PREVIOUS YEAR PAPER

SSC MTS 2023 — 1 September 2023, Shift 3

SSC MTS & Havaldar · 1 September 2023 · 4:00 PM - 6:00 PM

77 of the paper's 90 questions · marks per question not printed on the response sheet

Left out of the original paper: 13 (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 1 September 2023, 4:00 PM - 6:00 PM. 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-mts/previous-year-papers/ssc-mts-2023-1-sep-shift-3/

Numerical and Mathematical Ability

3.

From a cuboid of dimension of $8 \times 6 \times 6$ units, small cubes of dimension $0.5 \times 0.5 \times 0.5$ unit are cut. How many small cubes can be cut from the big cuboid?

(a)

576

(b)

1152

(c)

2304

(d)

1552

Answer: (c)

4.

The following table shows the number of students enrolled in a university for higher education in Liberal Arts and in Engineering from 2015 to 2018. Study the table carefully and answer the question that follows.

Year	No. of students	
	Liberal Arts	Engineering
2015	345	650
2016	549	521
2017	477	846
2018	781	695

The average number of students enrolled per year in Liberal Arts is how much more or less than that in Engineering from 2015 to 2018?

(a)

Less, 140

(b)

Less, 127

(c)

More, 140

(d)

More, 127

Answer: (a)

5.

Find the greatest two digit number which on dividing 219, 365, 511 le the remainders 3, 5, 7, respectively.

(a)

63

(b)

82

(c)

53

(d)

72

Answer: (d)

6.

From a container having pure milk, 35% is replaced by water and the process is repeated thrice. At the end of the third operation, the purity of the milk is:

(a) $21\frac{23}{80}\%$

(b) $37\frac{21}{80}\%$

(c) $23\frac{37}{80}\%$

(d) $27\frac{37}{80}\%$

Answer: (d)

7.

The difference in interests earned on ₹1,50,000 at an 8% rate of interest per annum in a year when the interest in compounded semi-annually and annually, respectively, is ₹_____.

(a) 360

(b) 120

(c) 240

(d) 420

Answer: (c)

9. The percentage profit earned by selling an article for ₹1,980 is equal to the percentage loss incurred by selling the same article for ₹1,620. At what price should the article be sold to make a 15% profit?

(a) ₹1,863

(b) ₹2,277

(c) ₹2,070

(d) ₹1,800

Answer: (c)

10.

A man travels from point A to point B at a speed of 40 km/h and returns to point A at a speed of 60 km/h. If the total time taken for the journey is 5 hours, what is the distance between point A and point B?

(a)

135 km

(b)

120 km

(c)

125 km

(d)

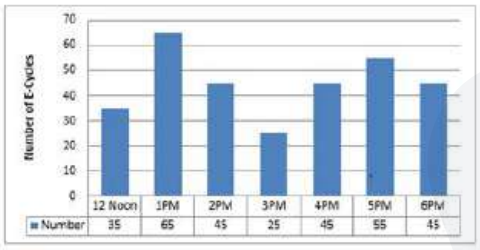
130 km

Answer: (b)

12.

The bar diagram represents the number of E-Cycles parking in a metro station from 12:00 P.M. to 6:00 P.M.

What will be the total collection from 2:00 P.M. to 6:00 P.M. when the parking charge is ₹3 per hour?



(a)

₹625

(b)

₹655

(c)

₹645

(d)

₹695

Answer: (c)

13.

The income of X is 12% more than that of Y. By how much per cent is Y's income less than that of X?

(a)

$10\frac{4}{7}\%$

(b)

$10\frac{3}{7}\%$

(c)

$10\frac{5}{7}\%$

(d)

$10\frac{2}{7}\%$

Answer: (c)

14.

In what ratio must a grocer mix two varieties of pulses costing ₹18 per kg and ₹22 per kg, respectively, so as to get a mixture worth ₹19.50 per kg?

(a)

5 : 3

(b)

5 : 1

(c)

1 : 5

(d)

5 : 2

Answer: (a)

17.

Simplify:

$$24 \div 6 \times \left(\frac{3}{4} \text{ of } \frac{1}{3} + \frac{5}{3} \text{of } \frac{3}{4}\right) = ?$$

(a)

9

(b)

6

(c)

3

(d)

8

Answer: (b)

18.

A and B can do a piece of work in 9 and 18 days, respectively. They started working together. After some days A left the work and B finished the remaining work in 15 days. After how many days did A leave?

(a)

1

(b)

2

(c)

4

(d)

3

Answer: (a)

19.

The cost price of an article is ₹1,120. After allowing a discount of ₹205 a gain of 15% was made, then the marked price of the article is:

(a)

₹1,760

(b)

₹1,493

(c)

₹1,350

(d)

₹1,580

Answer: (b)

20.

12 days are taken by one man and one woman together to complete the work. A man alone can complete the work in 15 days. In how many days can one woman alone complete the work?

(a)

45 days

(b)

30 days

(c)

60 days

(d)

12 days

Answer: (c)

Reasoning Ability and Problem Solving

1.

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

10 19 ? 199 775 3079 12295

(a)
63

(b)
55

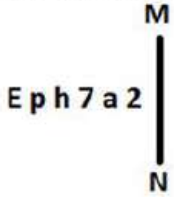
(c)
50

(d)
61

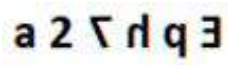
Answer: (b)

2.

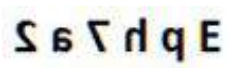
Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.



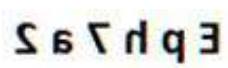
(a)



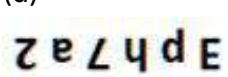
(b)



(c)



(d)



Answer: (c)

3.

Seven people, S, T, U, V, W, X and Y are sitting in a straight line, facing north. Only two people sit to the right of W. Only three people sit between S and W. U is the immediate neighbour of T and X. X is not the immediate neighbour of W. V sits third to the right of T.

Who is sitting between W and V?

(a)

T

(b)

Y

(c)

U

(d)

X

Answer: (b)

6.

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /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, 35, 7)

(9, 27, 3)

(a)

16, 50, 7

(b)

6, 42, 7

(c)

4, 10, 5

(d)

6, 17, 9

Answer: (b)

7.

In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its 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)

16 : 95

6 : 35

(a)

8 : 48

(b)

13 : 77

(c)

2 : 13

(d)

17 : 23

Answer: (b)

8.

Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. You have to decide which conclusion/s logically follow/s from the given statements.

Statements: Some photos are vases. All vases are tall. Some tall are buildings.

Conclusion I: Some photos are buildings.

Conclusion II: All tall are vases.

(a)

Both conclusions (I) and (II) are follow.

(b)

Only conclusion (I) is follow.

(c)

Only conclusion (II) is follow.

(d)

Neither conclusion (I) nor (II) is follow.

Answer: (d)

9.

What should come in place of ? in the given series based on the English alphabetical order?

JPX, GNU, DLR, AJO, ?

(a)
XHL
(b)
ZGL
(c)
YIL
(d)
YGM

Answer: (a)

10.

In a certain code language, 'LED' is coded as '15-22-23' and 'BMW' is coded as '25-14- 4'. What is the code for 'QUF' in the given code language?

(a)
9-4-21
(b)
10-6-21
(c)
11-5-20
(d)
9-5-20

Answer: (b)

11.

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

11 14 20 29 41 ?

(a)
54
(b)
61
(c)
56
(d)
64

Answer: (c)

12.

Select the option figure in which the given figure (X) is embedded as its part (rotation is NOT allowed).



(X)

(a)



(b)



(c)



(d)



Answer: (c)

13.

In a certain code language, 'DEAN' is coded as '2458' and 'LEND' is coded as '8352'. What is the code for 'L' in the given code language?

(a)

5

(b)

3

(c)

8

(d)

2

Answer: (b)

14.

If 6 July 2011 is a Wednesday, then what will be the day of the week on 16 February 2010?

(a)

Monday

(b)

Thursday

(c)

Tuesday

(d)

Saturday

Answer: (c)

16.

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

7 41 177 721 2897 ?

(a)

12589

(b)

11601

(c)

11283

(d)

10631

Answer: (b)

17.

What will come in the place of '?' in the following equation, if '+' and '–' are interchanged and '×' and '÷' are interchanged?
$121 \times 11 \div 7 - 15 + 23 = ?$

(a)
69

(b)
49

(c)
59

(d)
79

Answer: (a)

18.

Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. You have to decide which conclusion/s logically follow/s from the given statements.

Statements: All bed are covers. Some covers are thick. Some thick is juice.

Conclusion I: All covers are beds.

Conclusion II: Some thick are covers.

(a)
Neither conclusion (I) nor (II) is follow

(b)
Only conclusion (II) is follow.

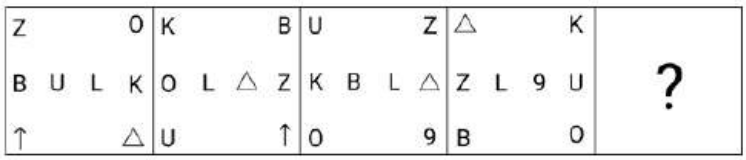
(c)
Both conclusions (I) and (II) are follow.

(d)
Only conclusion (I) is follow.

Answer: (b)

19.

Which figure should replace the question mark (?) if the following figure series were to be continued?



(a)



(b)



(c)



(d)



Answer: (b)

20.

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

$2 \times 4 - 1 \div 6 + 8 = ?$

(a)

-13

(b)

-42

(c)

-18

(d)

-24

Answer: (b)

General Awareness

1. If 7 N force is applied on a brick and it moves through 5 m, then what will be the work done?

(a) 25 J

(b) 40 J

(c) 35 J

(d) 35 Erg

Answer: (c)

2. _____is celebrated in Jharkhand immediately after Diwali on the new moon day in the honour of cattle.

(a) Bhagta Parab

(b) Makar

(c) Rohini

(d) Sohrai

Answer: (d)

3.

Which of the following novels is NOT written by Mulk Raj Anand?

(a)

The Sword and the Sickle

(b)

Coolie

(c)

Private Life of an Indian Prince

(d)

The Guide

Answer: (d)

4. Which of the dance was immediately preceded by a practice session called sevakali and undertaken in the precincts of a temple?

(a) Kathakali
(b) Kathak
(c) Odissi
(d) Kuchipudi

Answer: (a)

5. Which of the following is a duty of the Attorney General of India?

(a) To give advice to the Government of India on legal matters
(b) To act as a judge in the Supreme Court
(c) To advise the State Government
(d) To represent India in international bodies

Answer: (a)

6. The cultural heritage of Siddhis from _____ dates back to almost 300 years and their Siddhi Dhamal dance is an exquisite art form.

(a) Uttar Pradesh
(b) Gujarat
(c) Madhya Pradesh
(d) Rajasthan

Answer: (b)

7.

Which of the following locations experiences the lowest [illegible] nfall during the monsoon season?

(a)
Kerala
(b)
Assam
(c)
Leh
(d)
Meghalaya

Answer: (c)

8. In which of the following cities was the 2023 IPL final match held?

(a) Kolkata
(b) Chennai
(c) Mumbai
(d) Ahmedabad

Answer: (d)

10. What is a budget deficit?

(a) The excess of government revenue over expenditure
(b) The amount of money allocated for defence spending
(c) The amount of money allocated for social welfare programmes
(d) The excess of government expenditure over revenue

Answer: (d)

11. What is a revenue expenditure?

(a) Money spent on day-to-day government operations
(b) Money spent on debt repayment
(c) Money spent on purchasing assets
(d) Money spent on construction of roads

Answer: (a)

13. The holy mountain 'Kailash' is located in which neighbouring country of India?

(a) Pakistan
(b) Afghanistan
(c) Bangladesh
(d) China

Answer: (d)

14. In which of the following states of India the 'Loo' w does NOT blow during the summer season?

(a) Punjab
(b) Rajasthan
(c) Goa
(d) Haryana

Answer: (c)

15. The Wild Life (Protection) Amendment Act, 2022 seeks to implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Which of the following statements is correct about CITES?

1. CITES is an agreement between governments to ensure that international trade in the specimens of wild animals and plants does not threaten the survival of the species.
2. Under CITES, plant and animal specimens are classified into five categories based on the threat to their extinction.
3. The Convention requires countries to regulate the trade of all listed specimens through permits.
4. It also seeks to regulate the possession of live animal specimens.

(a) 1, 2 and 4
(b) 1, 3 and 4
(c) 2, 3 and 4
(d) 1, 2 and 3

Answer: (b)

16. ‘My Story’ is the autobiography of which female writer?

(a) Amrita Pritam
(b) Pratibha Ray
(c) Kamala Das
(d) Ashapurna Devi

Answer: (c)

17. Which age group of the population are covered under the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) scheme of the Government of India?

(a) 25 to 60 years
(b) 30 to 60 years
(c) 15 to 35 years
(d) 14 to 40 years

Answer: (c)

18. Who was the founder of Naujawan Bharat Sabha?

(a) Chandra Shekhar Azad
(b) Ajeet Singh
(c) Lala Lajpat Rai
(d) Bhagat Singh

Answer: (d)

19. Which gland gets enlarged in the goitre due to w[illegible] there is a swelling in the front part of the throat?

(a) Adrenal gland
(b) Thyroid gland
(c) Pineal gland
(d) Pituitary gland

Answer: (b)

20. In which state is the Bhitari temple situated?

(a) Uttar Pradesh
(b) Odisha
(c) Jharkhand
(d) Bihar

Answer: (a)

21. Shubman Gill was in the news for creating a record in his sport. What sport does he play?

(a) Chess
(b) Cricket
(c) Hockey
(d) Badminton

Answer: (b)

22. Which of the following does NOT come under Fundamental Duties?

(a) To develop the scientific temper

(b) To pay taxes

(c) To promote harmony

(d) To respect National Anthem

Answer: (b)

24. Which of the following institutions bagged the maximum medals at the third edition of Khelo India University Games?

(a) Panjab University

(b) University of Kerala

(c) Guru Nanak Dev University

(d) Jain University

Answer: (a)

25. In which year did the All-India Muslim League move a resolution demanding 'Independent States' for Muslims in the north-western and eastern areas of the country?

(a) 1942

(b) 1940

(c) 1939

(d) 1941

Answer: (b)

English Language and Comprehension

1. Parts of the following sentence have been g[illegible]s options. Select the option that contains an error. A soothe voice must convey both confidence and intimacy, qualities which can be attributed to a few key components.

(a) few key components

(b) A soothe voice

(c) convey both confidence

(d) which can be

Answer: (b)

2. Select the most appropriate ANTONYM of the given word. Empathetic

(a) Lonely

(b) Merciless

(c) Charismatic

(d) Frustrated

Answer: (b)

3. Select the most appropriate meaning of the underlined idiom. The police inspector knows the ins and outs of the murder case.

(a) laws
(b) all the witnesses
(c) lawyers and judges
(d) full details

Answer: (d)

4. The following sentence has been split into four segments. Identify the segment that contains an error. He told me / that he goes / to the market / to buy a laptop.

(a) He told me
(b) to buy a laptop
(c) to the market
(d) that he goes

Answer: (d)

6. The following sentence has been split into four segments. Identify the segment that contains a grammatical error. It is commonly believed / that Democracy is / the best form / of the government.

(a) of the government
(b) It is commonly believed
(c) that Democracy is
(d) the best form

Answer: (a)

7. Four words of the following sentence have been underlined and given as options. Select the option that contains a spelling error. Ozone is a reactiev gas that is not only important in protecting us from harmful ultraviolet radiation but is also a greenhouse gas and, at high smog-level concentrations, harmful to human health and vegetation.

(a) reactiev
(b) radiation
(c) concentrations
(d) vegetation

Answer: (a)

8. Select the most appropriate option that can substitute the underlined segment in the given sentence. He said that I have finished my work.

(a) he had finished his work
(b) he has finished his work
(c) I had finished my work
(d) he was finished his work

Answer: (a)

9. Parts of the following sentence have been underlined and given as options. Select the option that contains a misspelt word. A piano teacher described an interesting encountar she had with a young lady who came to inquire about music lessons.

(a) interesting
(b) inquire
(c) piano
(d) encountar

Answer: (d)

10. Select the most appropriate meaning of the underlined idiom.

The executives were running around in circles, without any success.

(a) Achieving maximum mileage
(b) Suffering huge profits and losses
(c) Successfully accomplishing the target
(d) Putting efforts into something that does not give a worthwhile result

Answer: (d)

11. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'. Many great people born in that small village.

(a) was born
(b) No substitution required
(c) is born
(d) were born

Answer: (d)

12. The given sentence contains an error. Select the option that correctly rectifies the error. He was carefullest while stealing the crown jewels.

(a) He was more careful while stealing the crown jewels.
(b) He was most carefuller while stealing the crown jewels.
(c) He was carefuller while stealing the crown jewels.
(d) He was most careful while stealing the crown jewels.

Answer: (d)

13. Select the most appropriate synonym of the given word. Hesitate

(a) Blabber
(b) Recoil
(c) Conceal
(d) Falter

Answer: (d)

14. The sentence given below has spelling errors. Select the sentence without spelling errors. We can also contribute to presarvation of water bodies by not dumping our garbage in them.

(a) We can also contribute to presarvation of water bodies by not dumpeing our garbage in them.

(b) We can also contribute to preservation of water bodies by not dumping our garbage in them.

(c) We can also contribut to presarvation of water bodies by not dumping our garbage in them.

(d) We can also contribute to presarvation of water bodies by not dumping our garbag in them.

Answer: (b)

15. Select the most appropriate meaning of the given idiom.

Call it a day

(a) To have the greatest day ever

(b) To stop working

(c) To be very straightforward

(d) To refer to something as something else

Answer: (b)

16. Select the most appropriate ANTONYM of the given word. Stern

(a) Stable

(b) Sincere

(c) Profound

(d) Lenient

Answer: (d)

17. Select the most appropriate option that can substitute the underlined segment in the given sentence.

His older brothers were quite willing that he should <u>went to</u> sea.

(a) had go to

(b) have gone in

(c) gone to

(d) go to

Answer: (d)

18. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No improvement required'. It is true that learning English is essential for professionals <u>to survived</u> the national and international competitions.

(a) to be survive

(b) having to survive

(c) No improvement required

(d) for surviving

Answer: (d)

19. Select the most appropriate option to fill in the blank. The tigress that was killed by the villagers was not only a man-eater, _____ a mother.

(a) but
(b) but also
(c) and
(d) but often

Answer: (b)

20. Select the most appropriate meaning of the given idiom. Spill the beans

(a) Excellent health
(b) Behave or speak in a rash manner
(c) Things always get worse
(d) To reveal a secret information unintentionally

Answer: (d)

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.
>
> Photosynthesis is the _____(1) used by plants, algae and some bacteria to turn sunlight into energy. The process chemically _____(2) carbon dioxide and water into food and oxygen. The chemical reaction often _____(3) on a pigment called chlorophyll, which gives plants their green colour. Photosynthesis is also the _____(4) our planet is bl[illegible]keted in an oxygen-rich atmosphere. Plants absorb carbon dioxide from the _____(5) air and r[illegible]ase water and oxygen via microscopic pores on their leaves called stomata.

21. Select the most appropriate option to fi[illegible] blar[illegible]umber 1.

(a) process
(b) guess
(c) chaos
(d) area

Answer: (a)

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

(a) converts
(b) exceeds
(c) crates
(d) bows

Answer: (a)

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

(a) relies
(b) creates
(c) hopes
(d) wants

Answer: (a)

24. Select the most appropriate option to fill in blank number 4.
    (a) goal
    (b) sense
    (c) reason
    (d) occasion

    Answer: (c)

25. Select the most appropriate option to fill in blank number 5.
    (a) afar
    (b) distant
    (c) surrounding
    (d) close

    Answer: (c)

Answer key

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

Numerical and Mathematical Ability

3	**(c)**	4	**(a)**	5	**(d)**	6	**(d)**	7	**(c)**	9	**(c)**
10	**(b)**	12	**(c)**	13	**(c)**	14	**(a)**	17	**(b)**	18	**(a)**
19	**(b)**	20	**(c)**								

Reasoning Ability and Problem Solving

1	**(b)**	2	**(c)**	3	**(b)**	6	**(b)**	7	**(b)**	8	**(d)**
9	**(a)**	10	**(b)**	11	**(c)**	12	**(c)**	13	**(b)**	14	**(c)**
16	**(b)**	17	**(a)**	18	**(b)**	19	**(b)**	20	**(b)**		

General Awareness

1	**(c)**	2	**(d)**	3	**(d)**	4	**(a)**	5	**(a)**	6	**(b)**
7	**(c)**	8	**(d)**	10	**(d)**	11	**(a)**	13	**(d)**	14	**(c)**
15	**(b)**	16	**(c)**	17	**(c)**	18	**(d)**	19	**(b)**	20	**(a)**
21	**(b)**	22	**(b)**	24	**(a)**	25	**(b)**				

English Language and Comprehension

1	**(b)**	2	**(b)**	3	**(d)**	4	**(d)**	6	**(a)**	7	**(a)**
8	**(a)**	9	**(d)**	10	**(d)**	11	**(d)**	12	**(d)**	13	**(d)**
14	**(b)**	15	**(b)**	16	**(d)**	17	**(d)**	18	**(d)**	19	**(b)**
20	**(d)**	21	**(a)**	[illegible]	**(a)**	23	**(a)**	24	**(c)**	25	**(c)**