SSC CHSL- MODEL PAPER

ENGLISH COMPREHENSION

Q1.Directions: In these questions the sentences have been given in **Active/ Passive Voice**. From the given alternatives choose the one which best expresses the given sentence in Passive/Active Voice.
This surface feels smooth
(a)This surface is felt smooth
(b)This surface is smooth when it is felt
(c)This surface when felt is smooth
(d)This surface is smooth as felt

Q2.Directions: In these questions the sentences have been given in **Active/ Passive Voice**. From the given alternatives choose the one which best expresses the given sentence in Passive/Active Voice.
He would have written this essay in time.
(a)The essay was written on time.
(b)This essay would have been written by him in time.
(c)The essay was written by him in time.
(d)He wrote the essay on time.

Q3.Directions : In these questions choose the word opposite in meaning to the word given in bold.
ANXIOUS
(a)fearful
(b) worried
(c)calm
(d)concerned

Q4.Directions : In these questions choose the word opposite in meaning to the word given in bold.
PERILLOUS
(a) carefree
(b) (2)strong
(c) safe
(d) bright

Q5.Directions: In the following questions, a sentence has been given in **Direct/Indirect Speech**. Out of the four alternatives suggested, select the one which best expresses the same sentence in Indirect/Direct Speech.
 "How did it get here.?" She wanted to know.
(a)She wanted to know how did it get here.
(b)She wanted to know how it had got there.
(c)She wanted to know how did it got there.
(d)She wanted to know how it get there.

Q6.Directions: In the following questions, a sentence has been given in **Direct/Indirect Speech**. Out of the four alternatives suggested, select the one which best expresses the same sentence in Indirect/Direct Speech.
 "Can you see a woman seated On the bench in a park ?" Alice asked her.

(a)Alice asked her if she can see a woman seated on the bench in a park.
(b)Alice told her if she could see a woman seated on the bench in a park.
(c)Alice asked her If she could see a woman seated on the bench in a park.
(d)Alice asked her if she could have seen a woman seated on the bench in a park.

Q7. Directions : In each questions read each sentence to find out the whether there is **any error** in it. The error if any will be in one part of the sentence. The number of that part is the answer.   Ignore the errors of punctuations if any.
She pretends as if she has (1)/ never In her life (2)/told a lie Isn't it ? (3)/No error(4)
(a) She pretends as if she has
(b) never In her life
(c) told a lie Isn't it ?
(d)No error

Q8. Directions : In each questions read each sentence to find out the whether there is **any error** in it. The error if any will be in one part of the sentence. The number of that part is the answer.   Ignore the errors of punctuations if any.
A few tiles on Skylab(1) were the only equipments (2)/ that failed to perform well in outer space(3)/ No error (4)
(a) A few tiles on Skylab
(b) were the only equipments
(c) that failed to perform well in outer space
(d) No error

Q9. If l had worked hard I _____ very high marks in the examination
(a)scored
(b)would score
(c)could score
(d)would have scored

Q10. Do not stay in the grasslands after dark as some animals become _____ when they see humans
(a) provoked
(b) alerted
(c) aggressive
(d) threatened

Q11.Directions: In the following questions, four alternatives are given for the **Idiom/Phrase** printed in bold in the sentence. Choose the alternative which best expresses the meaning of the Idiom/ Phrase.
His failure at the election has been a sore point with him for a long time.
(a)something which hurts
(b)something that brings fear to
(c)something memorable for
(d)something pleasurable to

Q12.Directions: In the following questions, four alternatives are given for the **Idiom/Phrase** printed in bold in the sentence. Choose the alternative which best expresses the meaning of the Idiom/ Phrase.
to smell a rat
(a)to smell foul
(b)to see a rat
(c)to chase a rat
(d)to be suspicious

Q13. Directions: Out of the four alternatives, choose the one which can be **substituted** for the given words/sentence.
A pen for small animals
(a)Hutch
(b)Lair
(c)Den
(d)Cage

Q14. Directions: Out of the four alternatives, choose the one which can be **substituted** for the given words/sentence.
To struggle helplessly
(a)Flounder
(b)Founder
(c)Fumble
(d)Finger

Q15. Directions : In these questions, the first and last sentence of the passage are numbered 1 and 6. The rest of the passage is split into four parts and named P,Q,R,S . These four parts are not given in proper order. Read the sentences and find out which of the four combinations is correct.
 (1) The internet has given
(P)to keep in touch with friends
(Q)and even allowed them
(R)students access to reams of information
(S)made it cheaper
(6) to attend universities remotely
(a) RPSQ
(b)RSPQ
(c) SRPQ
(d)PRSQ

Q16. Directions : In these questions, the first and last sentence of the passage are numbered 1 and 6. The rest of the passage is split into four parts and named P,Q,R,S . These four parts are not given in proper order. Read the sentences and find out which of the four combinations is correct.
 1. His son fell into bad company of village boys.
P.The father wanted to wean his son from bad company.
Q.A few days later all bananas, got spoiled
R.His father was much worried about his son's bad company

S.To give a lesson to the son, his father gave him a few good bananas with a rotten one.
6.The boy understood the desired lesson his father wanted to give him.
(a) RPSQ
(b) SQPR
(c) PSQR
(d) QSPR

Q17.Directions: In the following questions, a sentence/ part of the sentence is printed in bold. Below are given alternatives which may **improve the bold part**. Choose the correct alternative. In case no improvement is needed, your answer is No Improvement.
It is a three years degree course.
(a)an three years degree course
(b)a three-year degree course
(c)a three years degree course
(d)No improvement

Q18.Directions: In the following questions, a sentence/ part of the sentence is printed in bold. Below are given alternatives which may **improve the bold part**. Choose the correct alternative. In case no improvement is needed, your answer is No Improvement.
I did not saw my cousin in Madras.
(a)not seen
(b)did not see
(c)did not seen
(d)No improvement

Q19.Directions: In the following questions out of the four alternatives, choose the one which best expresses, the meaning of the given word.
LITTLE
(a)trivial
(b) petty
(c) sample
(d) simple

Q20.Directions: In the following questions out of the four alternatives, choose the one which best expresses, the meaning of the given word.
REVERIE
(a)determination
(b)day-dream
(c)reality
(d)realization

Q21.DIRECTIONS : YOU HAVE ONE BRIEF PASSAGE WITH LIVE QUESTIONS. READ THE PASSAGE CAREFULLY AND CHOOSE THE BEST ANSWER TO EACH QUESTION OUT OF THE FOUR ALTERNATIVES.
Long ago in Mongolia there lived an emperor who feared growing old. One day he saw an old man in the street. Upset at being reminded that someday he too would age he ordered all the Old people to leave his land. One day a violent storm swept the kingdom. Nothing was

safe from its fury. It roared into the palace and blew away the emperor s belongings including his priceless golden pitcher. When the storm ended the emperor ordered that the pitcher be found and brought back to him. People went in search of the pitcher. They saw it in a lake nearby. But no matter who tried no one could get a grip on the pitcher. All they got was a handful of water Yet it could be plainly seen glittering and just below the water surface.

The emperor was upset to see the old man because
(a)it reminded him that he might fall ill.
(b)it reminded him that he would grow old too.
(c)it reminded him that he had to colour his hair.
(d)it reminded him of his grandfather.

Q22. The people saw the golden pitcher
(a) in a lake nearby.
(b) in a pit nearby.
(c) inside the palace.
(d) in a river nearby.

Q23. The emperor s orders were that all the
(a)old men should leave his land.
(b)old men should live in his land.
(c)young men should stay in his land.
(d)children should leave his land.

Q24. What did the people who went to bring the pitcher get?
(a) A handful of water.
(b)A handful of air.
(c) The pitcher s handle.
(d)Nothing at all.

Q25. The emperor feared
(a) getting young.
(b)getting weak.
(c) getting ill.
(d)getting old.

NUMERICAL APTITUDE
Q26.A box has 100 blue, 50 red balls, 50 black balls, 25% of blue balls and 50% of red balls are taken away, percentage of black balls at present is;
(a)50%
(b) 25%
(c)100/3%
(d) 30%

Q27.A sum of money is paid is paid back in two annual installments of Rs. 17,640 each, allowing 5% compound interest compounded annually. The sum borrowed was
(a) Rs.32800
(b) Rs.32400
(c) Rs. 32000
(d) Rs. 32200

Q28. From the peak of a hill which is 300m high, the angle of depression of two sides of a bridge lying on a ground are 45 degree and 30 degree (both ends of the bridge are on the same side of the hill) then the length of the bridge is
(a) (a) 300($\sqrt{3}$-1) m
(b) 300($\sqrt{3}$-1)
(c) 300$\sqrt{3}$m
(d) 300/$\sqrt{3}$ m

Q29. The distance between centers of two circles of radii 3 cm and 8 cm is 13 cm. If the points of contact of a direct common tangent the circles are P and Q, then the length of the line segment PQ is:
(a)11.9cm
(b) 12 cm
(c) 11.5 cm
(d) 11.58 cm

Q30. Let x be the least number, which when divided by 5,6, 7 and 8 leaves a remainder 3 in each case but when divided by 9 leaves remainder
0. The sum of digits of x is :
(a) 24
(b) 21
(c) 22
(d) 18

Q31. The simplifiedvalue of (secA.cosA)^2+ (cosecA-sinA)^2– (cotA-tanA)^2
(a) 0
(b) 1/2
(c) 1
(d) 2

Q32. If tanθ = $\frac{\sin \alpha - \cos \alpha}{\sin \alpha + \cos \alpha}$, then sin α + cos α is:
(a) ±$\sqrt{2}$ sin θ
(b) ±$\sqrt{2}$ cos θ
(c) ± 1/$\sqrt{2}$ sin θ
(d) ± 1/$\sqrt{2}$ cos θ

Q33.A cistern 6 m long and 4 m wide contains water up to depth of 1m 25 cm. The total area of the wet surface is
(a) 55m^2
(b) 53.5^2
(c) 50m^2
(d) 49m^2

Q34. If a sin θ + b cos θ =c, then a cos θ – b sin θ is equal to :
(a) ±$\sqrt{a+b+c}$
(b) ±$\sqrt{a^2+b^2-c^2}$
(c) ±$\sqrt{a^2+b^2+c^2}$
(d) ±$\sqrt{c^2+a^2-b^2}$

Q35. If x = $\sqrt{3}$ + $\sqrt{2}$ then the value of x^3– $\frac{1}{x^3}$ is

(a) 10√2
(b) 14√2
(c) 22√2
(d) 8√2

Q36. $\dfrac{6^2+7^2+8^2+9^2+10^2}{\sqrt{7+4\sqrt{3}}-\sqrt{4+2\sqrt{3}}}$ is equal to
(a) 330
(b) 355
(c) 305
(d) 366

Q37. Two trains start at the same time from Aligarh and Delhi and proceed towards each other at the rate of 14 km/hr and 21 km per hour respectively. When they meet, it is found that one train has travelled 70 km more than the other. The distance between two stations is
(a) 140 km
(b) 350 km
(c) 210 km
(d) 330 km

Q38. If $a^{1/3} + b^{1/3} + c^{1/3} = 0$, then a relation among a, b, c is:
(a) a + b + c = 0
(b) $(a+b+c)^3 = 27\ abc$
(c) a + b + c = 3abc
(d) $a^3 + b^3 + c^3 = 0$

Q39. In how many years will a sum of money double itself at 12% per annum?
(a) 8 yrs., 6 months
(b) 6 yrs. 9 months
(c) 8 yrs. 4 months
(d) 7 yrs. 6 months

Q40. Divide 27 into two parts so that 5 times the first and 11 times the second together equals to 1
95. Then ratio of the first and second parts is:
(a) 3 : 2
(b) 17: 10
(c) 2 : 7
(d) 5 : 4

Q41. 5 men can do a piece of work in 6 days while 10 women can do it in 5 days. In how, days can 5 women and 3 men do it?
(a) 4 days
(b) 5 days
(c)   6 days
(d) 8 days

Q42. The total cost of 8 buckets and 5 mugs is Rs. 92 and the total cost of 5 buckets and 8 mugs is Rs.
77. Find the cost of 2 mugs and 3 buckets.
(a) Rs. 35
(b) Rs. 70
(c) Rs. 30

(d) Rs. 38

Q43. Height of a prism shaped part of a machine is 8 cm and its base is an isosceles triangle, whose each of the equal sides is 5 cm and remaining side is 6 cm. the volume of part is
(a) 90 cm³
(b) 96 cm³
(c) 120 cm³
(d) 86 cm³

Q44. A number x is divisible by 7 When this number is divided by 8,12 and16, if leaves remainder 3 in each ease. The least value of x is :
(a)149
(b)150
(c)147
(d)(b)148

Q45. A merchant offer 8% discount on all his goods and still makes profit of 15%, If an item is marked Rs. 250, then is cost price is
(a) 180
(b) 200
(c) 230
(d) 187

Q46. A circus tent is cylindrical up to a height of 3 m and conical above it. If its diameter is 105 m and the slant height of the conical part is 63 m, then the total area of the canvas required to make the tent is (take pie =22/7)
(a) 11385 m²
(b) 10395 m²
(c) 9900 m²
(d) 990 m²

Q47. The diameter of two hollow spheres made from the same metal sheet is 21 cm and 17.5 cm respectively. The ratio of the area of metal sheets required for making the two spheres is
(a) 6: 5
(b) 36:25
(c) 3 : 2
(d) 18: 25

Q48. Evaluate : 3 cos 80° cosec 10° + 2 cos 59° cosec 31°
(a) 1
(b) 3
(c) 2
(d) 5

Q49. If a = $\dfrac{\sqrt{5}+1}{\sqrt{5}-1}$ & b = $\dfrac{\sqrt{5}-1}{\sqrt{5}+1}$, then the value of $\dfrac{a^2+ab+b^2}{a^2-ab+b^2}$ is :
(a) 3/4
(b) 4/3
(c) 3/5
(d) 5/3

Q50. In an examination there were 640 boys and 360 girls, 60% of boys and 80% of girls were successful. The percentage of failure was :
(a) 20%
(b) 60%
(c) 30.5%
(d) 32.8%

GENERAL INTELLIGENCE & REASONING

Q51.Direction: In each of the following questions, select the related word from the given alternatives.
Mathematics : Logic : : Science : ?
(a) Experiment
(b) Laboratory
(c) Scientist
(d) Facts

Q52.Direction: In each of the following question, select the related number from the given alternatives.
30 : 130 : : ? : ?
(a)20 : 1 20
(b)37 : 2 10
(c)42 : 2 22
(d)49 : 3 50

Q53.Direction: In each of the following questions, select the related letter from the given alternatives.
Earn : near : : reef : ?
(a)feer
(b) free
(c) fere
(d) efre

Q54. P is Q's brother. R is Q's mother. S is R's father. T is S's mother. How is P related to T?
(a)Granddaughter
(b)Great grandson
(c)Grandson
(d)Grandmother

Q55. Find the odd man out from the given responses ?
(a)RQP
(b)HGF
(c)DCB
(d)NPR

Q56. Find the odd man out from the given responses ?
(a)Save
(b) Spill
(c)Spend
(d) Squander

Q57. Find the odd man out from the given responses ?
(a)Eyes
(b)Nose
(c)Lips
(d)Throat

Q58. Find the odd man out from the given responses ?
(a) Aptitude
(b) Altitude
(c) Attitude
(d) Behaviour

Q59. Somu travelled from a point A straight to B, a distance of 12 km. He turned right and travelled 8 km and reached point C. From that point took right turn and travelled 6 km, and reached point D.How far is he away from the starting point?
(a) 10 km
(b) 12 km
(c) 13 km
(d) 14 km

Q60.Directions: In each of the following questions a series is given with one term missing. Choose the correct alternative from the given ones that will complete the series
ACE, BDF, CEG, ?
(a)DEF
(b)DFH
(c)DEH
(d)DFE

Q61.Directions: In each of the following questions a series is given with one term missing. Choose the correct alternative from the given ones that will complete the series

4, 12, 36, 108, ?, 972
(a) 226
(b)324
(c) 423
(d)432

Q62.Directions: In each of the following questions a series is given with one term missing. Choose the correct alternative from the given ones that will complete the series

5,? , 23, 47, 95,
(a)13
(b) 10
(c) 17
(d) 11

Q63.Direction: In each of the following questions, a series is given, with one/two terms missing. Choose the correct alternatives from the given ones that will complete the series.
If 5 x 7 = 5; 12 x 3 = 6; 8x 9 =2,what is the value of 6 x 8 = ?
(a) 5
(b) 6
(c) 8

(d) 2

Q64. If SUPER = 79, SUPREME = 97, then LABOUR = ?
(a) 79
(b) 69
(c) 89
(d) 49

Q65. If BOMBAY is coded as FSQFEC, which word could be coded as QCWSVI ?
(a) MANDYA
(b) MANDAL
(c) MYSORE
(d) MYSOER

Q66. Find the odd man out from the given responses ? 3, 9, 29, 81, 243, 730
27
81
243
730

Q67. Direction:In the following questions a word is followed by four other words one of which cannot be formed by using the letter of the given word. Find this word.
ARCHITECTURE
(a) TACT
(b) CHAT
(c) TORCH
(d) RICH

Q68. Direction: A word is given capital letters. It is followed by four words. Out of these four words, three cannot be formed from the letters. Point out the word which can be formed from the letters of the given word in capital word in capital letter.
ENVIRONMENT
(a)EMINENT
(b) ENTRANCE
(c) ENTERTAIN
(d) MOVEMENT

Q69. Direction: Which one set of letters when sequentially placed at the gaps in the given letters series shall complete .
gfe_ ig_eii_fei_gf__ii
(a)eifgi
(b) figie
(c) ifgie
(d) ifige

Q70. Which one number is wrong in the series ? 225 256 121 289 324
(a)225
(b)256
(c) 121
(d)324

Q71.A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in two matrices given below. The columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, e,g., A' can be represented by 04, 10, etc. and 'B' can be represented by 59, 65, etc. Identify the set for the word MARBLE.

Matrix I

	0	1	2	3	4
0	R	T	S	M	A
1	A	R	T	S	M
2	M	A	R	T	S
3	S	M	A	R	T
4	T	S	M	A	R

Matrix II

	5	6	7	8	9
5	E	G	L	O	B
6	B	E	G	L	O
7	O	B	E	G	L
8	L	O	B	E	G
9	G	L	O	B	E

(a)20, 21, 23, 65, 79, 87
(b)42, 43, 22, 87, 57, 66
(c)31, 10, 12, 58, 86, 55
(d)14, 32, 41, 98, 96, 88

Q72. Directions: which of the answer figures is exactly the mirror image of the given figure?
DANIEL
(1) DANIEL   (2) DANIEL
(3) DANIEL   (4) DANIEL
(a)[1]
(b)[2]
(c)[3]
(d)[4]

Q73. Directions: A piece of paper is folded and cut as shown below. How will it appear when opened? Select your response from the answer figures.
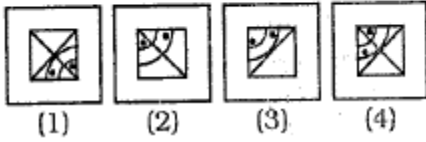Question Figure :

Answer Figures :

(1)   (2)   (3)   (4)
(a)[1]
(b)[2]
(c)[3]
(d)[4]

Q74. Directions: Which answer figure will complete the question figure?
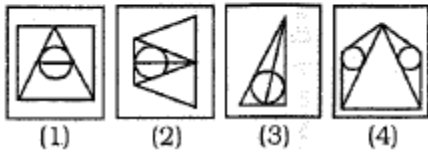
Question Figure :

Answer Figures :

(1)   (2)   (3)   (4)

(a)[1]
(b)[2]
(c)[3]
(d)[4]

Q75.Directions: In which answer figure is the given figure embedded?

Question Figure :

Answer Figures :

(1)   (2)   (3)   (4)

(a)[1]
(b)[2]
(c)[3]
(d)[4]

GENERAL AWARENESS

Q76. Who amidst the following was a wife of emperor Ashoka who in fluenced him?
(a)Chandalika
(b) Charulata
(c) Gautami
(d) Karuwaki

Q77. The main source of revenue for a State Government in India is
(a) Sales tax
(b) Excise duty
(c) Income tax
(d) Property tax

Q78. What is the minimum escape velocity of rocket to be launched into space?
(a) 5 Km Sec.
(b)6 Km Sec.
(c) 11 Km. Sec.
(d) 15 Km. Sec.

Q79. The sensation of weightlessness in a spacecraft in an orbit is due to the
(a)absence of gravity outside
(b)acceleration in the orbit which is equal to the acceleration due to gravity outside
(c)presence of gravity outside but not inside the spacecraft
(d)fact that spacecraft in the orbit has ho energy

Q80. January 26 selected as the date for the inauguration of the Constitution because
(a) it was considered to be auspicious day
(b)on that day the Quit India Movement was started in 1942
(c)the Congress had observed it as the Independence Day in 1930
(d)None of these

Q81. In which year was the "House of the People" named as "Lok Sabha" ?
(a)1954
(b)1964
(c) 1974
(d)1984

Q82. Which of the following is used as a lubricant in heavy machines?
(a) Bauxite
(b) Sulphur
(c) Phosphorus
(d) Graphite

Q83. Catalyst is a substance which
(a) increases the rate of the reaction
(b) decreases the rate of reaction
(c) has no action on the rate of the reaction
(d) None of these

Q84. Who developed the concept World Wide Web ?
(a)Tim Berners Lee
(b)Microsoft
(c)Arthur Clarke
(d)AT&T Bell Lab

Q85. Which of the following is known as the Morning Star?
(a)Saturn
(b)Jupiter
(c)Mars
(d)Venus

Q86. Which one of the following creatures has maximum number of ribs ?
(a) Crocodile
(b)Snake
(c)Ray fish
(d)Flying mammal

Q87. The locomotory organ of Amoeba is
(a)Pseudopodia
(b)Parapodia
(c)Flagella
(d) Cilia

Q88. Steel contains
(a) 12% carbon
(b) 5-10% carbon
(c) more than 10% carbon
(d) no carbon

Q89. Which of the following is a supercooled liquid?
(a) Icecream
(b) Ammonia
(c) Glass
(d) Wood

Q90. A portable personal computer small enough to fit on your lap is called a
(a)Notebook computer
(b)PDA
(c)Mainframe computer
(d)Workstation

Q91. Amount of water vapour in the atmosphere is measured in terms of
(a)Humidity
(b) Droplets
(c)Smog
(d)All of the above

Q92. Who was the first Woman Governor of a State in free India from out of the following ?
(a)Mrs. Sarojini Naidu
(b)Mrs. Sucheta Kriplani
(c)Mrs. Indira Gandhi
(d)Mrs. Vijay Laxmi Pit

Q93. Vikings abandoned Greenland in the beginning of the 15th century when the climate started becoming colder and harsher. During which century had they settled there?
(a)8th
(b)10th
(c)12th
(d)9th

Q94. Cyanide exerts its toxic action by inhibiting the production of
(a)ATP
(b)Oxygen
(c)Hemoglobin
(d)Bile acids

Q95. Many of Gandhi's associates joined him during the course of activities he undertook in his political career to strengthen the national movement. Select the correct statements and choose the right code:
1. Champaran indigo cultivators agitation: Rajendran Prasad, Braj Kishore Prasad and J B Kripalani
2. Ahmedabad textile workers strike: Vallabhbhai Patel and Indulal Yagnik X
3. Kheda peasants: Anasuya Behn
4. South Africa: G K Gokhale
(a)Only 1
(b)1 & 4
(c) 1 & 3
(d) 1, 2 & 3

Q96. King George V visited India during the viceroyalty of
(a)Lord Ripon
(b) Lord Curzon
(c) Lord Harding
(d) Lord Hastings

Q97. One of the following statements is wrong
(a)The Civil Service helps formulate and implement policies
(b)It provides continuity to the administration
(c)It makes laws for the lower levels of administration
(d)It helps manage finances.

Q98. In which of the following areas is the literacy rate highest?
(a) Lakshadweep
(b) Chandigarh
(c) Kerala
(d) Delhi

Q99. The salient feature of the Rig-vedic religion was
(a)worship of the Mother Goddess
(b)worship of nature
(c)worship of the Trimurties
(d)worship of Pashupati

Q100. The largest stupa at Sanchi is assignable to the period of the
(a)Mauryas
(b) Kushanas
(c)Satavahanas
(d) Guptas

1b	**2**b	**3**c	**4**c	**5**b	**6**c
7a	**8**b	**9**d	**10**c	**11**a	**12**d
13a	**14**a	**15**b	**16**a	**17**b	**18**b
19a	**20**b	**21**b	**22**a	**23**a	**24**a
25d	**26**c	**27**a	**28**a	**29**b	**30**d
31c	**32**b	**33**d	**34**b	**35**c	**36**a
37b	**38**b	**39**c	**40**b	**41**b	**42**a
43d	**44**c	**45**b	**46**a	**47**b	**48**d
49b	**50**d	**51**a	**52**a	**53**b	**54**b

55d   **56**a   **57**c   **58**b   **59**a   **60**b
61c   **62**d   **63**c   **64**b   **65**c   **66**d
67c   **68**a   **69**c   **70**c   **71**b   **72**b
73a   **74**b   **75**b   **76**d   **77**a   **78**c
79b   **80**c   **81**a   **82**d   **83**d   **84**b
85d   **86**b   **87**a   **88**a   **89**c   **90**a
91a   **92**a   **93**b   **94**a   **95**b   **96**c
97c   **98**c   **99**b   **100**a