PREVIOUS YEAR PAPER

SSC MTS 2023 — 11 September 2023, Shift 3

SSC MTS & Havaldar · 11 September 2023 · 4:00 PM - 6:00 PM

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, 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-2023-11-sep-shift-3/

Numerical and Mathematical Ability

1.

A thief noticed a policeman at a distance of 500 m away from him. The thief starts running at a speed of 60 km/h and the policeman chased him running at a speed of 70 km/h. Find the time taken by the policeman to catch the thief (in minutes).

(a)
15
(b)
10
(c)
3
(d)
6

Answer: (c)

2.

If the income of T is 8 times his savings, then his expenditure is _____ times his savings.

(a)
6
(b)
7
(c)
8
(d)
5

Answer: (b)

3.

The average marks of 21 papers is 50. The average marks of the first 11 papers is 52 and that of the last 11 papers is 45. Find the marks of the 11th paper.

(a)
17

(b)
14

(c)
20

(d)
15

Answer: (a)

4. By selling a cycle for ₹5,800, a man gains 45%. What will be the cost price of the cycle?

(a) ₹3,000

(b) ₹4,500

(c) ₹4,000

(d) ₹3,500

Answer: (c)

5.

Mayur and Aham enter into a partnership by making investments in the rati 3. 10% of the total profit goes to charity. If Aham's share is ₹4,860, then what is the total profit (in ₹) earne

(a)
7,200

(b)
9,000

(c)
8,500

(d)
11,000

Answer: (b)

6. A certain sum of money lent out at simple interest amounts to ₹12,600 in 2 years and ₹16,200 in 4 years. The rate per cent per annum is:

(a)

$25\ \%$

(b)

$12\frac{6}{7}\ \%$

(c)

$17\frac{1}{2}\ \%$

(d)

$20\ \%$

Answer: (d)

7.

Dev and Goyal together can do a piece of work in 14 days and Dev alone can do it in 27 days. In how many days can Goyal alone do it?

(a)

$21\frac{1}{13}$

(b)

$30\frac{1}{13}$

(c)

$29\frac{1}{13}$

(d)

$32\frac{1}{13}$

Answer: (c)

8.

A company buys raw materials for ₹10,000 and manufactures a product that costs an additional ₹5,000 in labour and overhead. The product is sold to a distributor for ₹25,000, who marks it up by 20% and sells it to a retailer. The retailer then marks it up by another 25% and sells it to the end customer. What is the overall percentage profit made by the company, distributor, and retailer combined?

(a)

100%

(b)

150%

(c)

125%

(d)

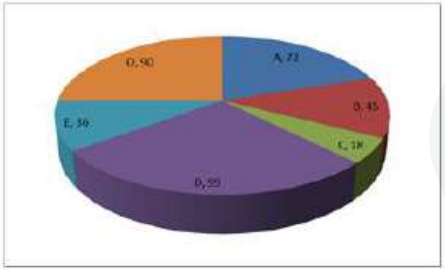
135%

Answer: (b)

9.

The pie diagram represents the export of different types of fabrics (in degree measure) from India during 2015.

Out of the total export, what is the percentage of fabric B?



(a)

45%

(b)

25%

(c)

12.5%

(d)

18%

Answer: (c)

10.

Find the area (in cm^2) of the rhombus, lengths of whose diagonals are, respectively, 7.5 cm and 5.6 cm.

(a)

21

(b)

28

(c)

27

(d)

30

Answer: (a)

11.

The average age of 25 students in a group is 14 years. When the teacher's age is included, the average increases by 1.5 years. What is the teacher's age (in years)?

(a)

42

(b)

50

(c)

53

(d)

46

Answer: (c)

12.

If $a : b = 3 : 7$, then the ratio of $(5a + 7b) : (7a + 5b)$ is:

(a)

3 : 7

(b)

7 : 11

(c)

7 : 9

(d)

8 : 7

Answer: (d)

13.

Two-fifth of a journey is covered at a speed of 45 km/h, and the remaining distance is covered at the rate of 63 km/h. The average speed for the whole journey (in km/h, rounded off to the nearest integer) is:

(a)

60

(b)

58

(c)

54

(d)

55

Answer: (c)

14.

Some solid metallic right circular cones, each with diameter of the base 8 cm and height 6 cm are melted to form a solid sphere of radius 12 cm. Find the number of right circular cones which are melted.

(a)

60

(b)

66

(c)

72

(d)

70

Answer: (c)

15.

Radha, Pratima and Reena begin to jog around a circular path and they complete their revolutions in 50 seconds, 75 seconds and 100 seconds, respectively. After how much time (in minutes) will they meet together at the starting point for the first time?

(a)

6

(b)

5

(c)

4

(d)

3

Answer: (b)

16.

A, B and C can complete a piece of work in 12 days, 24 days and 36 days, respectively. A starts working alone on the first day and then A is assisted by B on the second day and C on the third day, respectively. This pattern is repeated till the work gets completed. In how many days does the work will be over?

(a)

9

(b)

10

(c)

$9\frac{1}{2}$

(d)

$8\frac{1}{2}$

Answer: (c)

17.

The table shows the annual expenditure of five families during the last 5 years. (In ₹ Thousands)

Year→ Family ↓	2017	2018	2019	2020	2021
F_1	35	50	55	60	45
F_2	45	35	60	55	40
F_3	53	40	45	65	50
F_4	40	30	35	50	
F_5	35	45	55	50	45

Which family had the highest expense throughout the years?

(a)

F_5

(b)

F_4

(c)

F_3

(d)

F_1

Answer: (c)

18.

In how many years will ₹1,60,000 become ₹2,79,841 at a compound interest (Compounded annually) rate of 15% per annum?

(a)

6

(b)

3

(c)

5

(d)

4

Answer: (d)

19.

Identify the single rational number that may replace the given expression.

$[1^2 + 2^2 + 3^2 + 4^2] \times \frac{2}{3\times5} \div (\frac{1}{4})^2$

(a)

16

(b)

64

(c)

$\frac{1}{64}$

(d)

$\frac{1}{16}$

Answer: (b)

20.

Two trains A and B, 210 m and 150 m, respectively, in length, are running in the same direction on parallel lines. If the speed of A and B be 110 km/h and 128 km/h, respectively, then what will be the time (in seconds) taken by train B to cross train A?

(a)

72

(b)

74

(c)

71

(d)

70

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 trees are mobiles. Some mobiles are small. All small are ants.

Conclusion I: Some trees are mobiles.

Conclusion II: Some ants are small.

(a)

Only conclusion (II) is follow.

(b)

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

(c)

Only conclusion (I) is follow.

(d)

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

Answer: (d)

2.

If A means '−', E means '×', D means '÷', G means '+', then what will come in place of question mark (?) in the following equation?

21 G 14 D 1 A 2 E 8 = ?

(a)

11

(b)

25

(c)

17

(d)

19

Answer: (d)

3.

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

$10 \div 2 - 6 \times 7 + 1 = ?$

(a)
24

(b)
19

(c)
18

(d)
15

Answer: (d)

4.

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

57 62 72 77 87 ?

(a)
94

(b)
93

(c)
92

(d)
91

Answer: (c)

5.

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

LAT, KYS, JWR, IUQ, ?

(a)
GRQ

(b)
HSP

(c)
ISP

(d)
HQR

Answer: (b)

6.

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 apples are fire. All fire is hot. Some hot are crabs.

Conclusion I: No apples are hot.

Conclusion II: Some crabs are fire.

(a)

Only conclusion (II) is follow.

(b)

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

(c)

Only conclusion (I) is follow.

(d)

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

Answer: (b)

7.

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

DFZ_ D_CJ DF_I _FIH DF_G

(a)

DLFFK

(b)

KFFDL

(c)

KDFLF

(d)

FDFKL

Answer: (b)

8.

22 is related to 198 following a certain logic. Following the same logic, 41 is related to 369. To which of the following is 54 related to, following the same logic?

(a)
286
(b)
486
(c)
268
(d)
468

Answer: (b)

9.

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

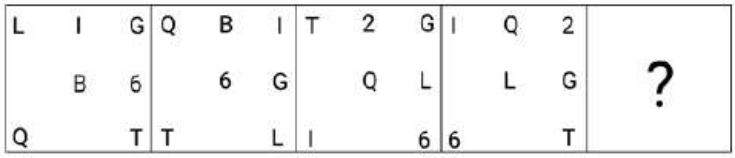
7 16 43 ? 367 1096 3283

(a)
105
(b)
117
(c)
124
(d)
98

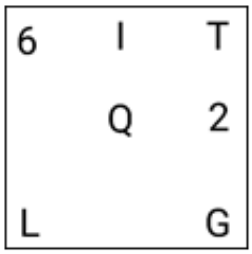
Answer: (c)

11.

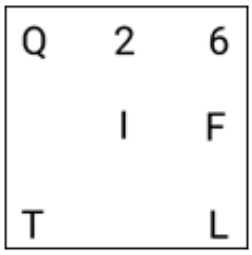
Which figure should replace the question mark (?) if the following figure series were to be continued?



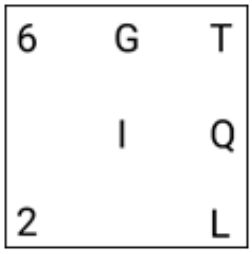
(a)



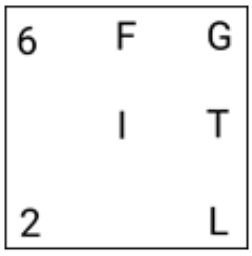
(b)



(c)



(d)



Answer: (d)

13.

In a certain code language, 'SCAR' is coded as '2386' and 'RACE' is coded as '8642'. What is the code for 'E' in the given code language?

(a)

8

(b)

4

(c)

2

(d)

6

Answer: (b)

14.

In a certain code language, 'QUALIFY' is coded as 'PTZKHYF' and 'PANTHER' is coded as 'OZMSGRE'. What is the code for 'FORCEPS' in the given code language?

(a)

EMOCDRQ

(b)

DMQCERP

(c)

DNPCDSQ

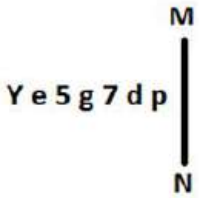
(d)

ENQBDSP

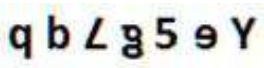
Answer: (d)

15.

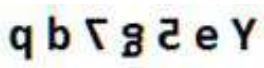
Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.



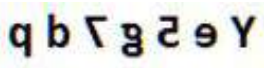
(a)



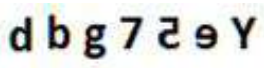
(b)



(c)



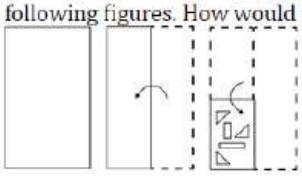
(d)



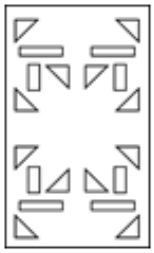
Answer: (c)

16.

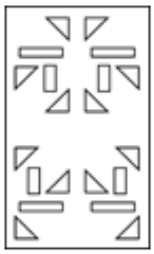
The sequence of folding a piece of paper and the manner in which the folded paper is cut is shown in the following figures. How would this paper look when unfolded?



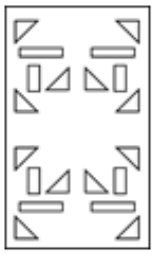
(a)



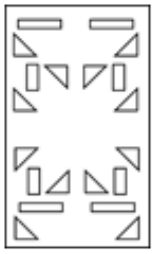
(b)



(c)



(d)



Answer: (a)

17.

If 13th March 2007 is Tuesday then what will be the day of the week on 14th Sep 2017?

(a)

Monday

(b)

Tuesday

(c)

Thursday

(d)

Wednesday

Answer: (c)

19. Seven people, V, F, D, S, R, C, and P are sitting in a straight line, facing south. Only two people sit between V and P. Only two people sit to the right of V. D sits third to the left of S. P is an immediate neighbour of D and F. C is an immediate neighbour of S.

Total how many people sit between S and P?

(a) Four

(b) One

(c) Three

(d) Two

Answer: (c)

General Awareness

1. In which year did the 'Battle of Buxar' take place?

(a) 1764 CE

(b) 1769 CE

(c) 1757 CE

(d) 1761 CE

Answer: (a)

2. Which Article of the Indian Constitution mandates that the state should protect every monument or place of artistic or historic interest?

(a) Article 39A

(b) Article 50

(c) Article 49

(d) Article 48A

Answer: (c)

3. To mark the celebration of Gandhi Jayanti, the _____ celebrates it as International Day of Non-Violence.

(a) United Nations
(b) BRICS Nations
(c) South Asian Association for Regional Cooperation
(d) Group of 20

Answer: (a)

4. Alarmel Valli is a _____ dancer.

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

Answer: (a)

5. Which of the following is an example of a microfinance institution (MFI) in India?

(a) State Bank of India (SBI)
(b) Bandhan Bank
(c) ICICI Bank
(d) HDFC Bank

Answer: (b)

6. Which of the following is an autobiography by Ma na Gandhi?

(a) The Story of My Experiments with Truth
(b) My Truth
(c) Matters of Discretion
(d) My Country My Life

Answer: (a)

7. Which of the following has initiated the Village Defence Guards scheme to instil a sense of self protection and ensure the safety and security of villages and infrastructural installations in and around the villages?

(a) Ladakh
(b) Uttar Pradesh
(c) Jammu and Kashmir
(d) Rajasthan

Answer: (c)

8. The Sirpur Shrine is situated in which of the following states?

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

Answer: (c)

9.

Which of the following factors does NOT affect the climate of India?

(a)

Altitude

(b)

Longitude

(c)

Latitude

(d)

Winds

Answer: (b)

10. What is the common name for a saturated solution of calcium hydroxide widely used as a raw material in the chemical industry?

(a) Slaked lime

(b) Calomel

(c) Burnt Lime

(d) Limestone

Answer: (a)

11. Who among the following singers is from Andhra [illegible]desh?

(a) Usha Uthup

(b) Asha Bhosle

(c) Alka Yagnik

(d) S Janaki

Answer: (d)

12. Who led the Congress in the second round table conference held in London?

(a) Annie Besant

(b) Sarojini Naidu

(c) Jawahar Lal Nehru

(d) Mahatma Gandhi

Answer: (d)

13. According to the Census of India 2011, which state has the second highest sex ratio?

(a) Kerala

(b) Tamil Nadu

(c) Assam

(d) Bihar

Answer: (b)

14. Factor cost is also known as:
    (a) market cost
    (b) ex-factory cost
    (c) input cost
    (d) output cost
    Answer: (c)

15. Which cell found in the bone marrow acts as a repair system for the body?
    (a) Bone Cells
    (b) Fat Cells
    (c) Muscle cells
    (d) Stem cells
    Answer: (d)

16. Which of the following is a famous folk dance of Rajasthan?
    (a) Chang Lo
    (b) Daskathia
    (c) Kalbelia
    (d) Pala Jatra
    Answer: (c)

17. When was the first general election for Lok Sabha held in India?
    (a) 1950-51
    (b) 1949-50
    (c) 1948-49
    (d) 1951-52
    Answer: (d)

18. Who among the following female singers has been felicitated with the Bharat Ratna?
    (a) Usha Uthup
    (b) Lata Mangeshkar
    (c) Asha Bhosle
    (d) Vani Jayaram
    Answer: (b)

19. Which of the following states of India is the first to receive rainfall from the South West Monsoon?
    (a) Himachal Pradesh
    (b) Kerala
    (c) Telangana
    (d) Rajasthan
    Answer: (b)

20.

Which famous Indian danseuse became the first woman to be nominated as a member of Rajya Sabha?

(a)

Rukmini Devi Arundale

(b)

Kamala Kumari

(c)

Sitara Devi

(d)

Mrinalini Sarabhai

Answer: (a)

21.

Which of the following is a famous novel written by Munshi Premchand?

(a)

Gunaho Ka Devta

(b)

Kitne Pakistan

(c)

Rag Darbari

(d)

Godan

Answer: (d)

22. India played in the finals of the 2023 World Test Championship against Australia. Where was this match conducted?

(a) Dubai

(b) London

(c) Kolkata

(d) Sydney

Answer: (b)

23. D Gukesh was awarded player of the year award in March 2023. He plays which sport?

(a) Snooker

(b) Boxing

(c) Badminton

(d) Chess

Answer: (d)

24. According to the Ministry of Textile 2022-23, which state is the second largest producer of cotton?

(a) Maharashtra
(b) Bihar
(c) Gujarat
(d) Madhya Pradesh

Answer: (a)

25. In which of the following States was the final of the 2023 Intercontinental Cup football championship held?

(a) Maharashtra
(b) Telangana
(c) Karnataka
(d) Odisha

Answer: (d)

English Language and Comprehension

1. Select the INCORRECTLY spelt word.

(a) Humorous
(b) Necassery
(c) Apparent
(d) Definite

Answer: (b)

2. Select the option that can be used as a one substitute for the given group of words. A small shop that sells fashionable clothes

(a) Boutique
(b) Store
(c) Tailoring
(d) Couture

Answer: (a)

3. Parts of the following sentence have been given as options. Select the option that contains an error. The blue is a beautiful colour.

(a) The blue
(b) is
(c) a
(d) beautiful colour

Answer: (a)

4. Select the most appropriate option to fill in the blank. The Nile is the _____ river of the world.

(a) long
(b) longer
(c) more longer
(d) longest

Answer: (d)

5. Parts of the following sentence have been given as options. Select the option that contains an error.

Tuntun and her friends dance beautiful.

(a) dance
(b) and her friends
(c) Tuntun
(d) beautiful

Answer: (d)

6. Select the most appropriate idiom to fill in the blank. It's risky to invest all your savings in one company; it's like _____.

(a) going down in flames
(b) putting all your eggs in one basket
(c) biting the bullet
(d) breaking a leg

Answer: (b)

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

Sometimes we have to accept replacing something with something else, if we want to move forward.

(a) evaluation
(b) change
(c) invasion
(d) invention

Answer: (b)

8. Select the most appropriate ANTONYM of the given word. Dishevelled

(a) Assertive
(b) Tidy
(c) Tainted
(d) Rigid

Answer: (b)

9. Select the most appropriate option to fill in the blank. I _____ to many countries to find the source of true happiness.

(a) triveled
(b) travelled
(c) travalled
(d) travelld

Answer: (b)

10. Select the INCORRECTLY spelt word.

(a) Abhorrent
(b) Jugglary
(c) Gesture
(d) Magnificence

Answer: (b)

11. Select the most appropriate meaning of the underlined idiom in the following sentence.

Irrespective of the chaos in the classroom, our class teacher stays cool as a cucumber.

(a) Stays calm and composed
(b) Behaves like a vegetable
(c) Scolds all the students in the classroom
(d) Develops a fever

Answer: (a)

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

(a) Marvel
(b) Miracle
(c) Ardent
(d) Accident

Answer: (d)

13. Select the most appropriate option to fill in the blank. He is a smug and very _____ person who thinks only about himself.

(a) arsonist
(b) diffident
(c) egoistic
(d) humble

Answer: (c)

14. Select the word segment which substitutes the bracketed word correctly and completes the sentence meaningfully. I (am here) since 1981.

(a) have been here

(b) had been here

(c) was here

(d) has been here

Answer: (a)

15. Parts of the following sentence have been given as options. Select the option that contains an error. You shall repented tomorrow for your misdeeds.

(a) for your misdeeds

(b) tomorrow

(c) shall repented

(d) You

Answer: (c)

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

She think Alex is abandoning her.

(a) was thinking

(b) thought

(c) thinks

(d) was to think

Answer: (c)

17. Select the most appropriate segment that can substitute the bracketed word in the following sentence. The bridge that (connecting) the two valleys across the Brahmaputra river has recently been constructed in Arunachal Pradesh.

(a) will be connecting

(b) had connected

(c) will be connected

(d) connects

Answer: (d)

18. Select the most appropriate idiom to fill in the blank. Naina has six children, and I always _____ with their names.

(a) get mixed up

(b) get rid of

(c) get away clean

(d) get cold feet

Answer: (a)

19. Select the most appropriate option to fill in the blank. When it comes to planning her wedding, Maria wants _____.

(a) down for the count
(b) a black sheep
(c) the whole fifteen miles
(d) the whole nine yards

Answer: (d)

20. Select the most appropriate option to fill in the blank.

I know that I can count on my best friend to be by my side through ____ and thin.

(a) tough
(b) heavy
(c) thick
(d) fat

Answer: (c)

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. I do not know how the party ended. I do not want to know. I went (1)___ upstairs, and undressed and (2)___ into bed, and lay there in the burning dark while the last guest gurgled in the hall below about the wonderful evening she had spent. I lay there (3)___ the front door shut after her, and Lavinia's steps came up the stairs and passed the door to the guest room beyond. And then after a couple of centuries (4)___, the clock struck three and I (5)___ to sleep.

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

(a) over
(b) through
(c) around
(d) straight

Answer: (d)

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

(a) gnawed
(b) lurched
(c) peeped
(d) crawled

Answer: (d)

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

(a) still
(b) toward
(c) while
(d) down

Answer: (c)

24. Select the most appropriate option to fill in blank no. 4.
    (a) crossed
    (b) eroded
    (c) elapsed
    (d) persisted

    Answer: (c)

25. Select the most appropriate option to fill in blank no. 5.
    (a) dozed off
    (b) called off
    (c) took off
    (d) put off

    Answer: (a)

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

Reasoning Ability and Problem Solving

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

General Awareness

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

English Language and Comprehension

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