

CDC 11 2022 DILR

Directions for questions 1 to 4: Answer the questions on the basis of the information given below.

Women's Cricket Teams from 7 countries – A, B, C, D, E, F, and G participated in the recent WT-20 Asia Cup. The tournament was played at the XYZ International Cricket Stadium.

All the 7 teams played in a round-robin stage, each team initially played once with each team, with the top 4 progressing to the semi-finals. If the number of points is equal, then the Net Run Rate (NRR) will be considered and the team with a higher NRR will qualify for semi-finals with higher seeding.

Out of the top 4 teams, the first semi-final match was played between the top scorer (as per total points awarded) and the lowest scorer (as per total points awarded); and the second semi-final match was played between the other two teams. The winners of the two semi-finals played in the final match and the winner got the Asia Cup Trophy. No match was drawn/tie in either the semi-finals or the final. Two points were awarded for a win, 1 for a draw, and 0 for a loss for every match.

The table given below shows partial information about matches played in the Round-robin stage.

Country	No. of matches won	No. of matches lost	No. of matches drawn	No. of points awarded	Net Run Rate
A		1	0		> 3
B				10	$> 1 \text{ but } < 2$
C		2	0		
D			0	6	
E				5	< 0.5
F	1			3	
G	0		0		< -3

Q 1. What is the maximum total number of drawn matches that could have been played in the tournament?

Q 2. The second semi-final match was played between which of the following two teams?

- 1) A & C
- 2) B & D
- 3) B & C
- 4) A & B

Q 3. Which of the following statements must be false?

- 1) The match between Teams E and F was not drawn in round-robin stage.
- 2) Team B played more than two drawn matches in round-robin stage.
- 3) Team D won the round-robin stage match against Team E.
- 4) Team A lost the round-robin stage match against Team B.

Q 4. What can be the maximum difference between the total points awarded to the teams that reaches in the final, at the end of the tournament?

- 1) 10
- 2) 4
- 3) 8
- 4) 6

Directions for questions 5 to 10: Answer the questions on the basis of the information given below.

Five aspirants - Aditi, Basil, Charu, Dharmu and Ekta appeared in five entrance tests - CET, SAT, GAT, IFT and MET - for admission in management colleges. Their marks in the above tests and their work experience while appearing for that test are as shown in the table given below:

Name	Marks in test					Work experience (in years) while appearing				
	CET	SAT	GAT	IFT	MET	CET	SAT	GAT	IFT	MET
Aditi	38	64	51	76	82	1	2	2	1	1
Basil	42	56	57	60	86	1	2	3	1	4
Charu	40	62	63	62	88	2	1	2	2	3
Dharmu	45	60	60	68	85	1	1	1	4	2
Ekta	41	59	65	72	94	3	1	2	1	0

If an aspirant's marks in any test is equal to the average of the marks of two or three or four of the other aspirants and in addition his/her work experience while appearing for that test is the average of that of two or three or four of the other aspirants, then that aspirant will definitely receive a call letter for admission through that test. For the rest of the aspirants, the call letter may also based on other criteria apart from just their marks and the work experience.

For example:- If Aditi's marks in a test was an average of that of (2 others) Basil and Charu or (3 others) Basil, Charu and Dharmu or (4 others) Basil, Charu, Dharmu and Ekta and similarly work experience is also such an average, then Aditi must get a call letter to get admission through that test. If Aditi's marks does not satisfy this condition the other criteria will be considered for the call letter.

Some other known facts are as below:

- (i) For every test there were either 3 or 4 aspirants who received a call letter.
- (ii) Each aspirant received call letters through at least two tests.
- (iii) Among all the five tests, only one aspirant with the lowest marks in a test received a call letter for admission.
- (iv) No aspirant received call letters for admission through all five tests.
- (v) If Aditi receives a call letter through a test, then Charu and Dharmu also receive call letters for the same test.
- (vi) A total of 16 call letters were issued based on the above information.

Q 5. Through which of the following entrance tests did four aspirants receive call letters?

- 1) SAT
- 2) GAT
- 3) Either SAT or IFT
- 4) Either GAT or IFT

Q 6. Which of the following is the marks of an aspirant who definitely receive a call letter?

- 1) 64
- 2) 76
- 3) 41
- 4) 60

Q 7. Through which of the following tests did Basil NOT receive a call letter?

- 1) CET, IFT and MET
- 2) SAT, GAT and MET
- 3) CET, GAT and MET
- 4) SAT, IFT and MET

Q 8. What are the marks of an aspirant who received a call letter inspite of being the lowest scorer in a test?

Q 9. How many aspirant(s) received a call letter through four out of the five entrance tests?

- 1) 1
- 2) 2
- 3) 3
- 4) Either (2) or (3).

Q 10. Through how many test(s) did both Aditi and Basil receive call letters?

- 1) 0
- 2) 1
- 3) 2
- 4) Either (2) or (3)

Directions for questions 11 to 16: Answer the questions on the basis of the information given below.

A delivery boy has a delivery auto with shelves. He arranges his delivery boxes according to their weights in four shelves arranged vertically top to bottom - A, B, C and D. Each of the shelves has four compartments - I, II, III and IV- arranged in horizontally. Upon removing a box from a lower shelf for delivery, the box on the shelf above is moved down, such that no occupied compartment has any vacant compartments immediately below it. There are delivery boxes numbered from 1 to 16 having distinct weights in an Arithmetic Progression from 0.5 kg to 8 kg in any order. A permissible weight of any box in a particular shelf is mentioned in the bracket adjacent to the name of shelf.

The table has incomplete information regarding the boxes and their weights.

Shelves (weight allowed)	I		II		III		IV	
	Box No.	Weight	Box No.	Weight	Box No.	Weight	Box No.	Weight
A (< 2.5 kg)	7	-	-	1 kg	14	2 kg	-	-
B (< 4.5 kg)	-	4 kg	13	-	16	-	2	3 kg
C (< 6.5 kg)	-	6 kg	-	-	8	5 kg	-	4.5 kg
D (< 8.5 kg)	1	-	6	7 kg	-	6.5 kg	11	-
Total		19 kg		17 kg		16 kg		16 kg

- (i) Box 15 is not on any row below Box 2 whereas Box 4 is placed in some row below Box 13.
(ii) Box 3, Box 5 and Box 9 are placed in the same shelf and Box 5 is 1 kg heavier than Box 9.
(iii) Box 10 has more weight than boxes 13 and 16.
(iv) The absolute difference between the box number of exactly one of the boxes, say Box K and its weight is 3 such that its weight is 7 kg more than that of Box (K + 1).
(v) The first delivery consists of Boxes 6, 9 and 12.
(vi) The second delivery consists of Boxes 1, 3, 5 and 15.
(vii) The fourth (i.e., last) delivery consists of 5 boxes and its total weight is 2 kg more than the total weight of the third delivery, which does not contain the box with the maximum weight.

Q 11. Which of the following combinations of box and weight is **NOT** correct?

- 1) Box 7 - 1.5 kg
- 2) Box 11 - 8 kg
- 3) Box 4 - 5.5 kg
- 4) Box 13 - 3.5 kg

Q 12. Which of the following options represents the boxes in shelf D after the first delivery?

- 1) 1 - 5 - 4 - 11
- 2) 1 - 6 - 4 - 11
- 3) 7 - 13 - 8 - 11
- 4) 10 - 13 - 4 - 11

Q 13. What is the difference (in g) in the total weight of boxes in shelf B and the total weight of boxes in shelf A after the second delivery?

Q 14. What is the ratio of the weights of all the boxes in the first and second deliveries respectively?

- 1) 23 : 37
- 2) 15 : 38
- 3) 25 : 39
- 4) 5 : 8

Q 15. Which of these cannot be the combination of boxes kept in shelf D after the third delivery?

- 1) Box 13, Box 16, Box 11
- 2) Box 10, Box 13, Box 14, Box 11
- 3) Box 7, Box 13, Box 8, Box 11
- 4) Box 10, Box 16, Box 11

Q 16. Select the correct order of boxes in terms of their weights.

- 1) Box 6 > Box 16 > Box 15 > Box 10
- 2) Box 11 > Box 7 > Box 3 > Box 1
- 3) Box 1 > Box 2 > Box 3 > Box 4
- 4) Box 4 > Box 5 > Box 13 > Box 15

Directions for questions 17 to 20: Answer the questions on the basis of the information given below.

In 2021, 16 million cases were filed across 9 major cities in India of which 80% of the cases were reported under 6 major categories – A, B, C, D, E, and others. The table 1 given below shows the percentage distribution of these cases filed in the 9 major cities. The percentage for these cities was deleted by mistake. The table 2 given below shows the percentage distribution of crimes reported category wise within these 6 categories.

Further, it is also known that:

- (i) Cases filed in Delhi were equivalent to 90% of cases filed in Chennai and 180% of cases filed in Mumbai.
- (ii) 90% of total cases filed under categories D and E were reported only in four major cities Trivandrum, Kolkata, Delhi and Mumbai in the ratio 4 : 2 : 1 : 1.

Table 1

City	Trivandrum	Kolkata	Hyderabad	Chennai	Delhi	Mumbai	Bangalore	Bhopal	Jaipur
Percentage distribution of the cases filed	40%	20%	10%	10%	–	–	–	2%	1.50%

Table 2

Category	A	B	C	D	E	Others
Percentage distribution categorywise	8%	10%	5%	15%	30%	–

Q 17. What is the total number of cases filed in Bangalore?

Q 18. If crimes D and E were reported in the ratio of 3 : 2 in Kolkata, then what was the total number of cases filed in Kolkata under category D?

- 1) 777600
- 2) 518400
- 3) 648000
- 4) 1555200

Q 19. If 4%, 9%, 10%, 5% of cases in Trivandrum, Kolkata, Hyderabad and Chennai respectively were filed under categories A, then which of the following is the correct order of cities regarding the number of cases filed?

- 1) Trivandrum > Kolkata > Hyderabad > Chennai
- 2) Kolkata > Hyderabad > Trivandrum > Chennai
- 3) Kolkata > Trivandrum > Chennai > Hyderabad
- 4) Kolkata > Trivandrum > Hyderabad > Chennai

Q 20. 60% and 80% of crimes in Bhopal and Jaipur were from category "others". The rest of the cases filed in Bhopal and Jaipur belonged to the categories A, B and C in the ratio 1 : 1 : 2 and 1 : 2 : 3, in that order. What is the absolute difference between the cases filed in category C in cities Bhopal and Jaipur?
