ATOMIC ENERGY CENTRAL SCHOOL NO. 2, MUMBAI

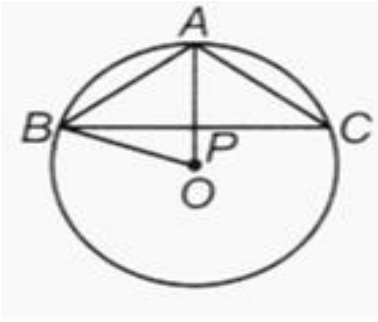
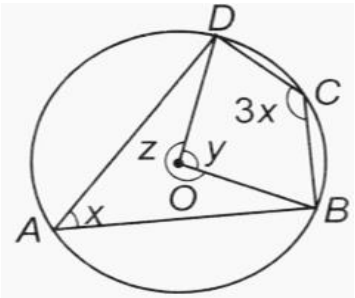
MULTIPLE CHOICE QUESTIONS EXAMINATION – 6 (MCQ-6)

CLASS : **IX** DATE : 31.01.2024

TIME : 3 HOURS MAX. MARKS: 120

	Attempt all questions	
1	If x =$2+\sqrt{3}$, then $x+\frac{1}{x}$ = a) 4 b) - 5 c) - 4 d) 5	**[1]**
2	The number x = 1.242424..... can be expressed in the form x =$\frac{p}{q}$, where p and q are positive integers having no common factors. Then p + q equals a) 41 b) 74 c) 53 d) 72	**[1]**
3	After simplification,$\frac{13^{1/5}}{13^{1/3}}$ is a) $13^{8/15}$ b) $13^{2/15}$ c) $13^{-2/15}$ d) $13^{1/3}$	**[1]**
4	Which of the following is a linear polynomial? a) $x+1$ b) $x+\frac{1}{x}$ c) $5x^2-x+3$ d) $x+x^2$	**[1]**
5	The remainder when$x^{31}-31$ is divided by $x+1$ is a) - 32 b) 31 c) 30 d) 0	**[1]**
6	If x + 1 is a factor of the polynomial $2x^2$ + kx, then k = a) - 3 b) 4 c) - 2 d) 2	**[1]**
7	$(x+y)^3$ - $(x-y)^3$ can be factorized as a) $2y(3y^2+x^2)$ b) $2y(3x^2+y^2)$ c) $2x(3x^2+y^2)$ d) $2x(x^2+3y^2)$	**[1]**
8	The equation of y - axis is: a) x = 0 b) y = x c) y = 0 d) none of these	**[1]**
9	The point O (0, 0) lies on: a) y - axis b) both x - axis and y - axis c) x - axis d) any quadrant	**[1]**
10	Point (0, –7) lies a) in the fourth quadrant b) on the y - axis c) on the x –axis d) in the second quadrant	**[1]**
11	The equation of x - axis is a) y = 0 b) x = 0 c) y = k d) x = k	**[1]**
12	x = 5 and y = - 2 is the solution of the linear equation. a) x + 3y = 1 b) 2x + y = 9 c) 3x + y = 0 d) 2x – y = 12	**[1]**
13	How many linear equations can be satisfied by x = 2 and y = 3? a) only one b) two c) many d) none of these	**[1]**
14	A line segment, when extended indefinitely in one direction is called a a) ray b) Line c) Line segment d) None of these	**[1]**

15	The number of line segments determined by three non-collinear points is a) 3 b) 2 c) 0 d) 1	**[1]**
16	"Lines are parallel if they do not intersect" is stated in the form of a) A proof b) A postulate c) A definition d) An axiom	**[1]**
17	One angle is equal to three times its supplement. The measure of the angle is a) 90° b) 130° c) 135° d) 120°	**[1]**
18	If one of the angles of a triangle is 130°, then the angle between the bisectors of the other two angles can be a) 50° b) 155° c) 145° d) 65°	**[1]**
19	When two straight lines intersect: i)Adjacent angles are complementary ii)Adjacent angles are supplementary. iii)Opposite angles are equal. iv)Opposite angles are supplementary. Which of the statements are correct? a) (ii) and (iv) b)(i) and (iv) c)(ii) and (iii) d) (i) and (iii)	**[1]**
20	In a triangle, an exterior angle at a vertex is 95° and its one of the interior opposite angle is 55°, then the measure of the other interior angle is a) 85° b) 55° c) 90° d) 40°	**[1]**
21	The base BC of triangle ABC is produced both ways and the measure of exterior angles formed are 94° and 126°. Then,∠ BAC = a) 40° b) 54° c) 44° d) 94°	**[1]**
22	If△ ABC ≅△ PQR and △ ABC is not congruent to △ RPQ, then which of the following is not true: a) AC = PR b) BC = PQ c) AB = PQ d) QR = BC	**[1]**
23	It is given that△ ABC ≅△ FDE and AB = 5 cm, ∠ B = 40° and ∠ A = 80°. Then which of the following is true? a) DE = 5 cm,∠ E = 60° b) DF = 5 cm,∠ E = 60° c) DF = 5 cm,∠ F = 60° d) DE = 5 cm,∠ D = 40°	**[1]**
24	ABCD is a Rhombus such that$\angle ACB$ = 40 ° , then $\angle ADB$ is a) 100° b) 40° c) 60° d) 50°	**[1]**
25	E Divides AB in the ratio 1 : 1 and also, F divides AC in the ratio 1 : 1. EF = 2.8 cm, Find BC a) 11.2 cm b) 11 cm c) 11.5 cm d) 5.6 cm	**[1]**
26	In△ABC, ∠A = 30^o, ∠B = 40^o and ∠C = 110^o.The angles of the triangle formed by joining the mid - points of the sides of this triangle are a)60^o, 40 ^{o}, 80 ^{o} b)70^o,70 ^{o}, 40 ^{o} c) 30^o, 40 ^{o} , 110 ^{o} d) 60^o , 70 ^{o}, 50 ^{o}	**[1]**

27	AD is diameter (50 cm) of a circle, O being the centre and AB is a chord (48 cm). Let the centre of AB be denoted by M, then find OM a) 8 cm b) 5 cm c) 7 cm d) 6 cm	**[1]**
28	If a chord of a circle is equal to its radius, then the angle subtended by this chord in major segment is a) 30^o b) 90^o c) 45^o d) 60^o	**[1]**
29	O is the centre of the circle having radius 5 cm. AB and AC are two chords such that AB =6 cm. If OA meets BC at P, then OP = _____  a) 2 cm b) 3.6 cm c) 1.4 cm d) 3 cm	**[1]**
30	In the given figure, O is the centre of the circle. Find the values of x, y and z.  a) 50°, 90°, 270° b) 40°, 90°, 250° c) 45°, 90°, 270° d) None of these	**[1]**
31	The sides of a triangle are 5 cm, 12 cm and 13 cm. then its area is a) 0.003 m^2 b) 0.0015 m^2 c) 0.0024 m^2 d) 0.0026 m^2	**[1]**
32	The base and hypotenuse of a right triangle are respectively 5 cm and 13 cm long. it is area is: a) 30 cm^2 b) 28 cm^2 c) 25 cm^2 d) 40 cm^2	**[1]**
33	The area of a right - angled triangle if the radius of its circumcircle is 3 cm and altitude drawn to the hypotenuse is 2 cm. is a) 4 cm^2 b) 3 cm^2 c) 6 cm^2 d) 8 cm^2	**[1]**
34	If the heights of two cones are in the ratio of 1: 4 and the radii of their bases are in the ratio 4 : 1, then the ratio of their volumes is a) 3 : 4 b) 1 : 2 c) 2 : 3 d) 4 : 1	**[1]**
35	The number of spherical bullets each 5 dm in diameter which can be cast from a rectangular block of lead 11m long,10 m broad and 5 high is a) 8400. b) 5600. c) 6300. d) 4200.	**[1]**
36	The volume of a cone is 1570 cm^3. If it is 15cm high then its base area is	**[1]**

	a) 413 cm^2 b) 314 cm^2 c) 514 cm^2 d) 415 cm^2	
37	The base radii of two circular cones of the same height are in the ratio 3: 5. The ratio of their volumes is a) 9 : 5 b) 27 : 125 c) 9 : 25 d) 3 : 5	**[1]**
38	In a bar graph if 1 cm represents 30 km, then the length of bar needed to represent 75 km is a) 3.5 cm b) 2.5 cm c) 2 cm d) 3 cm	**[1]**
39	In a frequency distribution, the mid value of a class is 10 and the width of the class is 6. The lower limit of the class is : a) 6 b)7 c)8 d) 12	**[1]**
40	To draw a histogram to represent the following frequency distribution : Class interval | 5-10 | 10-15 | 15-25 | 25-45 | 45-75 Frequency | 6 | 12 | 10 | 8 | 15 The adjusted frequency for the class 25 - 45 is a) 6 b) 5 c) 2 d) 3	**[1]**
41	When the liquid starts boiling, the further heat energy which is supplied a) is absorbed as latent heat of vaporization by the liquid b) is lost to the surrounding as such c) Increases the temperature of the liquid. d) increases the K.E of the particle in the liquid	**[1]**
42	When we observe the melting of ice, the melting point of ice is a constant temperature at which a)only ice is present b)both ice and water are present c) first water and then only ice d) only water is present	**[1]**
43	In which phenomenon does water change into water vapour below its boiling point? a)Boiling b) Evaporation c)Freezing d)Sublimation	**[1]**
44	Choose the correct observation about a solution of sugar in water prepared by you in the laboratory. a) Solid particles settle at the bottom after sometimes b) Its particles are seen by naked eyes c) It is transparent d) Its components can be separated by filtration	**[1]**
45	A student added only two drops of iodine to a rice extract in test tube 'A'. Another student added a little rice extract to iodine solution in test tube 'B'. They would then observe: a) no change of colour in any test tube b) a change of colour to blue - black in both tubes 'A' and 'B' c)change of colour to blue-black in test tube'B' but not in test tube 'A'	**[1]**

	d)change of colour to blue-black in test tube 'A' but not in test tube 'B'	
46	Which of the following are homogeneous in nature i)Ice ii) Wood iii)soil iv)air a) (iii) and (iv) b) (i) and (iii) c) (i) and (iv) d) (ii) and (iv)	**[1]**
47	Which one of the following will result in the formation of a mixture? a) Breaking of ice cubes into small pieces b) Adding sodium metal to water c) Agitating a detergent with water in a washing machine d) Crushing of a marble tile into small particles	**[1]**
48	Which of the following statements are incorrect? i)Dichromate ion is a divalent and positive ion. ii)Barium ion is trivalent and positive. iii)Solid sulphur is a polyatomic molecule. iv)Ammonium ion is divalent and positive. a) i, ii and iv only b) i, ii and iii only c) iii and iv only d) i and ii only	**[1]**
49	An element P forms an oxide with formula PO. The formulae of its sulphate and phosphate will be respectively a) $P_2 (SO_4)_3$ and PPO_4 b) PSO_4 and $P_2 (PO_4)_3$ c) $P(SO_4)_2$ and $P(PO_4)_2$ d) PSO_4 and $P_3 (PO_4)_2$	**[1]**
50	Which of the following represents a correct chemical formula? a) $NaSO_4$ b) NaS c) CaCl d) $AlPO_4$	**[1]**
51	Atomic mass of Chlorine is ———— (u) (a) 34 (b) 34.5 (c) 35 (d) 35.5	**[1]**
52	The isotope of carbon which has same number of neutrons as $_8 O^{16}$, is used in radiocarbon dating to determine age of old samples of living organisms? a) $_6 C^{15}$ b) $_6 C^{12}$ c) $_6 C^{14}$ d) $_6 C^{13}$	**[1]**
53	Which of the following represents the correct composition of the three isotopes of carbon? a) C - 12 : 6p + 6n, C - 13 : 12p + 1n, C - 14 : 5p + 9n b) C - 12 : 6p + 6n, C - 13 : 6p + 7n, C - 14 : 6p + 8n c) C - 12 : 6p + 6n, C - 13 : 5p + 8n, C - 14 : 7p + 7n d) C - 12 : 6p + 6n, C - 13 : 7p + 6n, C - 14 : 8p + 6n	**[1]**
54	In neutral atoms, number of electrons are equal to number of _____ a) Mass number b) Protons c) Neutrons d) Nuclear charge	**[1]**
55	A has 9 protons, 9 electrons and 10 neutrons. B has 12 protons, 12 electrons and 12 neutrons. Formula between A and B is: a) BA_2 b) $B_2 A_3$ c) A_2B d) AB_4	**[1]**
56	Ribosomes are the centre for **:**	**[1]**

	a) Respiration b) Fat synthesis c) Photosynthesisd) Proteins synthesis	
57	The statement 'cells arise only from pre - existing cells' was given by: a) Louis Pasteur b) Schwann c) Schleiden d) Rudolf Virchow	**[1]**
58	The structure/organelle of a cell that functions as a passage for intracellular transport as well as a manufacturing surface is: a)endoplasmic reticulum b)plastids c)plasma membrane d)ribosome	**[1]**
59	The site of detoxification in liver cells is: a) SER b) lysosome c) ribosome d) RER	**[1]**
60	Bones are connected to muscles at the joints by a) tendon b) adipose tissue c) areolar tissue d) Ligament	**[1]**
61	Voluntary muscles are found in a) limbs b) alimentary canal c) iris of the eye d) bronchi of lungs	**[1]**
62	The extremely thin and flat cells forming a delicate lining in the lung alveoli constitute a) stratified squamous epithelium b) simple squamous epithelium c) ciliated epithelium d) simple cuboidal epithelium	**[1]**
63	The mechanical strength and rigidity of the cell wall is due to a) suberin b) lignin c) cellulose d) cutin	**[1]**
64	What is the slope of the body when it moves with uniform velocity? a) positive b) zero c) may be positive or negative d) negative	**[1]**
65	If a body starts from rest, what can be said about the acceleration of the body? a) Uniform accelerated b) Positively accelerated c) Negative accelerated d) Non - Uniform accelerated	**[1]**
66	Suppose a boy is enjoying a ride on a merry - go - round which is moving with a constant speed of $10ms^{-1}$. It implies that the boy is a) Moving with no acceleration b) At rest c) In accelerated motion d) Moving with uniform velocity	**[1]**
67	A force can be completely described by: a) its magnitude b) neither magnitude nor direction c) its magnitude and direction d) its direction	**[1]**
68	An object of mass 2 kg is sliding with a constant velocity of $4ms^{-1}$ on a frictionless horizontal table. The force required to keep the object moving with the same velocity is a) 32 N b) 2 N c) 0 N d) 8 N	**[1]**
69	A 20 kg gun fires a bullet of mass 20 g with a velocity of 400 m/s. The action on the shoulder of the person per second by the gun is: a) 8000 N b) 8 N c) 4000 N d) 4 N	**[1]**
70	A heavier and a lighter body have equal momentum, then	**[1]**

	a) heavier will have more K.E. b) lighter will have more K.E. c) they will have equal K.E. d) K.E. will be independent of momentum	
71	In the relation F = $\frac{Gmm}{d^2}$, the quantity G a) Is greater at the surface of the earth b) Depends on the value of g at the place of observation c) Is universal constant of nature d) Is used only when the earth is one of the two masses	**[1]**
72	Acceleration due to gravity varies with a) shape of the planet b) All of these c) height d) depth	**[1]**
73	In case of negative work the angle between the force and displacement is: a) 180^o b) 90^o c) 0^o d) 45^o	**[1]**
74	The law of gravitation describes the gravitational force between a)any two bodies having mass b)earth and point mass only c)earth and Sun only d)two charged bodies only	**[1]**
75	Match the column I with column II and mark the correct option from the codes given here. **Column I** / **Column II** (a) String vibration / (i) Tabla (b) Membrane vibration / (ii) Bicycle bell (c) Vibration of air column / (iii) Sitar (d) Vibration of plate / (iv) Flute a) (a) - (i), (b) - (iv), (c) - (ii), (d) - (iii) b) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv) c) (a) - (iv), (b) - (ii), (c) - (iii), (d) - (i) d) (a) - (iii), (b) - (i), (c) - (iv), (d) - (ii)	**[1]**
76	Sonic booms are caused by the combination of a) pressure variation only b) infrasonic speed and pressure variation c) supersonic speed and pressure variation d) ultrasonic sound and pressure variation	**[1]**
77	Manures are used in sandy soils mainly to a) increase the water holding capacity b) avoid waterlogging c) reduce soil pollution d) provide all essential nutrients to crops	**[1]**
78	Crop improvement by crossing two plants with different desired characters in order to combine these characters is called _____. a)Hybridisation b)Mixedcropping c)Natural selection d) Intercropping	**[1]**

79	Application of nitrogenous fertilizers causes a) retarded flowering and resistance to worms. b) retarded vegetative growth, but increased flowering c) vigorous vegetative growth d) early flowering	**[1]**
80	Nitrogen, phosphorus and potassium are examples of a) Micro - nutrients and Macro - nutrients b) Micro - nutrients c) Fertilizers d) Macro - nutrients	**[1]**
81	Which of the following defines the annual movement of Kurumas and Kurubas of Andhra Pradesh and Karnataka? a) Pressure and temperature b) Winter and summer c) Monsoon and dry season d) Winds and temperature	**[1]**
82	The traditional authority of both elders and warriors wereadversely responsible for the same? i) The British imposed various restrictions on raiding and warfare. ii) They appointed chiefs of different sub - groups. iii) The created Game Reserves where the whole tribe was allowed to move freely. a) Only (i) b)(i), (ii) and (iii) c) (i) and (ii) d) (ii) and (iii)	**[1]**
83	In which of the following country Samburu National Park is located? a) Kenya b) India c) Tanzania d) South Africa	**[1]**
84	Who were warriors? a) They were the rulers of the Maasai Community. b) They were the advisors of the king. c) They used to settle disputes. d) They were responsible for providing protection	**[1]**
85	The _____ shepherds of Himachal Pradesh spent their winter in the low hills of Siwalik range, Which of the following is a pastoral nomadic community of Jammu and Kashmir ? a) Gaddi b) Gujjar c) Kurava d) Golla	**[1]**
86	To Which of the following forests, the pastoralist were not given any access? a) Village forest b) Open forest c) Reserved forestd) Protected forest	**[1]**
87	Which of the following step/steps was/were taken by the colonial people which adversely affected the lives of the pastoralist? i)Waste Land Act was enacted. ii)Forest Act was passed. iii)The criminal Tribes Act was enacted. iv)Taxes were imposed on the grazing of animals. a) Only (i) b) All of these c) Only (i) and (iii) d) Only (ii) and (iii)	**[1]**
88	In 1885, _____ was cut into half with an	**[1]**

	international boundary between British Kenya and German Tanganyika. a) Thailand b) Maasailand c) Congoland d) England	
89	Which of the following is a pastoral nomadic community of Maharashtra? a) Dhangars b) Maasai c) Gujjar Bakarwals d) Raikas	**[1]**
90	In which of the following region the Massai community lives? a) East Africa b) South Africa c) West Africa d) North Africa	**[1]**
91	How is growth of population expressed ? A. It can be expressed in terms of absolute number. B. It can be expressed in terms of percentage change per year. a) Only B b) Neither A and B c) Both A and B d) Only A	**[1]**
92	Which of the following is not a primary activity? a) Transport b) Fishing c) Forestry d) Animal husbandry	**[1]**
93	Which state has the lowest density of population? a) Arunachal Pradesh b) Manipur c) Sikkim d) Rajasthan	**[1]**
94	_____ rate is the number of live births per thousand persons in a year. a) Birth b) Death c) Maturity d)Child mortality	**[1]**
95	Which state has the highest density of population? a) Punjab b) West Bengal c) Rajasthan d) Haryana	**[1]**
96	What was the literacy rate of the male in India as per the Census of 2001? a) 90.26 % b) 80.26 % c) 75.26 % d) 85.26 %	**[1]**
97	What was the density of population of India in 2001? a) 324 persons per sq. km b) 120 persons per sq. km c) 1200 persons per sq. km d) 400 persons per sq. km	**[1]**
98	What is migration? a) None of these b) It is in the composition of population. c) It is the movement of people, goods and services. d) It is the movement of people across regions and territories.	**[1]**
99	Which of the following is a secondary activity? a) Quarrying b) Manufacturing c) Mining d) Communication	**[1]**
100	Which one from the following refers to Census? A. The process of taking a count of the total number of people in a country. B. The process of counting the number of states in a country. C. The process of counting the land area in a country. D. The process of counting the mountains and hilly terrains in a country.	**[1]**

	a) Only C b) Only D c) Only A d) Only B	
101	What is RPDS? a) Renewed Public Distribution System b) Renewed Private Distribution System c) Rural Public Distribution System d) Revamped Public Distribution System	**[1]**
102	What are the two components of food security system? a) PDS, FCI b) Buffer stock, PDS c) Buffer stock, Issue price d) Buffer stock, FCI	**[1]**
103	Choose the appropriate word - It is the stock of food grains procured by the government through FCI. a) Baffin Stock b) Store House c) Baffler Stock d) Buffer Stock	**[1]**
104	Which of the following programmes has been launched by the government to adopt the principle of targeting the poor in all areas? a) TNFW b) TPDS c) TAPS d) TAAY	**[1]**
105	Which of the following group of states account for a large number of food - insecure people in the country? a) Bihar, Jharkhand, Orissa b) Punjab, Haryana, Uttar Pradesh c)Punjab,Uttar Pradesh,West Bengal d)Jammu and Kashmir,Bihar,West Bengal	**[1]**
106	Which of the following agency purchases food grains from the farmers? a) FCI b) ICICI c) Government of India d) IMF	**[1]**
107	Buffer Stock is prepared in India by: a) None of these b) Food Supply of India c) Food Procurement of India d) Food Corporation of India	**[1]**
108	The food procured by the FCI is distributed through government - regulated ration shops among the poorer section of the society. This is called the _____. a) MSP b) FCI c) AAY d) PDS	**[1]**
109	Since Independence, India has been aiming at : a) Self - sufficiency in food grains b) Increase in population c) Distributing food among poor d) Setting up ration shops	**[1]**
110	What is FCI? a) Functional Corporation of India b) Food Corporate of India c) None of these d) Food Corporation of India	**[1]**
111	Mr. Sam was denied admission in Government Medical College as he	**[1]**

	was a Christian. Which of his fundamental right is being violated? a) Cultural and educational right b) Right to freedom of religion c) Right to freedom d) Right to equality	
112	Which of the following is not an instance of an exercise of a fundamental right? a) Men and women government employees get the same salary b) Parents' property is inherited by their children c) Workers from Bihar go to the Punjab to work on the farms d) Christian missions set up a chain of missionary schools	**[1]**
113	The country is ruled by a hereditary king and the people have no role in electing or changing their ruler.With which of the following country the statement is associated? a) Pakistan b) Saudi Arabia c) China d) England	**[1]**
114	The claims of a person over other fellow beings, over the society and over the government are called_____. a) Duties b) Rules c) Rights d) Concessions	**[1]**
115	_____ is a practice where the worker is forced to render service to the master free of charge or a nominal remuneration. a) Begging b) Begar c) Child labour d) Untouchability	**[1]**
116	"The UN Secretary General said the prison in Guantanamo Bay should be closed down." It is due to _____. a) the poor food given to the prisoners b) denial of religious freedom to the prisoners c) denial of right to education in the prison d) denial of basic human rights to the prisoners.	**[1]**
117	"Non-Muslim residents can follow their religion in private, but not in public." Pick up the country where this rule is applied. a) UAE b) Singapore c) Egypt d) Saudi Arabia	**[1]**
118	Which Fundamental Right was called the heart and soul of our Constitution? a) Right to equality b) Cultural and educational right c) Right to freedom d) Right to Constitutional Remedies	**[1]**
119	The rights which are fundamental to our life and are given special status are known as _____. a) Fundamental Rights b) Compulsory Rights c) Legal Rights d) Basic Rights	**[1]**
120	What is PIL? a) Public Interest Litigation b) Public Information Litigation c) Private Interest Litigation d) Public Interest Legislature	**[1]**

Answer Key

Q.NO.	OPTION	Q.NO.	OPTION	Q.NO.	OPTION
1	A	41	A	81	B
2	B	42	B	82	C
3	C	43	B	83	A
4	A	44	C	84	D
5	A	45	B	85	B
6	D	46	C	86	C
7	A	47	C	87	B
8	A	48	A	88	B
9	B	49	D	89	A
10	B	50	D	90	D
11	A	51	D	91	C
12	D	52	C	92	A
13	C	53	B	93	A
14	A	54	B	94	A
15	A	55	A	95	B
16	C	56	D	96	C
17	C	57	D	97	A
18	B	58	A	98	D
19	C	59	A	99	B
20	D	60	A	100	A
21	A	61	A	101	D
22	B	62	B	102	B
23	B	63	C	103	D
24	D	64	C	104	B
25	D	65	B	105	A
26	C	66	C	106	A
27	C	67	C	107	D
28	A	68	C	108	D
29	C	69	B	109	A
30	C	70	A	110	D
31	A	71	C	111	D
32	A	72	B	112	C
33	C	73	A	113	B
34	D	74	A	114	C
35	A	75	D	115	B
36	B	76	C	116	D
37	C	77	A	117	D
38	B	78	A	118	D
39	B	79	C	119	A
40	C	80	D	120	A