracy
- (c) Republic
- (d) Nobility

Answer: (b)

19. Select the INCORRECTLY spelt word.

The Special Task Force will conduct a thorough probe in the land scam case which has Mr. Lakhan Lal as the prime akused.

- (a) Scam
- (b) Prime
- (c) Thorough
- (d) Akused

Answer: (d)

20. Select the most appropriate ANTONYM to substitute the underlined word in the given sentence.

The newly selected secretary of the party has a/an impeccable image among the public.

- (a) Refurbished
- (b) Blemished
- (c) Irresistible
- (d) Arbitrary

Answer: (b)

Passage — for questions 21–25

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank. Upgrading the higher education sector especially in terms of patents filed and cutting-edge research output is (1)_____ in improving India's global ranking. Our sustainable (2)_____ development depends on human resources. A quality higher education base is essential to reap the full benefits of our demographic dividend. In higher education, the strategies of the 12th plan (3)_____ on technical education, distance learning, quality research, infrastructure, faculty, and curriculum content. (4)_____ efforts of the government departments and the private sector are needed to (5)_____ the plan's educational goals.

21. Select the most appropriate option to fill in blank number 1.

- (a) unrequired
- (b) deserving
- (c) fulfilling
- (d) essential

Answer: (d)

22. Select the most appropriate option to fill in blank number 2.

- (a) social
- (b) economic
- (c) psychological
- (d) political

Answer: (a)

23. Select the most appropriate option to fill in blank number 3.

- (a) understand
- (b) attend
- (c) divert
- (d) focus

Answer: (d)

24. Select the most appropriate option to fill in blank number 4.

- (a) Sustained
- (b) Compromised
- (c) Coordinated
- (d) Gathered

Answer: (c)

25. Select the most appropriate option to fill in blank number 5.

- (a) remain
- (b) realise
- (c) conclude
- (d) conduct

Answer: (b)

General Intelligence

1.

What should come in place of the question mark (?) in the given series?

5 11 17 ? 29 35

- (a)
23
- (b)
22
- (c)
24
- (d)
25

Answer: (a)

2.

What should come in place of X in the given series?

22 31 49 76 112 X

- (a)
152
- (b)
157
- (c)
159
- (d)
149

Answer: (b)

4.

Select the term from among the given options that can replace the question mark (?) in the following series based on the English alphabetical order.

ZAM, XCK, VEL, TGG, ?

(a)

SHH

(b)

RIH

(c)

RIE

(d)

SIT

Answer: (c)

5.

In a certain code language,

$A + B$ means 'A is the father of B'

$A - B$ means 'A is the brother of B'

$A \times B$ means 'A is the mother of B'

$A \div B$ means 'A is the sister of B'

Based on the above, how is I related to M if ' $I + J \div K \times L - M$ '?

(a)

Father

(b)

Father's brother

(c)

Mother's father

(d)

Father's father

Answer: (c)

6.

Each of the letters in the word KINGDOM are arranged in alphabetical order. How many letters are there in the English alphabetical series between the letter that is fourth from the left and the one that is extreme right in the new letter-cluster thus formed?

(a)

Two

(b)

Six

(c)

Three

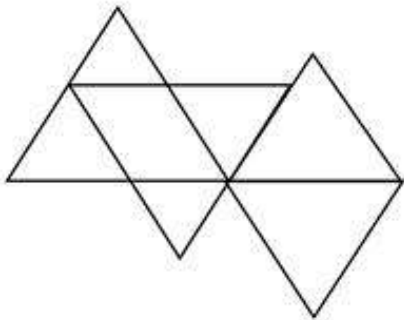
(d)

Five

Answer: (c)

7.

How many triangles are there in the given figure?



(a)

9

(b)

7

(c)

6

(d)

8

Answer: (d)

8.

In a certain code language, 'YACHT' is coded as '8' and 'SHALEOD' is coded as '24'. How will 'ANALYSTIC' be coded in that language?

(a)

40

(b)

26

(c)

44

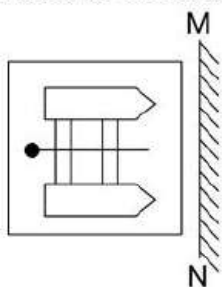
(d)

20

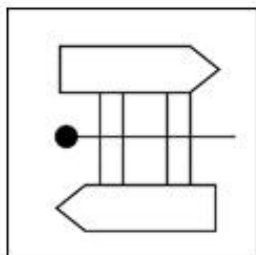
Answer: (a)

10.

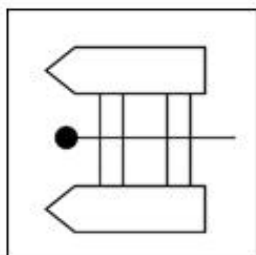
Select the correct mirror image of the given figure when the mirror is placed at MN as shown.



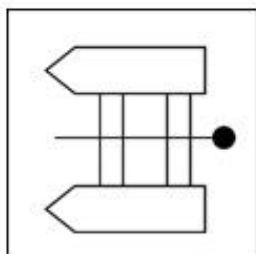
(a)



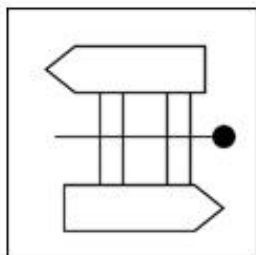
(b)



(c)



(d)



Answer: (c)



11.

Select the option in which the letter-clusters share the same relationship as that shared by the given pair of letter-clusters.

DKG : HSN

VLM : ZTT

(a)

RBI : VYG

(b)

SPY : VXB

(c)

KTY : OBF

(d)

PBN : SLM

Answer: (c)

12.

The second number in the given number pairs is obtained by performing certain mathematical operations(s) on the first number. The same operation(s) is/are followed in all the number pairs except one. Find that odd number pair.

(a)

14 : 77

(b)

25 : 86

(c)

31 : 94

(d)

22 : 85

Answer: (b)

13.

Select the term from among the given options that can replace the question mark (?) in the following series based on the English alphabetical order.

BYM, CWL, DUK, ESJ, ?

(a)

FQI

(b)

FRI

(c)

FQG

(d)

FRG

Answer: (a)

14.

Three of the following four are alike in a certain way and thus form a group. Which is the one that does NOT belong to that group?

- (1) $4 - 125$
- (2) $3 - 64$
- (3) $2 - 8$
- (4) $6 - 343$

(a)

3

(b)

4

(c)

2

(d)

1

Answer: (a)

15.

Select the term from the given options that can replace the question mark (?) in the given series to make it logically complete.

DT 35, EU 33, ?, GW 29, HX 27

(a)

EX 30

(b)

GV 33

(c)

EW 32

(d)

FV 31

Answer: (d)

16.

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow[s] from the statements.

Statements:

Some papers are buttons.

All papers are flowers.

All buttons are stamps.

Conclusions:

(I) Some flowers are stamps.

(II) Some buttons are flowers.

(a)

Only conclusion (I) follows

(b)

Both conclusions (I) and (II) follow

(c)

Only conclusion (II) follows

(d)

Neither conclusion (I) nor (II) follows

Answer: (b)

17.

What will come in the place of '?' in the following equation, if:

'+' is changed with '–'

'–' is changed with '÷'

'÷' is changed with '+'

'×' is unchanged

$$120 - 6 + 31 \div 8 \times 11 = ?$$

(a)

69

(b)

73

(c)

77

(d)

55

Answer: (c)

18.

Each of the letters in the word POINTED are arranged in alphabetical order. How many letters are there in the English alphabetical series between the letter that is third from the left and the one that is fourth from the right in the new letter-cluster thus formed?

(a)

Six

(b)

Three

(c)

Four

(d)

Two

Answer: (c)

19.

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and '×' and '÷' are interchanged?

$$41 \div 7 + 125 \times 5 - 8 = ?$$

(a)

370

(b)

270

(c)

170

(d)

470

Answer: (b)

20.

In a certain code language,

$A + B$ means 'A is the son of B',

$A - B$ means 'A is the wife of B',

$A \times B$ means 'A is the brother of B',

$A \div B$ means 'A is the mother of B'.

Based on the above, how is R related to T if ' $P \times Q \div R - S + T$ '?

(a)

Son's wife

(b)

Daughter

(c)

Mother's brother

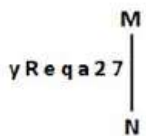
(d)

Brother

Answer: (a)

21.

Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.



(a)

72spəRy

(b)

72spəRy

(c)

72spəRy

(d)

72spəRy

Answer: (d)

22.

In a certain code language, 'always keep your secret' is written as 'pl zt rs mk' and 'your attitude is good' is written as 'nj mk hl yp'. How is 'your' written in the given language?

(a)

mk

(b)

Nj

(c)

yp

(d)

Zt

Answer: (a)

23.

Select the number pair in which the numbers are related in the same way as are the numbers of the given number pairs.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g., 13—Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

5 : 50

12 : 288

(a)

4 : 36

(b)

8 : 128

(c)

9 : 161

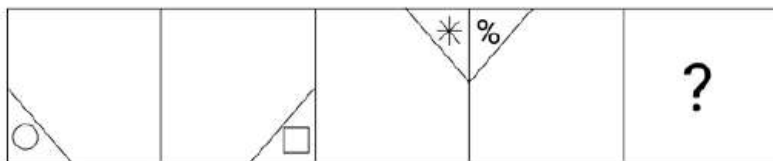
(d)

6 : 70

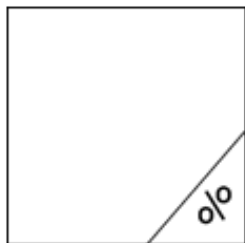
Answer: (b)

25.

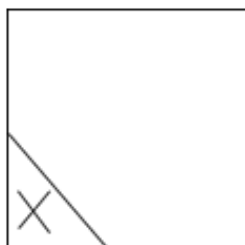
Identify the figure given in the options which when put in place of ? will logically complete the series.



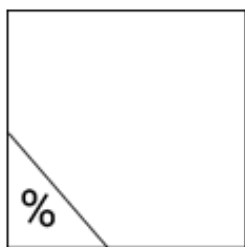
(a)



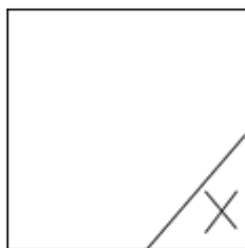
(b)



(c)



(d)



Answer: (b)

Quantitative Aptitude

1.

The volume of a solid sphere is $4500 \pi \text{ cm}^3$. The surface area of the solid sphere is:

(a)

$$700 \pi \text{ cm}^2$$

(b)

$$850 \pi \text{ cm}^2$$

(c)

$$900 \pi \text{ cm}^2$$

(d)

$$810 \pi \text{ cm}^2$$

Answer: (c)

2.

Find the fourth proportion of the numbers $\frac{1}{3}$ rd of 15, $\frac{4}{5}$ th of 25, $\frac{3}{7}$ th of 35:

(a)

$$65$$

(b)

$$55$$

(c)

$$60$$

(d)

$$50$$

Answer: (c)

3.

If $\triangle ABC \sim \triangle PQR$, the ratio of perimeter of $\triangle ABC$ to perimeter of $\triangle PQR$ is $36 : 23$ and $QR = 3.8$ cm, then the length of BC is:

(a)

$$4\frac{103}{121} \text{ cm}$$

(b)

$$3\frac{109}{121} \text{ cm}$$

(c)

$$5\frac{109}{115} \text{ cm}$$

(d)

$$3\frac{107}{115} \text{ cm}$$

Answer: (c)

5.

If $x^2 - 4x - 1 = 0$, then find the value of $x^2 + \frac{1}{x^2} - 5$.

(a)

$$17$$

(b)

$$12$$

(c)

$$15$$

(d)

$$13$$

Answer: (d)

7.

If $\frac{\sin \theta - \cos \theta}{\sin \theta + \cos \theta} = \frac{4}{5}$, then the value of $\frac{\operatorname{cosec}^2 \theta}{2 - \operatorname{cosec}^2 \theta}$ is:

(a)

$$\frac{16}{25}$$

(b)

$$\frac{40}{41}$$

(c)

$$\frac{41}{40}$$

(d)

$$\frac{31}{30}$$

Answer: (c)

8.

Anil completed a certain journey by a car. If he covered 35% of the distance at 70 km/h, 40% of the distance at 80 km/h and the remaining distance at 50 km/h, his average speed (in km/h) for the entire journey is:

(a)

$$66\frac{2}{3} \text{ km/h}$$

(b)

$$66\frac{1}{3} \text{ km/h}$$

(c)

$$66\frac{1}{3} \text{ km/h}$$

(d)

$$66\frac{4}{3} \text{ km/h}$$

Answer: (b)

9.

$\triangle PQR$ is right angled at Q. If $PQ = 12$ cm $PR = 13$ cm, find $\tan P + \cot R$.

(a)

$$\frac{9}{10}$$

(b)

$$0$$

(c)

$$\frac{10}{12}$$

(d)

$$\frac{12}{10}$$

Answer: (c)

10.

A table fan is marked at ₹1,700 and a discount of 15% is given. What is its selling price (in ₹)?

(a)

$$1,454$$

(b)

$$1,425$$

(c)

$$1,445$$

(d)

$$1,554$$

Answer: (c)

11. A tradesman marks his goods 25% above the cost price and allows his customers a discount of 12% on their bill. How much % profit tradesman realizes?

(a)

$$13\%$$

(b)

$$11\%$$

(c)

$$12\%$$

(d)

$$10\%$$

Answer: (d)

12.

If 7 divides the integer n , then the remainder is 2. What will be the remainder if $9n$ is divided by 7?

(a)

3

(b)

5

(c)

1

(d)

4

Answer: (d)

13.

The table given below shows the number of aerated drinks—A, B, C, D—manufactured (in thousands) by a company over the years.

YEAR	Aerated Drinks			
	A	B	C	D
2019	250	200	140	115
2020	200	230	170	120
2021	260	210	195	135
2022	275	175	190	155

Which aerated drink has the highest manufacturing number from 2019 to 2022?

(a)

D

(b)

B

(c)

A

(d)

C

Answer: (c)

14.

The largest chord of the circle is:

- (a)
point
- (b)
tangent
- (c)
diameter
- (d)
radius

Answer: (c)

15.

The difference between the simple interest and the compound interest on a certain amount at 9 % per annum for two years is ₹ 162, what is the principal?

- (a)
₹ 19700
- (b)
₹ 19000
- (c)
₹ 20000
- (d)
₹ 19500

Answer: (c)

16.

Two circles touch each other externally at any point C. PQ is the direct common tangent to both the circles touching the circles at point P and point Q. If the radii of the circles are 36 cm and 16 cm, respectively, then the length of PQ is:

- (a)
42 cm
- (b)
24 cm
- (c)
48 cm
- (d)
36 cm

Answer: (c)



17.

Chords $\overline{AB}$ and $\overline{CD}$ of a circle intersect inside the circle at point F. If $m(\overline{AF}) = 2.4$ cm, $m(\overline{BF}) = 1.8$ cm, and $m(\overline{CD}) = 5.7$ cm, what is the length (in cm) of the longer of the two line segments, $\overline{CF}$ and $\overline{DF}$?

- (a) 4.5
- (b) 4.8
- (c) 5.4
- (d) 3.6

Answer: (b)

18.

The algebraic expression $4x^2 - y^2 + 6y - 9$ is equal to _____.

- (a) $(2x + y - 3)(2x - y + 3)$
- (b) $(2x - y - 3)(2x - y + 3)$
- (c) $(2x + y - 3)^2$
- (d) $(2x + y + 3)^2$

Answer: (a)

21.

If $\tan A = \frac{1}{2}$ and $\tan B = \frac{1}{3}$, then the value of $A+B$ is:

- (a) 60°
- (b) 15°
- (c) 30°
- (d) 45°

Answer: (d)

23.

If $x = (\sqrt{6} - 1)^{\frac{1}{3}}$, then the value of $\left(x - \frac{1}{x}\right)^3 + 3\left(x - \frac{1}{x}\right)$ is:

(a)

$$\frac{2\sqrt{6} - 6}{5}$$

(b)

$$\frac{4\sqrt{6} - 6}{5}$$

(c)

$$\frac{4\sqrt{6} - 6}{3}$$

(d)

$$\frac{4\sqrt{3} - 6}{5}$$

Answer: (b)

24.

X can do a piece of work in 14 days, Y can complete the same work in 28 days and Z can do it in 42 days. In how many days can X, Y and Z together complete the work?

(a)

$$7\frac{9}{11}$$

(b)

$$7\frac{7}{11}$$

(c)

$$7\frac{5}{11}$$

(d)

$$7\frac{3}{11}$$

Answer: (b)

General Awareness

1.

Indian Navy Sailing Championship 2022, one of the events being conducted by the Indian Navy to commemorate Azadi Ka Amrit Mahotsav and Khelo India, was held in:

(a)

Andhra Pradesh

(b)

West Bengal

(c)

Tamil Nadu

(d)

Kerala

Answer: (d)

2.

Ramesh Bais served as Governor in which of the following states before being appointed as Governor of Maharashtra in 2023?

(a)

Odisha

(b)

Karnataka

(c)

Jharkhand

(d)

West Bengal

Answer: (c)

3.

In which year did Niels Bohr propose a theory for the hydrogen atom based on the quantum theory that some physical quantities take only discrete values?

(a)

1919

(b)

1921

(c)

1909

(d)

1913

Answer: (d)

4.

Which d-block element in the periodic table is represented by the Greek symbol 'alpha' and the metallic 'rays'?

(a)

Lanthanum

(b)

Actinium

(c)

Rhenium

(d)

Tungsten

Answer: (b)

6.

Which event was hosted at Lord's Cricket Ground(LCG) at the 2012 Olympics?

(a)

Boxing

(b)

Cricket

(c)

Archery

(d)

Equestrian

Answer: (c)

7.

Which of the following is the compelling factor that produced a very high repayment rate of 98% in the concept of lending to groups of poor women, initiated by Dr Yunus?

(a)

Involvement of 'loan sharks'

(b)

Removal of the defaulter from the group

(c)

Joint liability putting social pressure to repay loans

(d)

Use of the services of aggressive loan recovery agents

Answer: (c)

8.

Which of the following forest types is found on the foothills of the Himalayas?

(a)

Temperate

(b)

Tundra

(c)

Alpine

(d)

Deciduous

Answer: (d)

12.

Alvars were the devotees of which South Indian cult?

(a)

Shaktism

(b)

Saivism

(c)

Jainism

(d)

Vaishnavism

Answer: (d)

13.

The working conditions also include prevention of sexual harassment of working women and making arrangements in the organisation for it, this falls under _____.

(a)

Article 44

(b)

Article 42

(c)

Article 45

(d)

Article 43

Answer: (b)

14.

Which of the following is true about the Zaid season in Indian agriculture?

(a)

It follows the Rabi season.

(b)

It coincides with southwest monsoon.

(c)

It begins with the onset of winter.

(d)

It follows the Kharif season.

Answer: (a)

15.

Talat Aziz is primarily a _____ singer.

(a)

Hindustani Classical

(b)

Carnatic Classical

(c)

Ghazal

(d)

Folk

Answer: (c)

17.

Which metal ion released from tannery industry causes acute water pollution?

(a)

Mg

(b)

As

(c)

Cr

(d)

Zn

Answer: (c)



18.

The plan that mainly aims to coordinate both, private and public investment and output plans through targets is called _____.

- (a) indicative planning
- (b) rolling plan
- (c) decentralised planning
- (d) centralised planning

Answer: (a)

19.

Who among the following Indian Grandmasters defeated the world number one Magnus Carlsen and become the runner up in the FTX Crypto Cup 2022?

- (a) Saket Myneni
- (b) Vishwanathan Anand
- (c) R Praggnanandhaa
- (d) P Harikrishna

Answer: (c)



21.

Which type of surveillance is specifically aimed at identifying missing cases of disease?

- (a) Overt surveillance
- (b) Passive surveillance
- (c) Active surveillance
- (d) Sentinel surveillance

Answer: (d)

22.

Which Article of the Indian Constitution protects monuments or a place of artistic or historical interest?

(a)

Article 48

(b)

Article 49

(c)

Article 50

(d)

Article 51

Answer: (b)

23.

Identify the correct statement/s with respect to NABARD's EShakti project.

i. The project aimed to digitise the financial and non-financial data of all the SHGs.

ii. The project aimed to bring awareness about Digital India among the farmers.

iii. This project was launched by NABARD in March 2015.

(a)

Only ii

(b)

Only i and iii

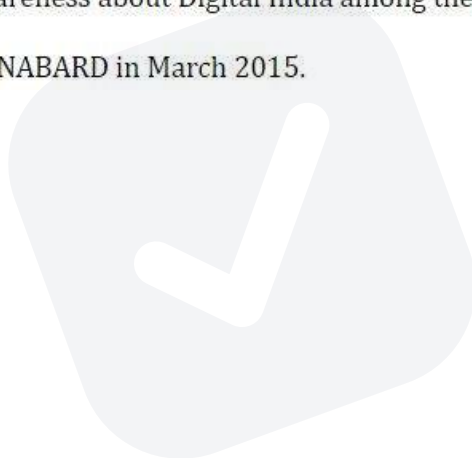
(c)

Only i and ii

(d)

Only ii and iii

Answer: (b)



24.

Proportional taxes would help to reduce the autonomous expenditure multiplier because _____.

(a)

taxes increase the MPC

(b)

MPC does not have any role in it

(c)

taxes and MPC become equal

(d)

taxes reduce the MPC

Answer: (d)



Answer key

Answer key as marked in the Staff Selection Commission's response sheet. "—" means the sheet did not show it clearly.

English Language

1	(b)	2	(a)	3	(c)	4	(d)	5	(b)	7	(a)	8	(c)	9	(d)
10	(a)	11	(a)	12	(c)	13	(a)	14	(c)	15	(a)	16	(b)	19	(d)
20	(b)	21	(d)	22	(a)	23	(d)	24	(c)	25	(b)				

General Intelligence

1	(a)	2	(b)	4	(c)	5	(c)	6	(c)	7	(d)	8	(a)	10	(c)
11	(c)	12	(b)	13	(a)	14	(a)	15	(d)	16	(b)	17	(c)	18	(c)
19	(b)	20	(a)	21	(d)	22	(a)	23	(b)	25	(b)				

Quantitative Aptitude

1	(c)	2	(c)	3	(c)	5	(d)	7	(c)	8	(b)	9	(c)	10	(c)
11	(d)	12	(d)	13	(c)	14	(c)	15	(c)	16	(c)	17	(b)	18	(a)
21	(d)	23	(b)	24	(b)										

General Awareness

1	(d)	2	(c)	3	(d)	4	(b)	6	(c)	7	(c)	8	(d)	12	(d)
13	(b)	14	(a)	15	(c)	17	(c)	18	(a)	19	(c)	21	(d)	22	(b)
23	(b)	24	(d)												