PREVIOUS YEAR PAPER

# SSC MTS 2023 — 14 September 2023, Shift 1

SSC MTS & Havaldar · 14 September 2023 · 9:00 AM - 11:00 AM

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

Left out of the original paper: 11 (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 14 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-2023-14-sep-shift-1/

## Numerical and Mathematical Ability

1.

A and B can do a piece of work in 30 days and 40 days, respectively. They began the work together but after a certain time, A leaves off and B completed the remaining work in 25 days. After how many days did A leave?

(a) $6\frac{3}{7}$

(b) $5\frac{3}{7}$

(c) $5\frac{2}{7}$

(d) $6\frac{1}{7}$

**Answer: (a)**

2.

6 skilled workers can complete a work in 4 days. After three days 3 more skilled workers joined them. How many days will they now take to complete the remaining work?

(a) $\frac{2}{3}$

(b) $\frac{1}{2}$

(c) $\frac{1}{3}$

(d) $\frac{3}{4}$

**Answer: (a)**

4. Atul sells goods to a customer at a profit of P%. If the cost price of the goods for the customer is ₹1,50,000 and Atul makes a profit of ₹30,000, then what is the value of P?

(a) 22

(b) 25

(c) 20

(d) 28

**Answer: (b)**

5.

Mixture 1 with a volume of 8 litres has 80% milk and Mixture 2 with a volume of 6 litres has 60% milk. Both the mixtures are mixed. Find the percentage of milk in the final mixture.

(a)

$\frac{600}{7}$

(b)

$\frac{500}{9}$

(c)

$\frac{500}{7}$

(d)

$\frac{800}{9}$

**Answer: (c)**

7.

A thief is spotted by a policeman from a distance of 250 m. When the policeman starts chase, the thief also starts running. Assuming that the speed of the thief is 10 km/h and that of the policeman is 12.5 km/h. How far will have the thief run before he is caught?

(a)

3 km

(b)

1 km

(c)

4 km

(d)

2 km

**Answer: (b)**

8.

Simplify: $6\frac{4}{5} \div \left[4\frac{1}{4} \div \left\{5\frac{1}{3} \times \frac{3}{8} + \left(3\frac{1}{2} + \frac{2}{3}\right) \times \frac{4}{5}\right\}\right]$

(a)

$8\frac{8}{15}$

(b)

$7\frac{8}{25}$

(c)

$8\frac{8}{25}$

(d)

$7\frac{8}{15}$

**Answer: (a)**

9.

Amit drove for 6 hours at a speed of 60 miles per hour and for 6 hours at 40 miles per hour. What was his average speed (in miles per hour) for the whole journey?

(a)

48

(b)

44

(c)

46

(d)

50

**Answer: (d)**

10.

A jewel was sold passing through 3 hands and on the whole, its price is raised by 80%. The first seller earns 20% profit and the second seller earns 25% profit, respectively. Find the percentage of profit earned by the third seller.

(a)

20%

(b)

10%

(c)

15%

(d)

5%

**Answer: (a)**

11.

A certain sum is invested at a simple interest rate of 12% per annum for a certain period of time. If the sum becomes four times the principal at the end of the period, what is the duration of the investment?

(a)

22 years

(b)

24 years

(c)

25 years

(d)

20 years

**Answer: (c)**

12.

Mr. Kalra borrowed ₹1,35,000 to meet the expenses of his son's education. If the rate of interest is 12% per annum compounded annually, then how much amount will he have to make after 2 years and 3 months to settle the account?

(a)

₹1,74,424.32

(b)

₹1,50,640.40

(c)

₹1,49,920.32

(d)

₹1,74,760

**Answer: (a)**

13.

The ratio of two numbers is 7 : 11 and their LCM is 462. What is the difference between these two numbers?

(a)

24

(b)

26

(c)

30

(d)

28

**Answer: (a)**

14.

The diameter of the base of a cylindrical vessel is 30 cm and its height is 56 cm. Find its curved surface area (in $cm^2$).

(a)

6080

(b)

6280

(c)

5280

(d)

5080

**Answer: (c)**

15.

The length, breadth and height of a cuboid are in the ratio of 6 : 4 : 3. If the total surface area of the cuboid is 972 $cm^2$, what is the length (in cm) of the diagonal of the cuboid?

(a)

$5\sqrt{65}$

(b)

$3\sqrt{61}$

(c)

$3\sqrt{65}$

(d)

$5\sqrt{61}$

**Answer: (b)**

16.

Three numbers are in the ratio 1 : 2 : 3. By adding 5 to each of the numbers then the ratio changes to 2 : 3 : 4. The smallest number is:

(a)

5

(b)

15

(c)

12

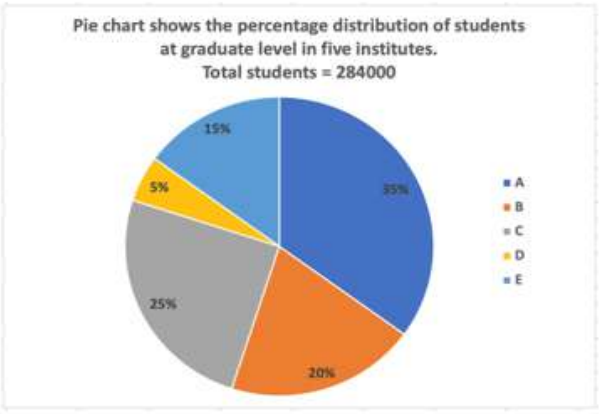
(d)

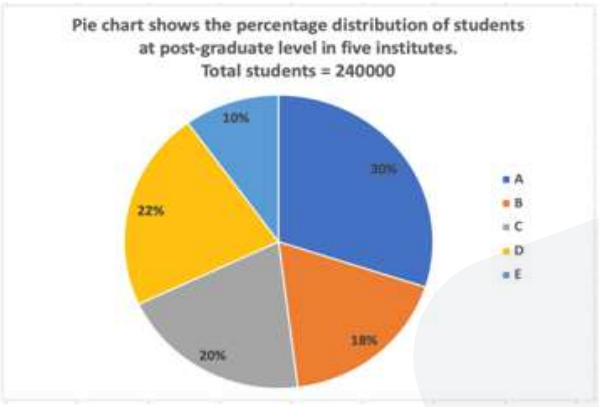
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**Answer: (a)**

17.

The following pie-charts show the distribution of students of graduate and post-graduate levels in five different institutes in a city.




What is the total number of students from ...itut ...A, C and E at the graduate level and from institutes B and D at the post-gr... ...e level?

(a)
390000

(b)
300900

(c)
300090

(d)
309000

**Answer: (d)**

18.

The distance between two towns is covered in 9 hours at a speed of 60 kmph. By how much should the speed (in km/h) be increased so that 1 hour of the travelling time is saved?

(a)

7.5

(b)

10

(c)

15

(d)

12.5

**Answer: (a)**

## Reasoning Ability and Problem Solving

1.

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 trucks are bikes. All bikes are carts. Some carts are pens.

Conclusion I: Some trucks are carts.

Conclusion II: No bikes are pens.

(a)

Only conclusion (II) is follow.

(b)

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

(c)

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

(d)

Only conclusion (I) is follow.

**Answer: (d)**

2.

What will come in the place of '?' in the following equation, if '+' and '–' are interchanged and '×' and '÷' are interchanged?
$357 \times 7 + 19 \div 2 - 38 = ?$

(a)
51

(b)
71

(c)
61

(d)
41

**Answer: (a)**

3.

RN 12 is related to PL 16 in a certain way. In the same way, EJ 17 is related to CH 21. To which of the following is FL 15 related to following the same logic?

(a)
DJ 19

(b)
HN 18

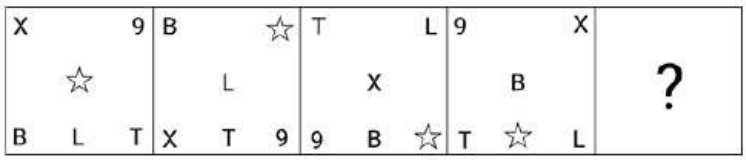
(c)
CI 20

(d)
DK 19

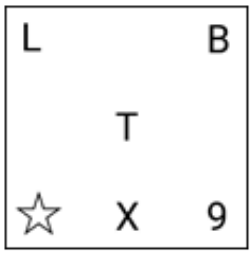
**Answer: (a)**

4.

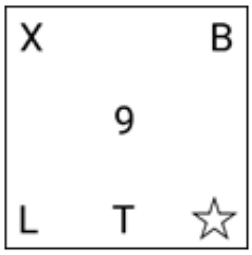
Which figure should replace the question mark (?) if the following figure series were to be continued?



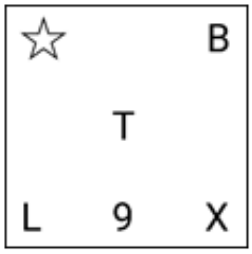

(a)



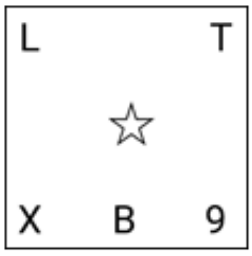

(b)




(c)




(d)




**Answer: (c)**

5.

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

PYJ_ S_LM _YNM YY_M B_RM

(a)
PMGHY

(b)
HAPPY

(c)
MHAPV

(d)
MYVPY

**Answer: (d)**

6.

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

3 21 111 561 2811 ?

(a)
12952

(b)
13468

(c)
14061

(d)
12786

**Answer: (c)**

7.

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

_ FFEF _ _ FF _ F _

(a)
EEEFE

(b)
EFFEF

(c)
EFEEF

(d)
EFFEE

**Answer: (c)**

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 chargers are metal. All metal are hard. Some hard are stools.

Conclusion I: All chargers are metal.

Conclusion II: Some stools are hard.

(a)

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

(b)

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

(c)

Only conclusion (I) is follow.

(d)

Only conclusion (II) is follow.

**Answer: (d)**

9.

Kiran, Pihu, Siya, Leena, Reena and Jiya are sitting around a circular table facing the centre.
Kiran sits 3rd to the right of Pihu. Siya sits 2nd to the right of Kiran. Leena sits 3rd to the left of Siya. Reena is an immediate neighbour of Leena.
Who sits to the immediate left of Jiya?

(a)

Leena

(b)

Siya

(c)

Pihu

(d)

Kiran

**Answer: (d)**

10.

If 'I' stands for '+', 'J' stands for '×', 'K' stands for '÷' and 'L' stands for '-', what will come in place of the question mark (?) in the following equation?
(95 K 19) J 7 L 15 I (10 J 4) = ?

(a)
50

(b)
40

(c)
70

(d)
60

**Answer: (d)**

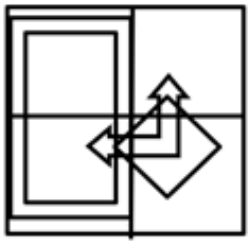
11.

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: (b)**

12.

428 is related to 317 following a certain logic. Following the same logic, 285 is related to 174. To which of the following is 597 related to, following the same logic?

(a)
386

(b)
368

(c)
468

(d)
486

**Answer: (d)**

14.

If 5th May 2010 is Wednesday, then what will be the day of the week on 5th June 2022?

(a)
Tuesday

(b)
Monday

(c)
Wednesday

(d)
Sunday

**Answer: (d)**

15.

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

YFD, VJA, SNX, PRU, ?

(a)
MXS

(b)
MVR

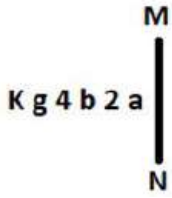
(c)
NWS

(d)
NWR

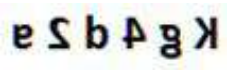
**Answer: (b)**

17.

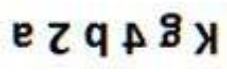
Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.



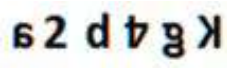

(a)



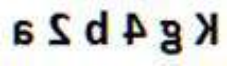
(b)



(c)



(d)



**Answer: (d)**

18.

What should come in place of '?' in the give eries?

14 85 511 3067 18403 ?

(a)

110279

(b)

110581

(c)

110119

(d)

110419

**Answer: (d)**

20.

In a certain code language, 'MENTOR' is coded as 'EMOUPS' and 'OCTAGON' is coded as 'COUBHPO'. What is the code for 'PENCIL' in the given code language?

(a)
EPLICN
(b)
LINCENP
(c)
PLICNE
(d)
EPODJM

**Answer: (d)**

## General Awareness

1.

Identify the vector quantity among these listed physical quantities?

(a)
Energy
(b)
Mass
(c)
Density
(d)
Gravitational Intensity

**Answer: (d)**

2. 'The Palace of Illusions', a rendition of the Hindu epic 'Mahabharata', was written by which of the following novelists?

(a) Chitra Banerjee Divakaruni
(b) Pratibha Ray
(c) Devi Yesodharan
(d) Indu Sundaresan

**Answer: (a)**

3. G Krishnakumar was appointed chairman of which of the following in 2023?

(a) Oil and Natural Gas Corporation Limited
(b) Indian Oil Corporation Limited
(c) Bharat Petroleum Corporation Limited
(d) Hindustan Petroleum Corporation Limited

**Answer: (c)**

4. _____ was the first Indian woman to write an autobiography and also the first to do so in Bengali in her book titled 'Aamar Jiban', which was published in 1876.

(a) Rassundari Devi
(b) Manikuntala Sen
(c) Sarala Devi Chaudhurani
(d) Santisudha Ghosh

**Answer: (a)**

5. Where is the Vivekanand Rock Memorial situated?

(a) Port Blair
(b) Vishakhapatnam
(c) Kanyakumari
(d) Chennai

**Answer: (c)**

6. Under which Act was the rule of British Crown established over India?

(a) Government of India Act 1833
(b) Charter Act of 1813
(c) Regulating Act of 1773
(d) Government of India Act 1858

**Answer: (d)**

7. The Kolar region of Karnataka is famous for which neral from the following?

(a) Coal
(b) Gold
(c) Petroleum
(d) Copper

**Answer: (b)**

8.

Match the following performances of Indian naatya, which were presented by the means of variegated components:

1) Angika (a) costumes and make-up

2) Vachika (b) depiction of mental or psychological states

3) Aharya (c ) spoken words

4) Sattvika (d) gestures and other bodily movements

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

**Answer: (c)**

9. In Fencing, a contest between the two fencers is known as:

(a) bout
(b) remise
(c) parry
(d) riposte

**Answer: (a)**

10. In which year has the Government of India instituted Arjuna Award to recognise outstanding achievement in national sports events?

(a) 1961
(b) 1963
(c) 1964
(d) 1962

**Answer: (a)**

11. 'Atla Taddi', a festival celebrated by married and unmarried women alike to seek the blessings of Devi Gauri for a long and happy married life and a suitable groom, respectively, is celebrated in _____.

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

**Answer: (a)**

12. PT Usha was elected as the president of which association in December 2022?

(a) Indian Olympic Association
(b) Haryana Olympic Association
(c) National Rifle Association of India
(d) Badminton Association of India

**Answer: (a)**

14. What is the full form of UPSC?

(a) United Public Security Commission
(b) United Power & Security Commission
(c) Union Private Service Committee
(d) Union Public Service Commission

**Answer: (d)**

15. To which of the state does Sattriya classical dance belong?

(a) Maharashtra
(b) Madhya Pradesh
(c) Karnataka
(d) Assam

**Answer: (d)**

16.

Who among the following was a renowned dancer and the first person from Odisha to receive 'Padma Vibhushan' in 2000?

(a)

Prabhat Swain

(b)

Gangadhar Pradhan

(c)

Mayadhar Raut

(d)

Kelucharan Mohapatra

**Answer: (d)**

18. Which of the following is NOT a function of money?

(a) Barter system

(b) Store of value

(c) Unit of account

(d) Medium of exchange

**Answer: (a)**

20.

Carbohydrates are utilised by the human b y in the form of:

(a)

glucose

(b)

nucleotides

(c)

fibre

(d)

amino acids

**Answer: (a)**

21. Which Indian musician is associated with the tabla?

(a) Ustad Bismillah Khan

(b) Zakir Hussain

(c) Pandit Ravishankar

(d) Ilaiyaraja

**Answer: (b)**

22. On whose advice did Gandhiji spend a year travelling around British India to know the people of India?

(a) Krishnashankar Pandya

(b) Mohammad Ali Jinnah

(c) Shrimad Rajchandra

(d) Gopal Krishna Gokhale

**Answer: (d)**

24. Which of the following fundamental duties was added to the Indian Constitution by the 86th Constitutional Amendment Act, 2002?

(a) To abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem

(b) To protect and to improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures

(c) To provide opportunities for education to his/her child or, as the case may be, ward between the age of six and fourteen years

(d) To cherish and follow the noble ideals which inspired our national struggle for freedom

**Answer: (c)**

25.

शैल कायांतरण के दौरान निम्नलिखित में से कौन-सी चट्टानें बनती हैं?

(a)

स्लेट (Slate)

(b)

पिंडशीला (Conglomerate)

(c)

बालुकाश्म (Sandstone)

(d)

बेसाल्ट (Basalt)

**Answer: (a)**

## English Language and Comprehension

1. Select the most appropriate option to fill in the blank. Dr. APJ Abdul Kalam was a great man with a high level of _____.

(a) intelligent humour

(b) wise boredom

(c) intellect

(d) clever fatigue

**Answer: (c)**

2. The following sentence contains some errors. Select the option that correctly rectifies the error. The forses that genarate conditions conduciive to crime and riiots are stronger in urban communities than in rurral areas.

(a) The forsec that genarate conditions conduciive to crime and riots are stronger in urban communities than in rurall areas.

(b) The forces that genereta conditions conducieve to crime and riotts are stronger in urban communities than in rural areas.

(c) The forces that generate conditions conducive to crime and riots are stronger in urban communities than in rural areas.

(d) The forces that genarete conditions conduciive to crime and riots are stronger in urban communities than in ruraal areas.

**Answer: (c)**

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

I found my teacher's points casual and informal in the group discussion.

(a) flesh and blood

(b) free and easy

(c) foot the bill

(d) fair and square

**Answer: (b)**

4. Select the word which means the same as the gro of words given. One who is all powerful.

(a) Omnipresent

(b) Omnipotent

(c) Optimist

(d) Omniscient

**Answer: (b)**

5. Select the most appropriate option that can substitute the underlined segment in the given sentence. Ramesh is owning a beautiful house in Noida.

(a) did owned

(b) owns

(c) has owning

(d) was owned

**Answer: (b)**

6. Parts of the following sentence have been given as options. Select the option that contains an error. When Nisha will have finished her task?

(a) have

(b) When Nisha will

(c) finished

(d) her task

**Answer: (b)**

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

He push the bushes aside and went a little farther.

(a) pushed with bush
(b) pushing the bush
(c) pushes in bush
(d) pushed the bushes

**Answer: (d)**

8. Select the option that can be used as a one-word substitute for the given group of words. Copying someone else's work and trying to submit it as your own

(a) Plagiarism
(b) Polygamy
(c) Preamble
(d) Extempore

**Answer: (a)**

9. Select the most appropriate meaning of the given idiom. Beauty of it

(a) Make things worse
(b) Cause for dispute
(c) Quite ordinary
(d) Good points

**Answer: (d)**

10. Select the most appropriate synonym of the underlined word. The girl was manacled and locked in the room.

(a) unfastened
(b) liberated
(c) fettered
(d) unbinded

**Answer: (c)**

11. Select the most appropriate ANTONYM of the underlined word. Addiction of drugs proved detrimental for his health.

(a) Impartial
(b) Potential
(c) Beneficial
(d) Differential

**Answer: (c)**

12. Select the most appropriate synonym of the given word. Plunge

(a) Transgress
(b) Dive
(c) Rush
(d) Fly

**Answer: (b)**

13. Select the INCORRECTLY spelt word.

(a) Tomatos
(b) Weather
(c) Vehicle
(d) Professor

**Answer: (a)**

14. Select the most appropriate option that can rectify the underlined segment in the given sentence. If there is no need to rectify it, select 'no rectification needed'.

I used a variety of sources to find the more cheap flight.

(a) no rectification needed
(b) cheaper
(c) cheapest
(d) cheap

**Answer: (c)**

15. Select the INCORRECTLY spelt word in the given sentence. All the members of my family are planning to visit Jammu and Kashmir this Nov.

(a) Novembur
(b) Planning
(c) Visit
(d) Members

**Answer: (a)**

16. Parts of the following sentence have been given as options. Select the option that contains an error. Ravi will go to the England.

(a) the England
(b) will
(c) Ravi
(d) go to

**Answer: (a)**

17. Select the most appropriate response in the given situation of the eve of a battle to fill in the blank. The commander: “Honourable Emperor, all the troops have lined up for the battle and are awaiting your orders.” Emperor Chandragupta Maurya: “_____.”

(a) We will march at dawn.

(b) You should learn how to talk to an emperor.

(c) We will be playing cards.

(d) We are ready for the pilgrimage.

**Answer: (a)**

18. Select the most appropriate meaning of the underlined idiom. We prefer going to movies once in a blue moon.

(a) Very rarely

(b) Very amazingly

(c) Very diligently

(d) Very often

**Answer: (a)**

19. The following sentence has been split into four segments. Identify the segment that contains an error. My father told me / that in his childhood / he was walking / to school every day.

(a) he was walking

(b) that in his childhood

(c) My father told me

(d) to school every day

**Answer: (a)**

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

Today’s question paper felt like a cakewalk.

(a) Very sweet

(b) Very tasty

(c) Very easy

(d) Very difficult

**Answer: (c)**

**Passage — for questions 21–25**

> In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each number. Modern football (1)_____in Britain in the 19th century. Since before medieval times, 'folk football' games had been played in towns and villages according to local customs and with a (2)_____of rules. Industrialisation and (3)_____, which reduced the amount of leisure time and space available to the working class, combined with a history of legal prohibitions against particularly (4)_____ and destructive forms of folk football to undermine the game's status from the early 19th century onward. However, football was taken up as a winter game between residence houses at public (independent) schools such as Winchester, Charterhouse and Eton. Each school had its own rules; some allowed limited handling of the ball and others did not. The (5)_____in rules made it difficult for public schoolboys entering university to continue playing except with former schoolmates.

21. Select the most appropriate option to fill in blank no. 1.
    (a) terminated
    (b) culminated
    (c) originated
    (d) fragmented

    **Answer: (c)**

22. Select the most appropriate option to fill in blank no. 2.
    (a) optimum
    (b) variance
    (c) minimum
    (d) maximum

    **Answer: (c)**

23. Select the most appropriate option to fill in b[illegible] no. 3.
    (a) normalisation
    (b) urbanisation
    (c) standardisation
    (d) implementation

    **Answer: (b)**

24. Select the most appropriate option to fill in blank no. 4.
    (a) traces
    (b) undercurrents
    (c) calm
    (d) violent

    **Answer: (d)**

25. Select the most appropriate option to fill in blank no. 5.

(a) grouse

(b) grunt

(c) variance

(d) control

**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

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **(a)** | 2 | **(a)** | 4 | **(b)** | 5 | **(c)** | 7 | **(b)** | 8 | **(a)** |
| 9 | **(d)** | 10 | **(a)** | 11 | **(c)** | 12 | **(a)** | 13 | **(a)** | 14 | **(c)** |
| 15 | **(b)** | 16 | **(a)** | 17 | **(d)** | 18 | **(a)** | | | | |

## Reasoning Ability and Problem Solving

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

## General Awareness

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **(d)** | 2 | **(a)** | 3 | **(c)** | 4 | **(a)** | 5 | **(c)** | 6 | **(d)** |
| 7 | **(b)** | 8 | **(c)** | 9 | **(a)** | 10 | **(a)** | 11 | **(a)** | 12 | **(a)** |
| 14 | **(d)** | 15 | **(d)** | 16 | **(d)** | 18 | **(a)** | 20 | **(a)** | 21 | **(b)** |
| 22 | **(d)** | 24 | **(c)** | 25 | **(a)** | | | | | | |

## English Language and Comprehension

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **(c)** | 2 | **(c)** | 3 | **(b)** | 4 | **(b)** | 5 | **(b)** | 6 | **(b)** |
| 7 | **(d)** | 8 | **(a)** | 9 | **(d)** | 10 | **(c)** | 11 | **(c)** | 12 | **(b)** |
| 13 | **(a)** | 14 | **(c)** | 15 | **(a)** | 16 | **(a)** | 17 | **(a)** | 18 | **(a)** |
| 19 | **(a)** | 20 | **(c)** | 21 | **(c)** | 22 | **(c)** | 23 | **(b)** | 24 | **(d)** |
| 25 | **(c)** | | | | | | | | | | |