PREVIOUS YEAR PAPER

SSC MTS 2023 — 11 September 2023, Shift 1

SSC MTS & Havaldar · 11 September 2023 · 9:00 AM - 11:00 AM

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

Left out of the original paper: 4 (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 11 September 2023, 9:00 AM - 11:00 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-mts/previous-year-papers/ssc-mts-2023-11-sep-shift-1/

Numerical and Mathematical Ability

1. If the selling price of 16 bulbs is equal to the cost price of 24 bulbs, what is the profit percentage?

(a) 40%

(b) 50%

(c) 25%

(d) 20%

Answer: (b)

2.

If the manufacturer gains 10%, the wholesale dealer gains 12% and the retailer gains 5%, then find the cost production of a table, the retail price of which is ₹1,771.

(a)

₹1,150

(b)

₹1,050

(c)

₹1,250

(d)

₹1,350

Answer: (c)

3.

If the average of two numbers is 12 and the product of the same two numbers is 119, then the difference of those two numbers is:

(a)

7

(b)

6

(c)

10

(d)

8

Answer: (c)

4.

Two cyclists start at the same time from opposite ends of a 200 km long straight road. One cyclist travels at a speed of 20 km/h and the other at a speed of 30 km/h. How long will it take them to meet?

(a)

5 hours

(b)

4 hours

(c)

5.5 hours

(d)

4.5 hours

Answer: (b)

5.

A hollow metal sphere of internal and external radii 5 cm and 6 cm, respectively, is melted into a solid cone of base radius 5.2 cm. What is the height (in cm, rounded off to 1 decimal place) of the cone?

(a)

11.8

(b)

12.8

(c)

13.5

(d)

14.5

Answer: (c)

6.

If Rita's salary increases by 5% in the first year and by 2% in the next year, then what is the net percentage increase in her salary after two years?

(a)

6.1%

(b)

5.1%

(c)

8.1%

(d)

7.1%

Answer: (d)

7.

Mohan can complete a piece of work in 24 days. He worked for 6 days and left the work. Thereafter, Sohan finished the remaining work in 21 days. In how many days, can Mohan and Sohan together complete it?

(a)

$12\frac{12}{13}$ days

(b)

$12\frac{9}{13}$ days

(c)

$12\frac{11}{13}$ days

(d)

$12\frac{10}{13}$ days

Answer: (a)

8.

The volume (in cm^3) of a sphere with diameter 7 cm is:

Take $\pi = \frac{22}{7}$

(a)

179.66

(b)

168.44

(c)

197.66

(d)

186.44

Answer: (a)

9.

In a fort, 160 men had food for 94 days. After 10 days, 20 men left the fort. How long (in days) would the food last at the same rate?

(a)

84

(b)

90

(c)

96

(d)

100

Answer: (c)

10.

What sum of money (in ₹) will earn an interest of ₹1,800 at the rate of 6% per annum simple interest in five years?

(a)

18,000

(b)

6,000

(c)

8,000

(d)

5,000

Answer: (b)

11.

If the ratio among the time taken by three cars to travel a certain distance is 2 : 3 : 5, then the ratio of speeds of these cars will be:

(a)

$10 : 6 : 15$

(b)

$15 : 9 : 8$

(c)

$10 : 15 : 8$

(d)

$15 : 10 : 6$

Answer: (d)

12.

The fourth proportion of $2, a$ and $5a$ is _____.

(a)

$\frac{2a^2}{5}$

(b)

$\frac{5a^2}{2}$

(c)

$\frac{2a^2}{3}$

(d)

$\frac{5a^2}{3}$

Answer: (b)

14.

Study the following table and answer the question given below it.
Distribution of students according to professional courses.

S.No	Course	Faculty			
		Arts		Science	
		Girls	Boys	Girls	Boys
1.	Business Management	25	45	25	65
2.	Type-writing	23	186	20	32
3.	Costing	25	120	12	58
4.	Typewriting &Costing	12	100	3	5

The percentage of students of Arts faculty doing costing only is (round to the nearest integer):

(a)

18

(b)

15

(c)

10

(d)

27

Answer: (d)

15. In some quantity of water ,four times the quantity of milk is added and the quantity of the mixture is now 7.5 litres. How much more milk is to be added to the mixture to have 90% milk in the mixture ?

(a) 9 liters

(b) 9.5 liters

(c) 6 liters

(d) 7.5 liters

Answer: (d)

16.

Evaluate $3\frac{1}{2} - [2\frac{1}{4} \div \{1\frac{1}{4} - \frac{3}{4}(1\frac{1}{2} - \frac{1}{2} - 2\frac{1}{2})\}]$:

(a)

$1\frac{21}{38}$

(b)

$2\frac{19}{18}$

(c)

$2\frac{21}{38}$

(d)

$\frac{47}{38}$

Answer: (c)

17.

Arvind, Bilal, Carmen invest ₹49,000 towards a business. Arvind invests ₹5,000 more than Bilal and Bilal invests ₹4,000 more than Carmen. Out of a total profit of ₹98,000, how much does Bilal receive?

(a)

₹34,400

(b)

₹33,200

(c)

₹30,500

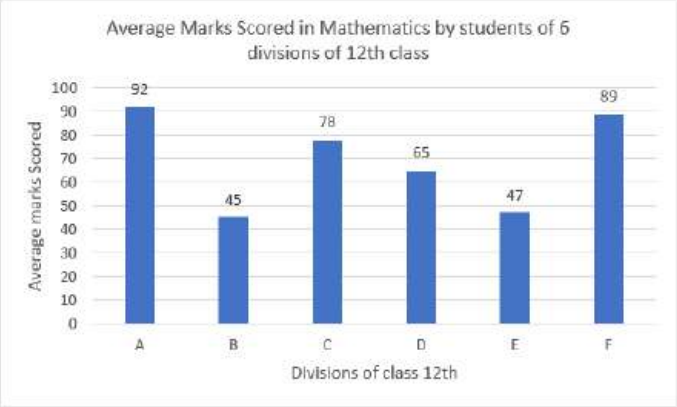
(d)

₹32,000

Answer: (d)

18.

The bar graph shows the average marks scored in Mathematics examination (out of 100) by students of 6 divisions of XIIth standard.



What is the ratio of the average marks scored by Division B to Division D?

(a)

9 : 13

(b)

1 : 3

(c)

13 : 9

(d)

1 : 9

Answer: (a)

19.

An amount of ₹2,000 amounts to ₹2,880 in 2 years. What will be the rate of interest if compounded annually?

(a)

12%

(b)

28%

(c)

10%

(d)

20%

Answer: (d)

20.

The average weight of some students in class 12th was 56 kg. When seven students whose average weight was 58 kg joined the class, the average weight of all the students increased by 200 gm. Find the number of students in the class in the beginning?

(a)

56

(b)

77

(c)

49

(d)

63

Answer: (d)

Reasoning Ability and Problem Solving

1.

What will come in the place of '?' in the following equation, if '+' and '–' are interchanged and '×' and '÷' are interchanged?
$23 \div 2 + 41 - 84 \times 14 = ?$

(a)

21

(b)

1

(c)

31

(d)

11

Answer: (d)

2.

In a certain code language, 'yes you can' is coded as 'an cf dt' and 'you are enough' is coded as 'sk dt hw'. How is 'you' coded in the given language?

(a)

cf

(b)

sk

(c)

dt

(d)

hw

Answer: (c)

3.

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 phones are flowers. Some flowers are bags. All bags are heavy.

Conclusion I: Some phones are flowers.

Conclusion II: All flowers are bags.

(a)

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

(b)

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

(c)

Only conclusion (II) is follow.

(d)

Only conclusion (I) is follow.

Answer: (d)

4.

The position of how many letters will remain unchanged if each of the letter in the word 'CHILDREN' is arranged in alphabetical order?

(a)

One

(b)

Four

(c)

Three

(d)

Two

Answer: (a)

5.

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 torches are guitars. Some guitars are bulbs. No bulb is a stove.

Conclusion I: All bulbs are guitars.

Conclusion II: No guitar is a torch.

(a)

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

(b)

Only conclusion (I) is follow.

(c)

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

(d)

Only conclusion (II) is follow.

Answer: (a)

6.

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

$15 - 6 + 12 \times 3 \div 4 = ?$

(a)

5

(b)

10

(c)

7

(d)

9

Answer: (a)

7.

Select the combination of letters that when sequentially placed in the blanks of the given series, will complete the series.

NO_ N _ _ NO _ _ ON

(a)
NONNN

(b)
OOONO

(c)
ONOON

(d)
NONON

Answer: (a)

8.

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

4 19 79 319 1279 ?

(a)
4875

(b)
5299

(c)
4913

(d)
5119

Answer: (d)

9.

Six people, Deepak, Gauri, Babita, Ira, Farheen and Hema are sitting in a straight line, facing north.
Deepak sits 2nd from the left end. Gauri sits 2nd to the right of Deepak. Ira sits 2nd to the right of Gauri. Farheen sits 3rd to the left of Ira. Babita sits 2nd to the left of Farheen.
Who sits 3rd to the right of Deepak?

(a)
Farheen

(b)
Hema

(c)
Babita

(d)
Ira

Answer: (b)

10.

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

5 23 95 ? 1535 6143 24575

(a)
383

(b)
347

(c)
312

(d)
361

Answer: (a)

11.

Select the word-pair that best represents a similar relationship to the one expressed in the pair of words given below.

(The words must be considered as meaningful English words and must not be related to each other based on the number of letters/number of consonants/vowels in the word)

Legend : Map

(a)
Volume : Guidebook

(b)
Glossary : Text

(c)
Column : Essay

(d)
Profession : Biography

Answer: (b)

12.

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

CSP, EUQ, GWR, IYS, ?

(a)

JBS

(b)

LBT

(c)

KAT

(d)

JAR

Answer: (c)

13.

Find out the correct alternative that when filled in the blanks in the same sequence will make the series logically complete.

BK_Y _KUT R_PO MKK_ HK_E

(a)

WKBFP

(b)

WBHZP

(c)

ZWKJF

(d)

ZKWLF

Answer: (c)

14.

In a certain code language, 'BACK' is coded as '17' and 'DTDC' is coded as '31'. What is the code for 'JAAM' in the given code language?

(a)

35

(b)

20

(c)

40

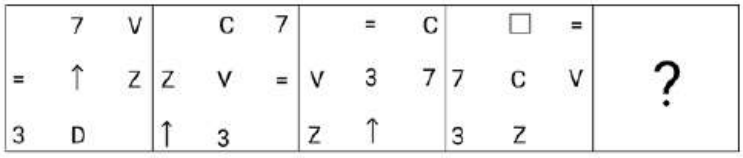
(d)

25

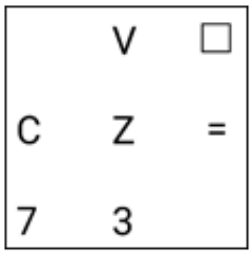
Answer: (d)

16.

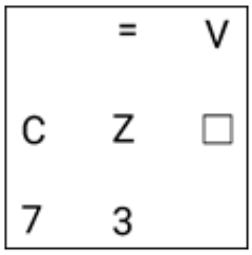
Which figure should replace the question mark (?) if the following figure series were to be continued?



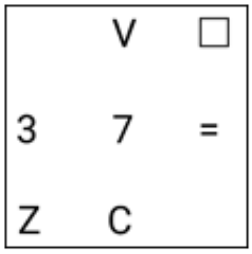
(a)



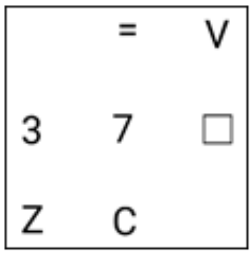
(b)



(c)



(d)



Answer: (a)

17.

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

11 59 299 1499 7499 ?

(a)

38199

(b)

37699

(c)

37499

(d)

38499

Answer: (c)

18.

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 : 41
11 : 26

(a)

7 : 28

(b)

5 : 15

(c)

21 : 84

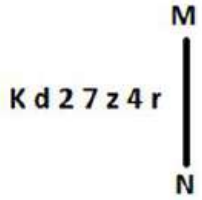
(d)

12 : 29

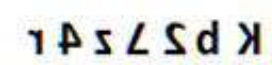
Answer: (d)

19.

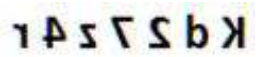
Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.



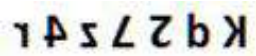
(a)



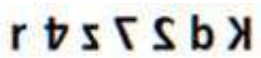
(b)



(c)



(d)



Answer: (b)

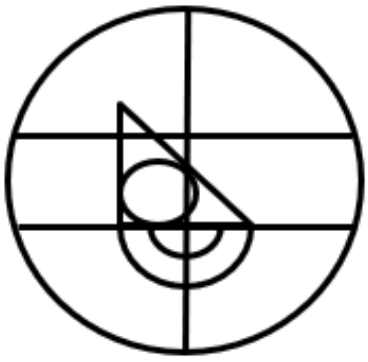
20.

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



(X)

(a)



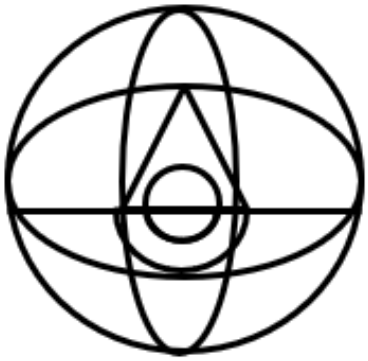
(b)



(c)



(d)



Answer: (c)

General Awareness

1. What is the purpose of a savings account?
   (a) Obtaining a mortgage loan
   (b) Earning interest on deposits
   (c) Making day-to-day transactions
   (d) Paying bills online
   Answer: (b)

2. According to the Census of India 2011, the female literacy rate was recorded as _____.
   (a) 75.35%
   (b) 65.46%
   (c) 55.84%
   (d) 70.24%
   Answer: (b)

3. Which of the following crops is most suitable for black soil?
   (a) Soybean
   (b) Maize
   (c) Cotton
   (d) Barley
   Answer: (c)

4. In India, the ‘Aus’, ‘Aman’ and ‘Boro’ terms are associated with which crop from the following?

(a) Wheat
(b) Gram
(c) Sugarcane
(d) Paddy

Answer: (d)

5. The President of India conferred the Padma Shri award to Gurcharan Singh for his distinguished service in the field of _____ in 2023.

(a) Tennis
(b) Cricket
(c) Football
(d) Badminton

Answer: (b)

6. Who moved the resolution proposing that the National Flag of India be a ‘horizontal tricolour of saffron, white and dark green in equal proportion’?

(a) Sardar Vallabhbhai Patel
(b) Jawaharlal Nehru
(c) Mahatma Gandhi
(d) Dr Rajendra Prasad

Answer: (b)

7. In which of the following States was the first Janj a Khel Mahotsav held?

(a) Odisha
(b) Chhattisgarh
(c) Jharkhand
(d) Andhra Pradesh

Answer: (a)

8. Identify the Indian singer who sang the song ‘Ae mere watan ke logon jara akhon mein bharlo paani...’ before the first Prime Minister of India, Pandit Jawaharlal Nehru.

(a) Lata Mangeshkar
(b) Mohammad Rafi
(c) Mukesh
(d) Asha Bhosle

Answer: (a)

9. Which regulatory body in India is responsible for overseeing and regulating Micro Finance Institutions?

(a) Securities and Exchange Board of India (SEBI)
(b) Small Industries Development Bank of India (SIDBI)
(c) Reserve Bank of India (RBI)
(d) National Bank for Agriculture and Rural Development (NABARD)

Answer: (c)

10. Who among the following was the viceroy of India at the time of India's independence from colonial rule on 15 August 1947?

(a) Lord Wavell
(b) Lord Willingdon
(c) Lord Mountbatten
(d) Lord Linlithgow

Answer: (c)

11. Which of the following is the legislative organ of the Union Government?

(a) Cabinet
(b) Supreme Court
(c) Executive
(d) Parliament

Answer: (d)

12. Due to rapid urbanisation, the human lifestyle has changed severely; obesity is a major health issue in such condition. Which of the following is a reason for obesity?

(a) Excessive consumption of water
(b) Excessive intake of high calorie foods
(c) Lack of protein
(d) Lack of vitamins in regular diet

Answer: (b)

14. Where was Shree Narayana Dharma Paripalana [illegible]gam founded?

(a) Tamil Nādu
(b) Kerala
(c) Karnataka
(d) Telangana

Answer: (b)

15. Who is the renowned kathak dancer, student of 'Pandit Birju Maharaj' and also served as an officer with Indian Audit and Accounts Services?

(a) Sonal Mansingh
(b) Guru Bipin Singh
(c) Shovana Narayan
(d) Padma Subrahmanayam

Answer: (c)

16.

Shama Bhate received the Sangeet Natak Akademi Award-2021 (given in February 2023) for her contribution to which dance form of the following?

(a)

Manipuri

(b)

Kathak

(c)

Bharatanatyam

(d)

Mohiniyattam

Answer: (b)

17. Which of the following Indus Valley sites is now located in Pakistan?

(a) Harappa

(b) Lothal

(c) Alamgirpur

(d) Kalibangan

Answer: (a)

18. In April 2023,Satwiksairaj Rankireddy and Chirag [illegible]tty made history, becoming the first Indian men's doubles pair to win a gold medal at the Badmi[illegible]n Asia Championships. Where was this championship held?

(a) Singapore

(b) Dubai

(c) Qatar

(d) Malaysia

Answer: (b)

19. Which of the following states has introduced a dedicated Semiconductor Policy 2022-27 with a view to generate at least 2,00,000 new employment opportunities in the state?

(a) Andhra Pradesh

(b) Maharashtra

(c) Gujarat

(d) Kerala

Answer: (c)

20. The classical dance style of Bharatanatyam belongs to the state of _____.

(a) Karnataka

(b) Tamil Nadu

(c) Assam

(d) Rajasthan

Answer: (b)

21. Which of the following peninsular rivers of India is a west flowing river?

(a) Kaveri
(b) Narmada
(c) Godavari
(d) Krishna

Answer: (b)

22. Which Articles of the Constitution of India deal with the Union and its territory?

(a) Articles 5-11
(b) Articles 1-4
(c) Articles 12-35
(d) Article 36-51

Answer: (b)

23. 'The Great Indian Novel' is a satirical novel by _____.

(a) Suryakant Tripathi
(b) KR Narayan
(c) Munshi Prem Chand
(d) Shashi Tharoor

Answer: (d)

24. What is the systematic name of a colourless gas with a faint, ethereal odour called acetylene, widely used for welding?

(a) Ethyne
(b) Ethanoic anhydride
(c) Azoethane
(d) Ethyl acetate

Answer: (a)

English Language and Comprehension

1. The following sentence has been divided into four parts. Identify the part that contains an error.
(A) Taylor, Richard, and /
(B) Francis plays for /
(C) the state /
(D) basketball team.

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

Answer: (d)

2. Select the most appropriate meaning of the given idiom. Pay an arm and a leg for something

(a) Be devoted to unwanted things

(b) Pay a lot of money for something

(c) Give a lot of love and care to someone

(d) Pay a lot of attention to an incident

Answer: (b)

3. The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer. As they driven through the dark, twisting lane / down which they had walked earlier, Lucius heard / the whistling of the night air in his ears.

(a) down which they had walked earlier, Lucius heard

(b) No error

(c) the whistling of the night air in his ears.

(d) As they driven through the dark, twisting lane

Answer: (d)

4. Select the most appropriate synonym of the given word. Trivial

(a) Minor

(b) Fatal

(c) Decisive

(d) Formal

Answer: (a)

5. Select the most appropriate word to fill in the blank. Ministry of education has announced that students can _____ the Board Examinations

(a) take

(b) participate

(c) give

(d) get

Answer: (a)

6. Select the most appropriate meaning of the underlined idiom in the given sentence.

A man of character, he stuck to his guns even in the most difficult situations.

(a) To do things that would please people

(b) To behave disrespectfully

(c) To find a treasure

(d) To stand firm against all difficulties and challenges

Answer: (d)

7. Select the most appropriate meaning of the underlined segment in the given sentence. After her husband passed away, Jane had to learn to bite the bullet and take care of the household on her own.

(a) Create a difficult situation

(b) Accept a difficult situation bravely

(c) Criticise someone harshly

(d) Run away from a difficult situation

Answer: (b)

8. Select the option that can be used as a one-word substitute for the given phrase. One who lends money to others at a very high rate of interest.

(a) Curator

(b) Bankrupt

(c) Usurer

(d) Numismatist

Answer: (c)

9. Parts of the following sentence have been given as options. Select the option that contains an error. The platinum is a precious metal.

(a) is

(b) The platinum

(c) a

(d) precious metal

Answer: (b)

10. Select the most appropriate option to fill in the blank. All praised him when he soared in the business world, but the same people _____ him when he failed in business.

(a) nourished

(b) criticised

(c) supported

(d) dramatised

Answer: (b)

11. Parts of the following sentence have been underlined and given as options. Select the option that contains an error. What most off us want most is to move forward.

(a) most off

(b) is to

(c) want most

(d) move forward

Answer: (a)

12. Select the word which means the same as the group of words given. That which can't be read.
    (a) Inaccessible
    (b) Incurable
    (c) Illegible
    (d) Irrelevant
    Answer: (c)

13. Select the INCORRECTLY spelt word.
    (a) Acknowlege
    (b) Territory
    (c) Excellence
    (d) Business
    Answer: (a)

14. Select the most appropriate ANTONYM of the given word. Authentic
    (a) Moderate
    (b) Actual
    (c) False
    (d) Wise
    Answer: (c)

15. Select the most appropriate idiom to fill in the blan lease tell me about the meeting _____.
    (a) in a nutshell
    (b) in a stew
    (c) in a huff
    (d) in a spin
    Answer: (a)

16. Select the most appropriate option to fill in the blank. Augmented Reality (AR) continues to develop and become more _____ among a wide range of applications.
    (a) rare
    (b) amicable
    (c) idealistic
    (d) pervasive
    Answer: (d)

17. Select the INCORRECTLY spelt word.
    (a) Grammar
    (b) Pleasant
    (c) Familiar
    (d) Aweful
    Answer: (d)

18. Select the INCORRECTLY spelt word in the given sentence. The handloom shop at the Ring Road has many kinds of bags, such as paper, leather, cloth and cannvas.

(a) Paper
(b) Cannvas
(c) Leather
(d) Cloth

Answer: (b)

19. Select the most appropriate option to fill in the blank. A/An _____ fellow cannot become an ideal teacher.

(a) idle
(b) bright
(c) intelligent
(d) honest

Answer: (a)

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

I considered Geography as an easier subject.

(a) the easy
(b) the easier
(c) an easiest
(d) an easy

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. The most common hazard in forests is forest fire. Forest fires are as old as the forests themselves. They pose a 1._____ not only to the forest wealth but also to the entire regime to fauna and flora seriously disturbing the biodiversity and the ecology and environment of a region. During summer, when there is no rain for months, the forests 2._____ littered with dry senescent leaves and twinges, which could burst into flames ignited by the slightest spark. The Himalayan forests, particularly, Garhwal Himalayas have been burning 3._____ during the last few summers, with colossal loss of vegetation cover of that region. The youngest mountain ranges of the Himalayas are the most 4._____ stretches of the world susceptible to forest fires. The forests of the Western are more 5._____ vulnerable to forest fires as compared to those in the Eastern Himalayas. This is because forests of the Eastern Himalayas grow in high rain density.

21. Select the most appropriate option to fill in blank no.1.

(a) mercy
(b) trend
(c) failure
(d) threat

Answer: (d)

22. Select the most appropriate option to fill in blank no.2.
    (a) keep
    (b) build
    (c) become
    (d) drive
    Answer: (c)

23. Select the most appropriate option to fill in blank no.3.
    (a) rarely
    (b) regularly
    (c) badly
    (d) enough
    Answer: (b)

24. Select the most appropriate option to fill in blank no.4.
    (a) outrageous
    (b) vulnerable
    (c) greasy
    (d) mysterious
    Answer: (b)

25. Select the most appropriate option to fill in blank no.5.
    (a) closely
    (b) frequently
    (c) deeply
    (d) barely
    Answer: (b)

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

1	**(b)**	2	**(c)**	3	**(c)**	4	**(b)**	5	**(c)**	6	**(d)**	7	**(a)**	8	**(a)**	9	**(c)**
10	**(b)**	11	**(d)**	12	**(b)**	14	**(d)**	15	**(d)**	16	**(c)**	17	**(d)**	18	**(a)**	19	**(d)**
20	**(d)**																

Reasoning Ability and Problem Solving

1	**(d)**	2	**(c)**	3	**(d)**	4	**(a)**	5	**(a)**	6	**(a)**	7	**(a)**	8	**(d)**	9	**(b)**
10	**(a)**	11	**(b)**	12	**(c)**	13	**(c)**	14	**(d)**	16	**(a)**	17	**(c)**	18	**(d)**	19	**(b)**
20	**(c)**																

General Awareness

1	**(b)**	2	**(b)**	3	**(c)**	4	**(d)**	5	**(b)**	6	**(b)**	7	**(a)**	8	**(a)**	9	**(c)**
10	**(c)**	11	**(d)**	12	**(b)**	14	**(b)**	15	**(c)**	16	**(b)**	17	**(a)**	18	**(b)**	19	**(c)**
20	**(b)**	21	**(b)**	22	**(b)**	23	**(d)**	24	**(a)**								

English Language and Comprehension

1	**(d)**	2	**(b)**	3	**(d)**	4	**(a)**	5	**(a)**	6	**(d)**	7	**(b)**	8	**(c)**	9	**(b)**
10	**(b)**	11	**(a)**	12	**(c)**	[illegible]	**(a)**	14	**(c)**	15	**(a)**	16	**(d)**	17	**(d)**	18	**(b)**
19	**(a)**	20	**(d)**	[illegible]	**(d)**	22	**(c)**	23	**(b)**	24	**(b)**	25	**(b)**				