PREVIOUS YEAR PAPER

SSC MTS 2023 — 11 September 2023, Shift 2

SSC MTS & Havaldar · 11 September 2023 · 12:30 PM - 2:30 PM

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

Left out of the original paper: 7 (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, 12:30 PM - 2:30 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-2023-11-sep-shift-2/

Numerical and Mathematical Ability

1.

The price of a bed is first increased by 32% and later on decreased by 20% due to reduction in sales. Find the net percentage change in the final price of the bed.

(a)

5.6%

(b)

6.2%

(c)

7.5%

(d)

4.9%

Answer: (a)

2.

A cone has base diameter 4 m and height 1.5 m. Find the slant height of the cone (in m).

(a)

2.1

(b)

2.3

(c)

2.7

(d)

2.5

Answer: (d)

3.

Robin purchases a fan for ₹2,000 and later sells it at a loss of 15%. At what price did he sell the fan?

(a)

₹1,900

(b)

₹1,800

(c)

₹1,700

(d)

₹2,100

Answer: (c)

4.

What is the compound interest (in ₹) on ₹20,500 for 2 years at 10% per annum, if the interest is compounded annually?

(a)

5,403

(b)

4,305

(c)

4,530

(d)

4,350

Answer: (b)

5.

What is the value of R, if, $10(8+4R) \div (12 \times 5) - 5 \times 2^3 = 6$?

(a)

86

(b)

68

(c)

76

(d)

67

Answer: (d)

6.

A and B working separately can do a piece of work in 16 days and 28 days, respectively. If they work on alternate days beginning with B, in how many days will the work be completed?

(a)

$18\frac{1}{2}$

(b)

$20\frac{1}{2}$

(c)

$21\frac{1}{2}$

(d)

$19\frac{1}{2}$

Answer: (b)

7.

The average weight of 15 parcels is 20 kg. Addition of another new parcel increases the average weight by 250 grams. What is the weight of the new parcel?

(a)

28 kg

(b)

24 kg

(c)

22 kg

(d)

26 kg

Answer: (b)

8. ₹8,000 becomes ₹9,800 in three years at simple interest rate. If the rate of interest becomes two times of itself, then what will be the amount of the same principle in four years?

(a) ₹10,800

(b) ₹11,800

(c) ₹12,800

(d) ₹13,500

Answer: (c)

9.

Neha walks at the rate of 8 km/h and crosses a bridge in 27 minutes. What is the length of the bridge in metres?

(a)

4850

(b)

3600

(c)

3000

(d)

2400

Answer: (b)

10.

Sanjay wants to exactly measure the lengths 7000 mm, 3850 mm and 12950 mm using a single measuring tape. What will be the greatest possible length (in cm) of the measuring tape?

(a)

40

(b)

45

(c)

35

(d)

30

Answer: (c)

11.

If A : B = 3 : 4 and B : C = 6 : 5, then A : B : C is:

(a)

9 : 12 : 20

(b)

9 : 10 : 20

(c)

9 : 10 : 12

(d)

9 : 12 : 10

Answer: (d)

13.

The mean of 23 observations is 36. If the mean of the first 12 observations is 32 and that of the last 12 observations is 39, find the 12th observation.

(a)

26

(b)

23

(c)

24

(d)

25

Answer: (c)

14. By investing ₹12,000 in a scheme, R gets ₹15,500 back in return. What is his percentage of profit?

(a) 27.19%

(b) 29.17%

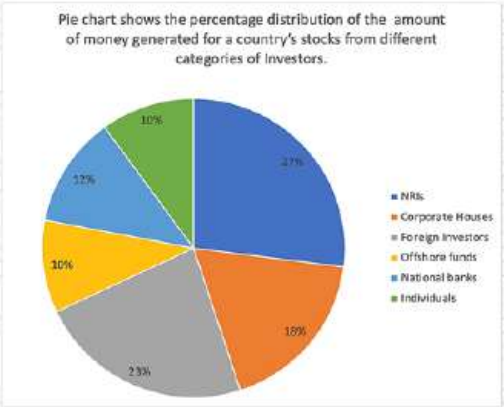
(c) 17.92%

(d) 19.17%

Answer: (b)

15.

The following Pie chart shows the amount of money generated for a country's stocks from different categories of Investors.



If the total investment other than by NRIs, foreign investors and corporate houses is ₹456 crore, then the investment by National banks and offshore funds (in crore ₹) will be:

(a)

231.5

(b)

331.5

(c)

213.5

(d)

313.5

Answer: (d)

17.

A milk vendor mixes water with milk and by selling the mixture at the cost price he gains $16\frac{1}{4}\%$. Find the ratio of milk to water in the mixture.

(a)

7 : 40

(b)

80 : 13

(c)

13 : 80

(d)

40 : 7

Answer: (b)

18.

If the length of the longest diagonal of a cubical box is $\sqrt{300}$ cm, find its volume.

(a)

$10000\ \text{cm}^3$

(b)

$400\ \text{cm}^3$

(c)

$100\ \text{cm}^3$

(d)

$1000\ \text{cm}^3$

Answer: (d)

19.

A, B and C can complete a work in 10, 15 and 25 days, respectively. The time taken by A, B and C together to do the work is:

(a)

$3\frac{16}{31}$ days

(b)

$4\frac{26}{31}$ days

(c)

$3\frac{11}{31}$ days

(d)

$4\frac{27}{31}$ days

Answer: (b)

20.

A person jogged daily as per the given table:

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Distance jogged (in kms)	4.5	3.5	2.5	3.0	2.0	4.0	1.5

What is the mean distance jogged by the person in a week?

(a)

2

(b)

3.5

(c)

2.5

(d)

3

Answer: (d)

Reasoning Ability and Problem Solving

1.

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

Statements: All dogs are cats. Some cats are hens. All hens are p

Conclusion I: Some dogs are cats.

Conclusion II: Some cats are pink.

(a)

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

(b)

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

(c)

Only conclusion (II) is follow.

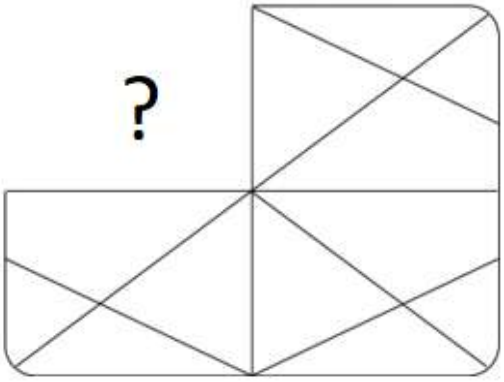
(d)

Only conclusion (I) is follow.

Answer: (b)

3.

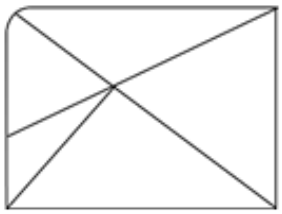
Identify the figure that completes the pattern (rotation is NOT allowed).



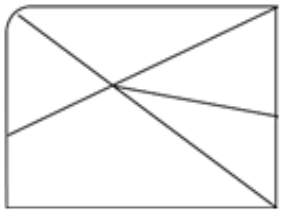
(a)



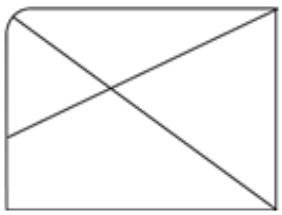
(b)



(c)



(d)



Answer: (d)

4.

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

14 47 146 443 1334 ?

(a)

4007

(b)

4171

(c)

4078

(d)

4001

Answer: (a)

6.

Shagun, Pragya, Yati, Lovey, Savi and Frooti are sitting around a circular table facing the centre.
Shagun sits 2nd to the left of Pragya. Yati sits 2nd to the left of Shagun. Lovey sits 3rd to the left of Yati. Savi sits 2nd to the left of Lovey.
Who sits 3rd to the left of Shagun?

(a)

Pragya

(b)

Lovey

(c)

Savi

(d)

Frooti

Answer: (d)

7.

If 15th Feb 2010 is Monday, then what will be the day of the week on 7th July 2011?

(a)

Saturday

(b)

Monday

(c)

Wednesday

(d)

Thursday

Answer: (d)

8.

In a certain code language, 'ARC' is coded as '1-18-3' and 'BOY' is coded as '2-15-25'. What is the code for 'FAD' in the given code language?

(a)

7-2-5

(b)

6-1-4

(c)

5-2-6

(d)

6-2-4

Answer: (b)

9.

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

HVP, JZO, LDN, NHM, ?

(a)

PLL

(b)

NLN

(c)

MLM

(d)

OLL

Answer: (a)

10.

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)
(2, 8, 32)
(5, 7, 70)

(a)

7, 12, 84

(b)

3, 5, 15

(c)

6, 11, 56

(d)

4, 12, 96

Answer: (d)

11.

In a certain code language, 'NEAR' is coded as 4968 and 'REAP' is coded as 9865. What is the code for 'P' in the given code language?

(a)

9

(b)

8

(c)

5

(d)

6

Answer: (c)

12.

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

$10 + 6 - 5 \times 5 \div 3 = ?$

(a)

7

(b)

8

(c)

5

(d)

4

Answer: (a)

13.

EH 11 is related to CF 16 in a certain way. In the same way, JV 15 is related to HT 20. To which of the following is FN 13 related to following the same logic?

(a)

DK 19

(b)

CL 18

(c)

EM 17

(d)

DL 18

Answer: (d)

14.

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

G_KPN_RPUXY_ BE_PI_MP

(a)

QJLDP

(b)

JPFLC

(c)

JQPFL

(d)

QFDPA

Answer: (c)

15.

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

7 33 137 553 2217 ?

(a)

8873

(b)

8723

(c)

8931

(d)

8827

Answer: (a)

16.

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 clowns are bottles. Some bottles are steel. All steel are keys.

Conclusion I: Some clowns are bottles.

Conclusion II: All steel are bottles.

(a)

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

(b)

Only conclusion (I) is follow.

(c)

Only conclusion (II) is follow.

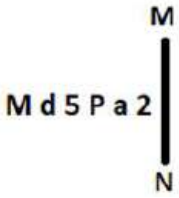
(d)

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

Answer: (b)

17.

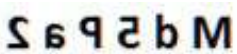
Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.



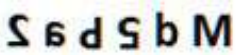
(a)



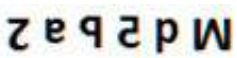
(b)



(c)



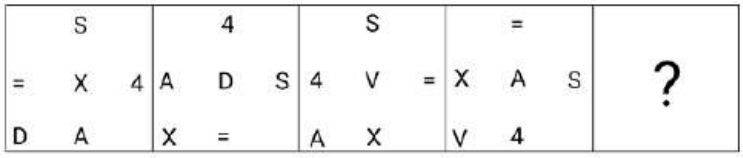
(d)



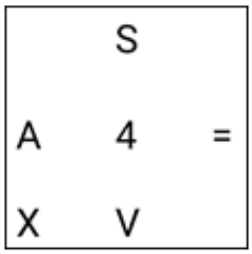
Answer: (b)

18.

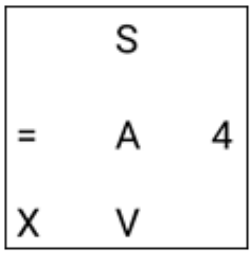
Which figure should replace the question mark (?) if the following figure series were to be continued?



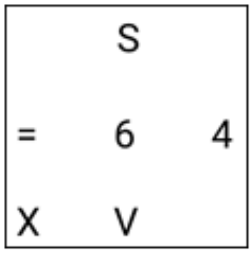
(a)



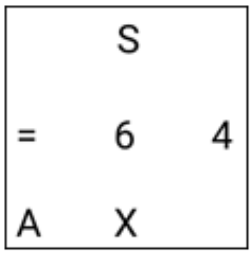
(b)



(c)



(d)



Answer: (c)

19.

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

12 18 30 54 102 ?

(a)
204

(b)
198

(c)
187

(d)
190

Answer: (b)

20.

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

$216 \times 36 - 6 \div 17 + 39 = ?$

(a)
69

(b)
89

(c)
79

(d)
59

Answer: (a)

General Awareness

1. Who propounded the concept of 'Rule of Law'?

(a) AV Dicey
(b) CK Daphtary
(c) Austin
(d) AK Sen

Answer: (a)

2. In which state is Vijay Stambh situated?

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

Answer: (a)

3. Which state passed a bill for the protection of advocates and became the first state to do so?

(a) Punjab
(b) Rajasthan
(c) Haryana
(d) Himachal Pradesh

Answer: (b)

4. Chaoite, Buckminsterfullerene and Graphene are related to which element?

(a) Arsenic
(b) Carbon
(c) Sulphur
(d) Bromine

Answer: (b)

5. Who is credited with the establishment of Servants of India Society?

(a) Lala Lajpat Rai
(b) Gopal Krishna Gokhale
(c) MG Ranade
(d) CR Das

Answer: (b)

6. The value of all final goods and services produced within the country during one year is known as _____.

(a) gross national product
(b) net national product
(c) gross domestic product
(d) net domestic product

Answer: (c)

7. Who was the first speaker of the Lok Sabha?

(a) NS Reddy
(b) GV Mavalankar
(c) Ananthasayanam Ayyangar
(d) Mira Kumar

Answer: (b)

8.

'The Story of My Experiments with Truth' is an autobiography of _____.

(a)

Dr. Rajendra Prasad

(b)

Mahatma Gandhi

(c)

Vivekanand

(d)

Jawaharlal Nehru

Answer: (b)

9.

Who was the music director of the famous film 'Sholay' released in 1975?

(a)

Madan Mohan

(b)

Jatin - Lalit

(c)

Nadeem - Shravan

(d)

RD Burman

Answer: (d)

10. The technique of classical dancing was codified by _____ in about the 5th century B.C.

(a) Sudraka

(b) Bharata

(c) Chanakya

(d) Kalhana

Answer: (b)

12.

Who among the following is credited with starting a Fusion Dance form called 'Hi-Dance'?

(a)

Shashadhar Acharya

(b)

Uday Shankar

(c)

Kartik Ram

(d)

Mani Damodara

Answer: (b)

13. According to the Census of India 2011, which of the following states has the lowest population?

(a) Sikkim

(b) Goa

(c) Manipur

(d) Mizoram

Answer: (a)

14. The Lambadi dance is a folk dance form of the ___ _____ tribe and originated in Andhra Pradesh.

(a) Sugali

(b) Banjara

(c) Nakkala

(d) Dabba Yerukula

Answer: (b)

15. In which of the following years was the Child Marriage Restraint Act passed?

(a) 1856

(b) 1947

(c) 1878

(d) 1929

Answer: (d)

16. What is the main reason behind the substantial rainfall during summer on the western coasts of India?

(a) Western Ghats

(b) Eastern winds

(c) Indus River

(d) Eastern Ghats

Answer: (a)

17. The second edition of Khelo India Youth Games, 2019 was organised in which city?

(a) Pune

(b) Guwahati

(c) New Delhi

(d) Mumbai

Answer: (a)

18. ACF conferred Grandmaster _____ with Player of the Year award, who is only the sixth Indian to break the 2700 Elo-rating mark and the youngest Grandmaster from the country to be rated above 2700.

(a) NR Vignesh

(b) Aadit Khan

(c) Koshy Varugeese

(d) D Gukesh

Answer: (d)

19. Which condition causes bone pain, poor growth, and soft, weak bones that can lead to bone deformities?

(a) Rickets

(b) Cerebral Palsy

(c) Pertussis

(d) Asplenia

Answer: (a)

20. In which Indian musician's name did the state of Massachusetts in the USA declare April 20th in 1984 as a day in his name?

(a) Brij Narayan

(b) Ali Akbar Khan

(c) Rajeev Taranath

(d) Amjad Ali Khan

Answer: (d)

21. Which of the following is an advantage of microfinance institutions in India?

(a) Limited impact on poverty reduction

(b) Increased reliance on informal lending sources

(c) Minimal support for women entrepreneurs

(d) Enhanced financial inclusion

Answer: (d)

22. Which of the following statements about Mahatma Gandhi is INCORRECT?

(a) Mahatma Gandhi was born in 1869 in Porbandar.

(b) In 1942, he launched the Quit India Movement.

(c) He led the Champaran Satyagraha in 1910.

(d) He led the Dandi Salt March in 1930.

Answer: (c)

23. Which university won the first place in the 3rd Khelo India University Games?
    (a) University of Mumbai
    (b) Panjab University
    (c) Shivaji University
    (d) University of Madras
    Answer: (b)

24. In which of the following states of India is the maximum extent of alluvial soil found?
    (a) Telangana
    (b) Uttar Pradesh
    (c) Karnataka
    (d) Maharashtra
    Answer: (b)

25. The _____ port was developed after Independence to ease the volume of trade on the Mumbai port.
    (a) Kandla
    (b) Kolkata
    (c) Chennai
    (d) Visakhapatnam
    Answer: (a)

English Language and Comprehension

1. Select the INCORRECTLY spelt word.
    (a) Curiousity
    (b) Vehemence
    (c) Superficial
    (d) Synagogue
    Answer: (a)

3. Select the most appropriate meaning of the given idiom. To cross swords
    (a) To kill
    (b) To arrange
    (c) To fight
    (d) To defend
    Answer: (c)

4. Select the most appropriate option to fill in the blank. Virtual worlds are recently new phenomena in that they _____ people to meet and socially interact with others in a variety of online environments.

(a) forbid
(b) bring
(c) choose
(d) enable

Answer: (d)

5. The following sentence has been split into four segments. Identify the segment that contains an error. I have seen / a movie / on schooling / yesterday.

(a) I have seen
(b) on schooling
(c) yesterday
(d) a movie

Answer: (a)

6. Select the most appropriate ANTONYM of the given word. Cheap

(a) Expensive
(b) Ignorant
(c) Old
(d) Untangle

Answer: (a)

7. Select the most appropriate option that c[illegible]te the underlined segment in the given sentence. Kavya invited all her friends, isn't it.

(a) didn't she?
(b) did she?
(c) don't she?
(d) isn't she?

Answer: (a)

8. Select the most appropriate idiom to fill in the blank. The deal was _____ for three months.

(a) cut no ice
(b) broken the ice
(c) tipped of the iceberg
(d) put on ice

Answer: (d)

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

They decided to / travel in train / instead of driving / to New Delhi.

(a) They decided to

(b) travel in train

(c) to New Delhi

(d) instead of driving

Answer: (b)

11. Select the most appropriate ANTONYM of the given word. Strengthen

(a) Debilitate

(b) Strain

(c) Fortify

(d) Ascend

Answer: (a)

12. Select the most appropriate ANTONYM of the given word. Fame

(a) Name

(b) Shame

(c) Scandal

(d) Stingy

Answer: (b)

13. Select the sentence that has NO spelling errors

(a) My new phone has a high-resolusion screen and powerful proccessor, which makes it perfect for streming videos and playing games.

(b) My new phone has a high-resollution screen and a powerfull procesor, which makes it perfect for streaming videos and playing games.

(c) My new phone has a high-resolution screen and a powerful processor, which makes it perfect for streaming videos and playing games.

(d) My new phone has a high-resolution screan and powerfull procesor, which makes it perfect for streming videos and playing games.

Answer: (c)

14. Identify the INCORRECTLY spelt word in the following sentence. Being a doktor, my sister Meera is prepared for an emergency usually.

(a) prepared

(b) doktor

(c) usually

(d) emergency

Answer: (b)

15. Select the option that can be used as a one-word substitute for the underlined group of words. I suppose dancing that well would require a lot of actual application.

(a) prevention
(b) perseverance
(c) practice
(d) perception

Answer: (c)

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

A music / is a great way / to express / your emotions.

(a) to express
(b) is a great way
(c) A music
(d) your emotions

Answer: (c)

17. Select the most appropriate idiom to fill in the blank. You are an intellectual with a professional degree; you can do wonders as _____.

(a) you are playing with fire
(b) you can say it again
(c) your mileage may vary
(d) the world is your oyster

Answer: (d)

18. Select the most appropriate option that can substitute the underlined segment in the given sentence. Rashmi works at the hospital, don't she?

(a) does she?
(b) has she?
(c) doesn't she?
(d) do she?

Answer: (c)

19. Parts of the following sentence have been given as options. Select the option that contains an error. Radha will have learnt cooking by the time she will have married.

(a) learnt cooking
(b) by the time
(c) she will have married
(d) Radha will have

Answer: (c)

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

Fear of closed spaces

(a) Xenophobia
(b) Claustrophobia
(c) Hydrophobia
(d) Zoophobia

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. A cashless India is the first step towards making the dream of digital India a reality. Government is trying to (1)_____ a cashless environment in the country. Demonetisation appears to be a stepping (2)_____ in that direction. To help facilitate this, government even (3)_____ its own app 'BHIM' built for the same purpose. The (4)_____ of conducting online financial transactions is probably the biggest motivator to go digital. You will no longer need to carry wads of cash, plastic cards or even queue up for ATM withdrawals. It's also safer and easier spending option when you are travelling. Making transactions digitally makes it easy to keep track of your finances. The (5)_____ are enormous for everyone if you leave out the low-income group, which will face a huge challenge. For the rest of the country, it is constructive and simple. However, the convenience of net-banking, m-banking, card or mobile wallet transactions can make you spend more than your budget.

21. Select the most appropriate option to fill in blank N[illegible].

(a) preach
(b) determine
(c) precede
(d) create

Answer: (d)

22. Select the most appropriate option to fill in blank No. 2.

(a) method
(b) matter
(c) stairs
(d) stone

Answer: (d)

23. Select the most appropriate option to fill in blank No. 3.

(a) followed
(b) sensed
(c) launched
(d) submitted

Answer: (c)

24. Select the most appropriate option to fill in blank No. 4.
    (a) hassle
    (b) ease
    (c) agony
    (d) delay
    Answer: (b)

25. Select the most appropriate option to fill in blank No. 5.
    (a) attempts
    (b) scenarios
    (c) benefits
    (d) severity
    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	**(d)**	3	**(c)**	4	**(b)**	5	**(d)**	6	**(b)**
7	**(b)**	8	**(c)**	9	**(b)**	10	**(c)**	11	**(d)**	13	**(c)**
14	**(b)**	15	**(d)**	17	**(b)**	18	**(d)**	19	**(b)**	20	**(d)**

Reasoning Ability and Problem Solving

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

General Awareness

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

English Language and Comprehension

1	**(a)**	3	**(c)**	4	**(d)**	5	**(a)**	6	**(a)**	7	**(a)**
8	**(d)**	10	**(b)**	11	**(a)**	12	**(b)**	13	**(c)**	14	**(b)**
[illegible]	**(c)**	16	**(c)**	17	**(d)**	18	**(c)**	19	**(c)**	20	**(b)**
21	**(d)**	22	**(d)**	[illegible]	**(c)**	24	**(b)**	25	**(c)**		