



**UPSC PRELIMS 2023 PAPER II (CSAT) ANSWER KEY
SET A**

1	A	21	B	41	D	61	D
2	D	22	B	42	A	62	D
3	C	23	B	43	A	63	B
4	D	24	A	44	C	64	C
5	B	25	C	45	D	65	D
6	B	26	B	46	C	66	C
7	A	27	A	47	A	67	C
8	A	28	C	48	C	68	D
9	D	29	B	49	B	69	C
10	C	30	C	50	B	70	B
11	C	31	D	51	D	71	B
12	C	32	C	52	A	72	A
13	B	33	B	53	A	73	D
14	A	34	C	54	B	74	D
15	D	35	B	55	B	75	D
16	A	36	C	56	D	76	A
17	D	37	D	57	C	77	D
18	A	38	D	58	A	78	A
19	C	39	C	59	D	79	A
20	A	40	D	60	B	80	C

Detailed Explanation

1. (a) A national, pragmatic, legal and policy framework for water allocation should be made.
2. (d) For rapid economic growth as envisaged by us, attention should be paid to health and nutrition of the people.
3. (c) Risk perceptions of farmers are important for motivating them for taking adaptation decisions.

4. (d) 45

Red - 10 Pair (20 Shoes)

White - 9 Pairs (18 Shoes)

Black - 8 Pairs (16 Shoes)

After taking 34 shoes, the next shoe he is going to take will be red. But it may be left leg or right leg shoes. So he has to take an additional 11 shoes to get a pair of shoes. So Answer will be 45.

5. (b) 19

Case 1: Only Singles - one way

Case 2 : Six and singles - 4 ways

Case 3 : Fours and singles - 6 ways

Case 4 : Six, fours and singles - 8 ways

So we can get 25 runs in 19 ways.

6. (b) 2 only

First statement UPSC PYQ 2008.

One letter did not go in the wrong envelope. It must go to the correct envelope. So statement 1 is incorrect.

Statement 2 is correct.

7. (a) 0

8. (a) 2

9. (d) 31

10.(c) 8

To get the least ratio of number to the sum of digits, the numerator will be small and the Denominator will be maximum. So we can take the unit digit and the hundred's digit will be 1 and 9. So the difference between the numbers will be 8.

11.(c) Waiting to deal with carbon emissions until technology improves is not a wise strategy.

12.(c) Health can be protected even if environmental problems go on unattended.

13.(b) We must place food-based nutrition at the centre of our policy debate.

14.(a) 1 only

In statement 2, it can be odd. But not definitely odd. So statement 2 is incorrect.

15.(d) 1, 2, 3

All 3 statements can be possible. (Keyword is can be)

16.(a) 18

$$A + B + C = 9 + 3 + 6 = 18$$

17.(d) 7, 11 and 13

18.(a) 27

No side painting : $(n-2)^3$, $n = 5$.

19.(c) 36

20.(a) 1 only

The work will be finished in 11 days. Hence statement 2 is incorrect.

21.(b) Knee-jerk reactions cannot solve the problem of pollution but an evidence based approach will be more effective.

22.(b) Good corporate governance improves the credibilities of the firms.

23.(b) Elephants are the keystone species and they benefit the biodiversity.

24.(a) 6

Sum the numbers. $23+4+15=42$, hence $4+2=6$.

25.(c) 12

The number of factors of 96 is 12.

26.(b) 225

Take the greatest value for p, q, r and s, as 9, 8, 7 and 6. To get the greatest value, the sum will be maximum. So we can take $(9+6) \times (7+8) = 225$.

27.(a) 11

28.(c) 81

29.(b) 856

30.(c) 20

To draw a triangle we need 3 points. From the 6 points we can take 3 points in $6C_3$ ways. So we can draw a triangle in 20 ways.

31.(d) Neither 1 nor 2

32.(c) Segregation of municipal solid waste is the first step in ensuring the success of waste -to-energy plants.

33.(b) 2 only

34.(c) In India, farmers need to be guided and helped to make their organic farming sustainable.

35.(b) 2 and 3 only

36.(c) Both 1 and 2

It is similar to the UPSC PYQ 2017.

37.(d) SODBHU

Check only for the last letter 'R'. R is written as U. So we will reach the Answer.

38.(d) All five

$C \text{ or } D > F > A > B > E$

All five statements are required to determine the oldest person/persons.

39.(c) All four statements together are sufficient to answer the question

D (Father)

$E (S1) - C (D1) - A(D2) = B(\text{Husband of } A)$

Hence E is brother in Law of B. So all statements are required to Answer the question.

40.(d) 83, 89, 91, 97

Other than option 'd' are prime number series. Option d has a composite number 91 ($13 \times 7 = 91$).

41.(d) Neither 1 nor 2

42.(a) An enhanced efficiency of use of nitrogen is imperative for both food production and environment.

43.(a) Climate justice should be ingrained in detail in the rules of all the new climate compacts/agreements.

44.(c) $R < S$

To get the same amount, the Rate of interest(S) of one Year compounded annually will be greater than the Rate of interest(R) in one compounded half yearly. Hence S will be greater than R.

45.(d) 9

Find the number of factors of 1155 ($1186-31$) above 31. Total number of factors of 1155 is 16. That is 1, 3, 5, 7, 11, 15, 21, 33, 35, 55, 77, 105, 165, 385, 231, 1157. So $16-7 = 9$.

46.(c) Both 1 and 2546

47.(a) 7998

The numbers are :1234 + 1243 + 1324 + 1342 + 1423 + 1432 = 7998

48.(c) 12

In 12 ways we can select 10 consecutive things in a clockwise direction.

49.(b) Thursday

If we divide 10^{10} by 7 we get 4 as remainder. So the answer will be Thursday.

50.(b) 4:10 P.M

Simple LCM sum.

51.(d) Agroecosystems should be developed in addition to or along with conventional agriculture.

52.(a) It is necessary to put proper effluent treatment protocols in place.

53.(a) To become a global power, India needs to invest in universal quality education.

54.(b) 15

15 th time the ring will reach the first person. (1, 2, 4, 7, 11, 16, 22, 29, 37, 6, 16, 27, 39, 12, 26, 1)

55.(b) I

ZZ,YYY,XXXX,.....A - Here total number of terms is 377

So the 189th term is the middle term. It will be 'I'.

56.(d) The Question cannot be answered even by using both the statements together.

Here not given that the number is a natural number or a whole number or an integer. So in general the number can be plus or minus. So we are not able to conclude which is greater. Hence option (d) is correct.

57.(c) The Question can be answered by using both the statements together, but cannot be answered using either statement alone.

Here it is given that the number will be integer. And by using both statements we can say the given question is correct (or) not correct. Hence option (c) is correct.

58.(a) The Question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.

Here we can find the number of people in the party by using the second statement alone.

$120+y=5y$; So, $y =30$. Hence option (a) is correct.

59.(d) The Question cannot be answered even by using both the statements together.

First statement UPSC PYQ 2021 & 2022.

By using both statements we can conclude the number may be 132 or 312.

So we are not able to come to a conclusion. Hence option (d) is correct.

60.(b) The Question can be answered by using either statements together.

61.(d) In our lives, having too few choices may not be a good thing, but having too many can be equally as difficult.

62.(a) 1 and 2 only or (d) 1, 2 and 3

63.(b) 1 and 4

64.(c) Both 1 and 2

65.(d) 35

If he scored 99% in total. He has to take an average of 99 marks in every subject. So his total mark will be 396. So sum of $P + Q + R + S = 396$. So we have to find how many ways can bring 396 from four subjects.

Case 1: We can take P, Q, R and S as 100, 100, 100 and 96. It can be arranged in 4 ways.

Case 2 : We can take P, Q, R and S as 100, 100, 99 and 97. It can be arranged in 12 ways.

Case 3 :We can take P, Q, R and S as 100, 100, 98 and 98. It can be arranged in 6 ways.

Case 4 : We can take P, Q, R and S as 100, 99, 99 and 98. It can be arranged in 12 ways.

Case 5: We can take P, Q, R and S as 99, 99, 99 and 99. It can be arranged in 1ways.

Hence the value of $n = 4+12+6+12+1= 35$.

66.(b) 24

We have four stripes and 3 colours. We can arrange 3 ways in the first strips, 2 ways in the second strips, 2 ways in the third strips and finally 2 ways in the fourth strips.

So Answer will be $3 \times 2 \times 2 \times 2 = 24$.

67.(c) 8

We have $400 \times 220 \text{ cm}^2$ & the tile size is $140 \times 60 \text{ cm}^2$. We can place 8 tiles inside the larger space.

68.(d) 24

Direct repeat UPSC PYQ 2015.

In 24 ways we can assign the job.

69.(c) Both 1 and 2

We can buy 78 gm by the way of one 50 gm, two 10gm and four 2 gm.

Weight is different from buying. In the weight machine one side we can place 50 gm, 25 gm and 5 gm and we can place 2 gm on the other side. By which we can weigh 78 gm. Hence both statements are correct.

70.(b) Only conclusion -2 follows from the statement.

$Q \leq p \leq T < R = S$

Hence statement 1 is incorrect and statement 2 is correct.

71.(b) Unemployment must be seen as a function of rising education and aspirations of young Indians.

72.(a) Modern statesmen need to be well trained in scientific methods and philosophical thinking to enable them to have a better perspective of their roles, responsibilities and goals.

73.(d) Liberty

74.(d) 4

2 power odd divided by 6 gives remainder 2,

2 power Even divided by 6 gives remainder 4.

Hence Answer will be 4.

75.(d) DDCA

76.(a) 6

77.(d) Neither 1 nor 2

78.(a) 1 only

79.(a) 1 only

No side painted = $(7-2)(5-2)(3-2) = 15$; Hence statement 1 is correct.

Two sides painted with Blue on one side and Green on the other side are exactly 4 cubes not 6. Hence statement 2 is incorrect.

80.(c) Two

I	N	C	O	M	P	R	E	H	E	N	S	I	B	I	L	I	T	I	E	S
T	S	S	R	P	O	N	N	M	L	I	I	I	I	I	H	E	E	E	C	B