NATA
National Aptitude Test in Architecture

NATA - 2019

(Final Answer key after objections for Test held on 14-Apr-2019)

Q1: If $a^2 - b^2 = 8$ and $a*b = 2$, find $a^4 + b^4$.	
A	4
B	8
C	72
D	64
Correct Ans: **C**	

Q2: Find the value of $\log_y(x^4)$ if $\log_x(y^3) = 2$	
A	6
B	4
C	12
D	3
Correct Ans: **A**	

Q3: How many terms are in the Arithmetic Progression 20, 25, 30,…, 135, 140?	
A	24
B	25
C	23
D	26
Correct Ans: **B**	

Q4: If $\log_{10}10 = 1$, $\log_{10}100 = 2$, what is the value of $\log_5125$?	
A	5
B	25
C	1
D	3
Correct Ans: **D**	

Q5:	A and B together can do a piece of work in 30 days. A having worked for 16 days, B finishes the remaining work alone in 44 days. In how many days shall B finish the whole workalone?
A	30 days
B	40 days
C	60 days
D	70 days
Correct Ans: **C**	

Q6:	If the side of a square increases by 30% its area increases by:
A	56%
B	15%
C	30%
D	69%
Correct Ans: **D**	

Q7:	A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, the how old is B?
A	6
B	10
C	7
D	5
Correct Ans: **B**	

Q8:	Sarthak bought 7 new trading cards to add to his collection. The next day his dog ate half of his collection. There are now only 31 cards left. How many cards did Sarthak start with ?
A	38
B	55
C	35
D	62
Correct Ans: **B**	

Q9:	A salesman has a 70% chance to sell a product to any customer. The behavior of successive customers is independent. If two customers A and B enter, what is the probability that the salesman will sell the product to customer A or B?
A	0.98
B	0.91
C	0.70
D	0.49
Correct Ans: **B**	

Q10:	If the points (2a,a),(a,2a) and (a,a) enclose a triangle of area 18 square units. Then the centroid of the triangle is:
A	(4,4)
B	(8,8)
C	(-4,-4)
D	$(4\sqrt{2}, 4\sqrt{2})$
Correct Ans: **B**	

Q11:	The sum of odd integers from 1 to 2001 is:
A	$(1121)^2$
B	$(1101)^2$
C	$(1001)^2$
D	$(1021)^2$
Correct Ans: **C**	

Q12:	Everybody in a room shakes hands with everybody else. The total number of handshakes is 66. Then the total number of persons in the room is:
A	11
B	12
C	13
D	14
Correct Ans: **B**	

Q13: A circle of maximum possible size is cut from a square sheet. Subsequently, a square of maximum possible size is cut from the resultant circle. What will be area of the final square?	
A	25% of the size of the original square
B	50% of the size of the original square
C	75% of the size of the original circle
D	Double the size of the original circle
Correct Ans: **B**	

Q14: If log2 + log(x+3) - log(3x-5) = log3. The value of x= ?	
A	-6
B	5
C	-3
D	+3
Correct Ans: **D**	

Q15: Evaluate the integral. $\int_2^3 x^4 dx$	
A	$\frac{211}{5}$
B	$2\sqrt{3}$
C	5
D	$\frac{2}{5}$
Correct Ans: **A**	

Q16: The sum of the values of x satisfying $\tan\left(\frac{\pi}{4}+x\right)+\tan\left(\frac{\pi}{4}-x\right)=2$ in the interval $[0,2\pi]$ is:	
A	6π
B	7π
C	4π
D	3π
Correct Ans: **D**	

Q17: A class has n students, we have to form a team of the students including at least two students and also excluding at least two students. The number of ways of forming the team is	
A	$2^n - 2n$
B	$2^n - 2n - 2$
C	$2^n - 2n - 4$
D	$2^n - 2n - 6$
Correct Ans: **B**	

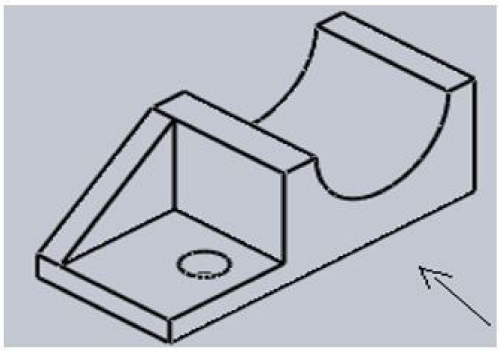
Q18: If a, b, c are odd positive integers, then number of integral solutions of a + b + c = 13, is	
A	14
B	21
C	28
D	56
Correct Ans: **B**	

Q19: The function given by : $x^m y^n = (x + y)^{m+n}$ is:	
A	strictly increasing
B	strictly decreasing
C	constant
D	neither increasing nor decreasing
Correct Ans: **A**	

Q20: The differential equation of all non vertical lines in a plane is:	
A	$\frac{d^2y}{dx^2} = 0$
B	$\frac{dy}{dx} = 0$
C	$\frac{dx}{dy} = 0$
D	$\frac{dy}{dx} + x = 0$
Correct Ans: **A**	

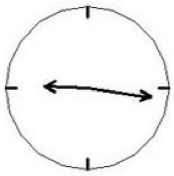
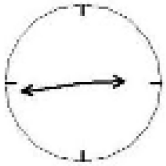
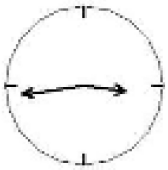
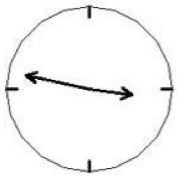
Q21: Which of the following film was directed by SatyajitRay	
A	Bhumika
B	Satranjkekhiladi
C	Nishant
D	Ardhyasatya
Correct Ans: **B**	

Q22: How many surface does this model has



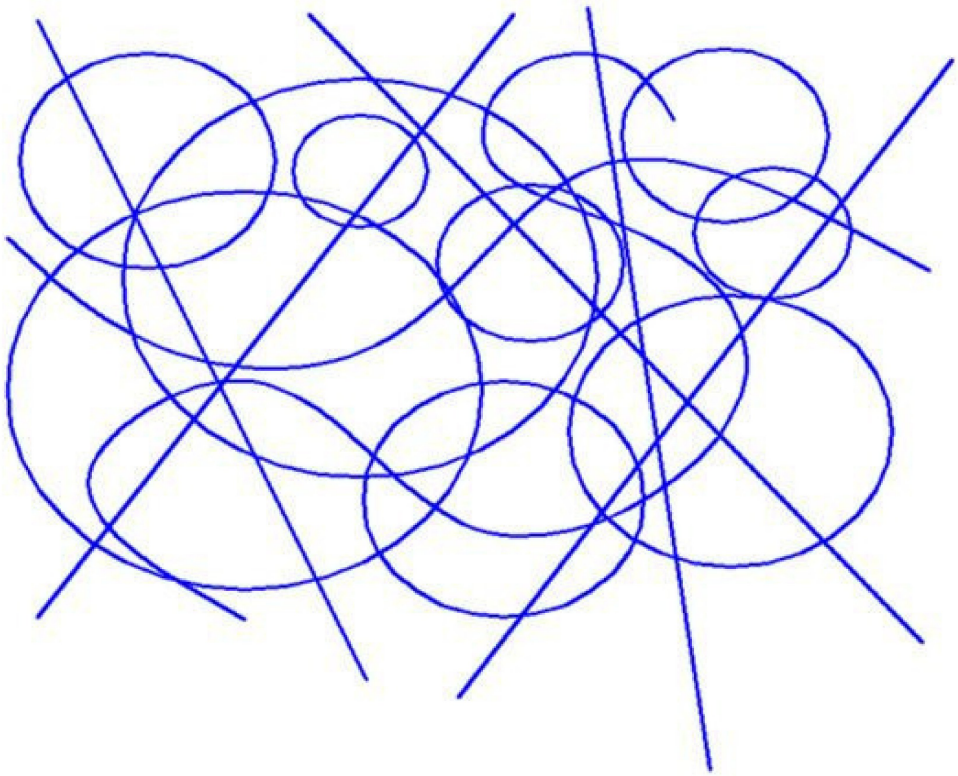
A	12
B	13
C	11
D	14
Correct Ans: **B**	

Q23:	`A' starts his walk in north and turns left, similarly `B' starts his walk from the same point in east direction and then turns right goes straight and then turns left. A & B faces are
A	In same direction
B	In opposite direction
C	Perpendicular to each other
D	None of above
Correct Ans: **B**	

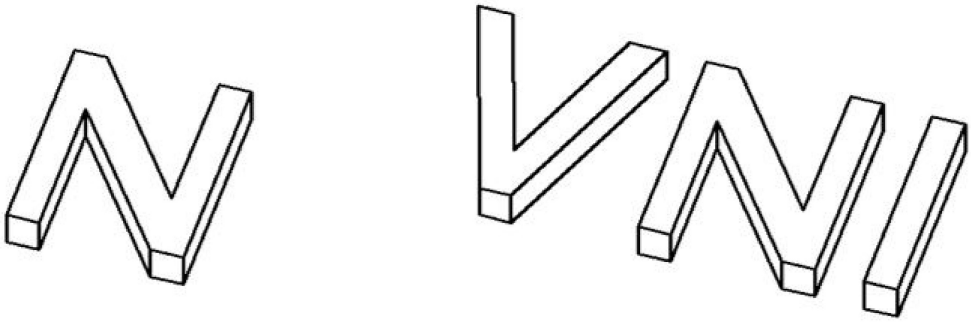
Q24:	Shown below are reflected images of a wall clock in mirror .Which one of the options shows 21:16 correctly.
A	
B	
C	
D	
Correct Ans: **B**	

Q25: How many edges does a Tetrahedron has	
A	4
B	8
C	3
D	6
Correct Ans: **D**	

Q26 : Total number of circles in the given figure are



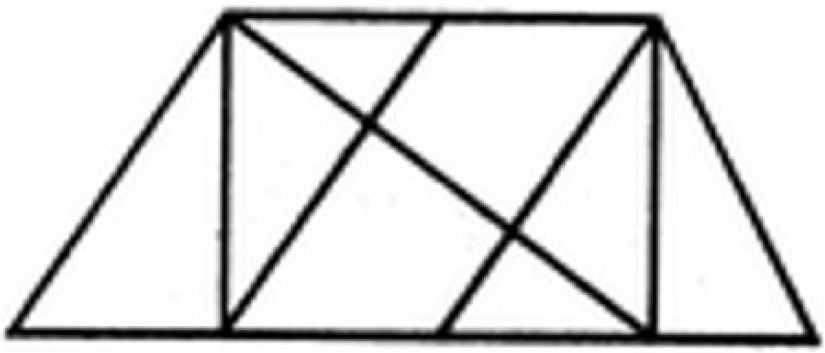
A	10
B	8
C	7
D	9
Correct Ans: **D**	

Q27: If a tank of the shape showed on the left contains 30 units of liquid , how much units would the shape on right approximately contain. 	
A	20
B	60
C	180
D	540
Correct Ans: **B**	

Q28: Ellora Temples in Maharashtra are executed,	
A	Left to Right
B	Top to Bottom
C	Bottom to Top
D	None of above
Correct Ans: **B**	

Q29: A regular hexagonal pyramid is sliced by a plane such that it passes through the centre of its axis . How many additional edges shall be created.	
A	12
B	11
C	9
D	24
Correct Ans: **A**	

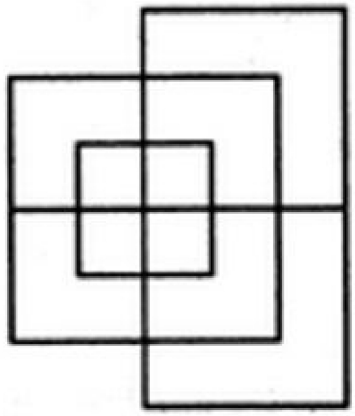
Q30: Find the number of triangles in the given figure.



A	8
B	10
C	12
D	14

Correct Ans: **D**

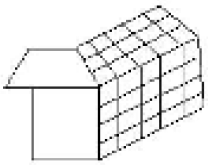
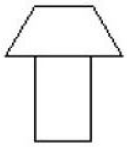
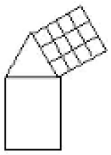
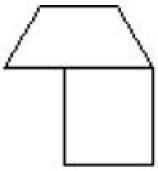
Q31: Find the minimum number of straight lines required to make the given figure.



A	13
B	15
C	17
D	19

Correct Ans: **A**

Q32: In a certain code language COMPUTER is written as RFUVQNPC. How will MEDICINE be written in that code language?	
A	MFEDJJOE
B	EOJDEJFM
C	MFEJDJOE
D	EOJDJEFM
Correct Ans: **D**	

Q33: Which of the given options represents the front view of the given 3-D figure of a house? 	
A	
B	
C	
D	None of these
Correct Ans: **C**	

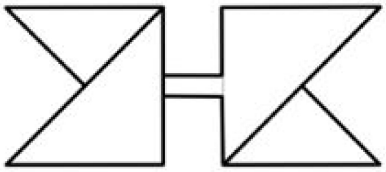
Q34: Which city is known as PINK CITY	
A	Delhi
B	Jaipur
C	Udaipur
D	Jodhpur
Correct Ans: **B**	

Q35: Which of the following does not form a part of Reinforced Cement Concrete?	
A	Steel
B	Cement
C	Sand
D	Lime
Correct Ans: **D**	

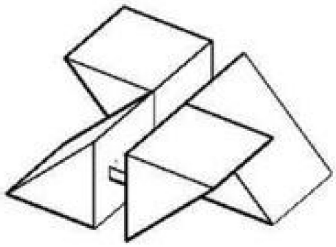
Q36: If South-East becomes North, North-East becomes West and so on. What will West become?	
A	North-East
B	North-West
C	South-East
D	South-West
Correct Ans: **C**	

Q37: One morning after sunrise, Suresh was standing facing a pole. The shadow of the pole fell exactly to his right. To which direction was he facing?	
A	East
B	West
C	South
D	Data is insufficient
Correct Ans: **C**	

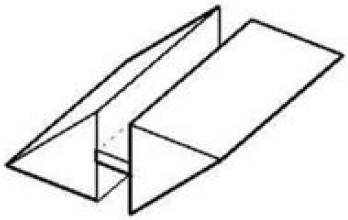
Q38: From the options provided, choose the 3-Dimensional drawing that best fits the side view shown below:



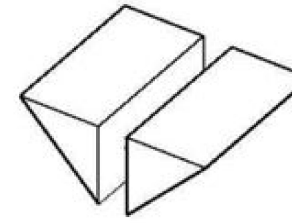
A



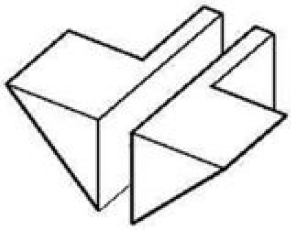
B



C



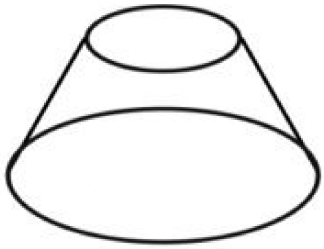
D



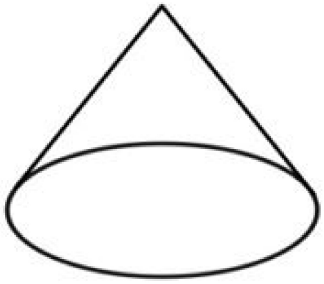
Correct Ans: **A**

Q39: Which one is a truncated cone?

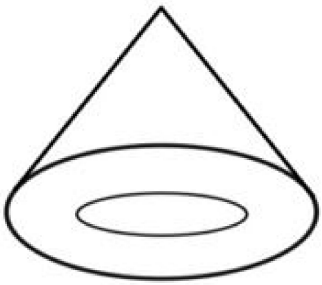
A



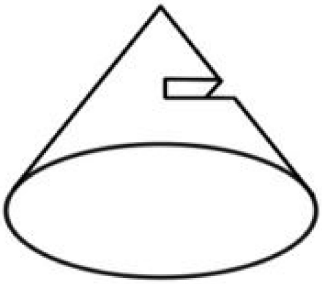
B



C



D



Correct Ans: **A**

Q40: How many faces and edges does an octahedron have?	
A	6 faces, 12 edges
B	12 faces, 8 edges
C	8 faces, 16 edges
D	8 faces, 12 edges
Correct Ans: **D**	

Q41: On which river does Guwahati stand?	
A	Gomti
B	Godavari
C	Brahmaputra
D	Beas
Correct Ans: **C**	

Q42: Which is the largest brackish water lake in Asia?	
A	Loktak Lake
B	Dal Lake
C	Mansarovar
D	Chilkha Lake
Correct Ans: **D**	

Q43: Ar. B V Doshi was awarded the Pritzker Architecture Prize in the field of Architecture, in the year.	
A	2018
B	2017
C	2016
D	2015
Correct Ans: **A**	

Q44: Which architect designed the Assembly Hall and High Court buildings in Chandigarh?	
A	Ar.Achyut Kanvinde
B	Ar. Charles Correa
C	Ar. Le Corbusier
D	Ar. Raj Rewal
Correct Ans: **C**	

Q45: Name the largest single religious building in the world.	
A	Konark Sun Temple
B	Brihadishwara Temple
C	Angkor Wat
D	Vatican City
Correct Ans: **C**	

Q46: What is a vertical load bearing component of a building called?	
A	Beam
B	Column
C	Lintel
D	Sill
Correct Ans: **B**	

Q47: Granite is a _____ rock.	
A	Igneous
B	Sedimentary
C	Calcareous
D	Metamorphic
Correct Ans: **A**	

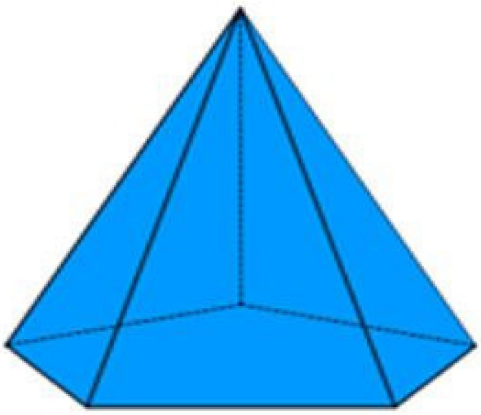
Q48: Identify the below (in picture) structure.



A	Colosseum
B	Pantheon
C	Agora
D	Forum

Correct Ans: **A**

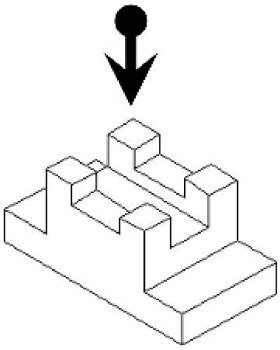
Q49: The development of lateral surfaces of a pentagonal pyramid is _____

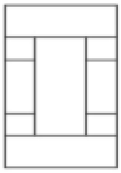
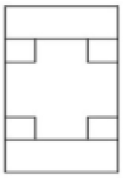
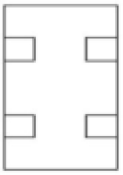
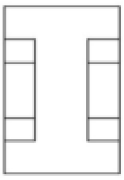


A	Five rectangles
B	Five squares
C	Five triangles
D	Five circles

Correct Ans: **C**

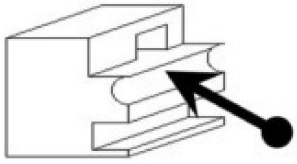
Q50: The figure shows a 3 dimensional view of an object. Identify the correct 2 dimensional top view from among the answers based on the direction of the arrow

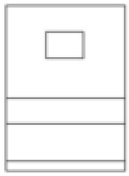
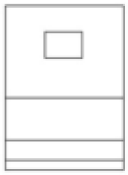
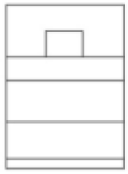
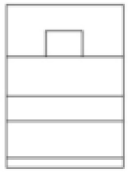


A	
B	
C	
D	

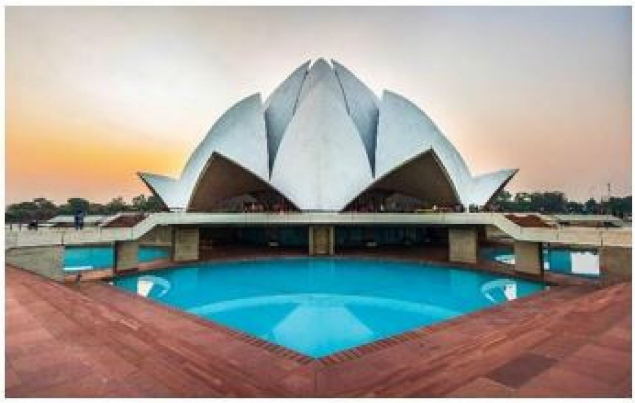
Correct Ans: **A**

Q51: The figure shows a 3 dimensional view of an object. Identify the correct 2 dimensional side view from among the answers based on the direction of the arrow



A	
B	
C	
D	

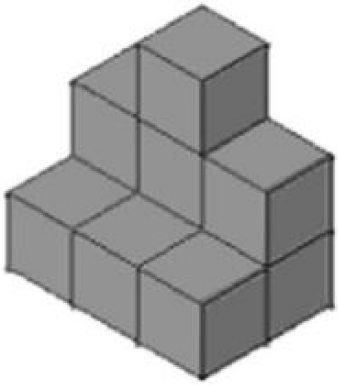
Correct Ans: **D**

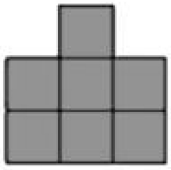
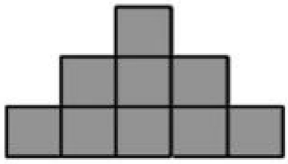
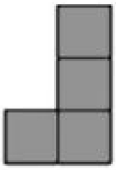
Q52: Identify the building in picture given below 	
A	Lotus Temple, Delhi, India
B	Sydney Opera house, Australia
C	Guggenheim Museum, Bilbao, Spain
D	St.Peter's Basilica, Vatican city
Correct Ans: **A**	

Q53: Sam ranked 9th from the top and 38th from the bottom in a class. How many students are there in the class?	
A	45
B	47
C	46
D	48
Correct Ans: **C**	

Q54: Which unit does NOT belong to the same category?	
A	Inch
B	Ounce
C	Feet
D	Yard
Correct Ans: **B**	

Q55: Identify the correct TOP view for the given 3D object.



A	
B	
C	
D	

Correct Ans: **B**

Q56: Vernacular refers to which of the following?	
A	Modern architecture
B	Digital architecture
C	Traditional architecture
D	Contemporary architecture
Correct Ans: **C**	

Q57: Choose the alternative which resembles the water-image of the given combination.

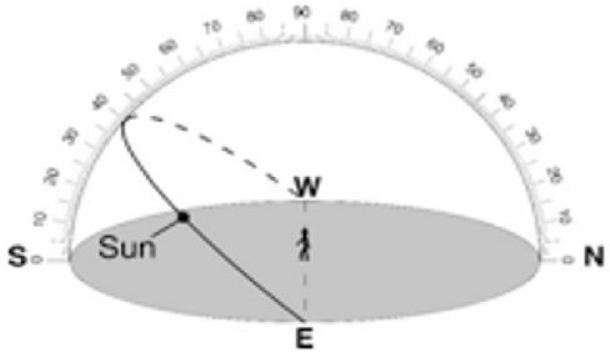
NUCLEAR



A	1
B	2
C	3
D	4
Correct Ans: **D**	

Q58: The type of roof suitable for the region where the rainfall is heaviest is	
A	Flat
B	Pitched and Sloped
C	Dome
D	Vault
Correct Ans: **B**	

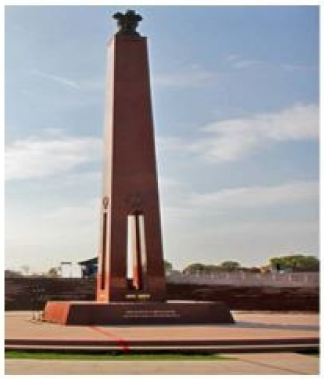
Q59: What time of the day is represented by the location of the Sun on the diagram?



A	6 AM
B	9 AM
C	12 PM
D	6 PM

Correct Ans: **B**

Q60: Identify the below structure.



A	National War Memorial – Delhi
B	National Soldier Memorial – Gwalior
C	Indian Obilisk – Ahmedabad
D	Amar Jyoti Memorial - Hyderabad

Correct Ans: **A**

NATA-2019: Answer Key

Mathematics (Q. 1 – 20)		General Aptitude (Q. 21 – 60)			
Question No	**Answer Key**	**Question No**	**Answer Key**	**Question No**	**Answer Key**
1	C	21	B	41	C
2	A	22	B	42	D
3	B	23	B	43	A
4	D	24	B	44	C
5	C	25	D	45	C
6	D	26	D	46	B
7	B	27	B	47	A
8	B	28	B	48	A
9	B	29	A	49	C
10	B	30	D	50	A
11	C	31	A	51	D
12	B	32	D	52	A
13	B	33	C	53	C
14	D	34	B	54	B
15	A	35	D	55	B
16	D	36	C	56	C
17	B	37	C	57	D
18	B	38	A	58	B
19	A	39	A	59	B
20	A	40	D	60	A