

## UPSC CSAT DPP 09 - Reasoning

- Q1** In a certain code BROTHER is written as \$&53@4& and DREAM is written as 9&47\*. How is THREAD written in that code?  
(A) \*@34&7 (B) 3@&479  
(C) 5@4&79 (D) 4\*3@47
- Q2** If banana is called 'sweet', sweet is called 'soap', soap is called 'pen', pen is called 'honey', and honey is called 'aky'. Which of the following is used for washing clothes?  
(A) Honey (B) Sweet  
(C) Pen (D) Soap
- Q3** In a certain code language, 'sa ra ga' means 'dogs are barking', 'ra jo ma' means 'dogs and horses' and 'mo sa ko', means 'donkeys are mad'. Which word in the language means 'barking'?  
(A) ga (B) ra  
(C) jo (D) sa
- Q4** In a code language 'EINSTEIN' is written as 'DJMTSFHO' and 'BAT' is written as 'ABS'. How is 'RUTHERFORD' written in that code language?  
(A) SVUIFGPSE (B) SWUJDTFQTD  
(C) QUSJDSDPRC (D) QVSIIDSEPQE
- Q5** The letters from A to Z are numbered from 1 to 26 respectively. If IHG = 1974 and FED = 1308, then what is CBA equal to?  
(A) 246 (B) 468  
(C) 642 (D) 864
- Q6** If each alphabet from A to Z is assigned a prime number starting from the smallest prime number assigned to 'A' and the next to 'B' and so on, then PET will be written as:  
(A) 471167 (B) 471371  
(C) 531367 (D) 531171
- Q7** If KITE is written as 2025 and ATE is written as 676, then what will be the code of REST in the same language?  
(A) 3721 (B) 3844  
(C) 3969 (D) 4225
- Q8** In a code language, if 'APPEAL' is written as '367683' and 'PLAY' is written as '8369', then how will 'PEARL' be written?  
(A) 36874 (B) 36148  
(C) 78633 (D) 36789
- Q9** If ACCENT is coded as YEAGLV and PRODUCT is coded as NTMFSE, then DIRECT will be coded as?  
(A) BKPGAV (B) FKTGEV  
(C) FGTCER (D) BGPCAR
- Q10** If DENSE is coded as FRODE and COMPANY is coded as ZMBONND, then CLARIFY will be coded as  
(A) EDTJME (B) ZEJSBMD  
(C) ZEJQBKD (D) ZDKSBKD



## Answer Key

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**Q1** (B)

**Q2** (C)

**Q3** (A)

**Q4** (D)

**Q5** (C)

**Q6** (D)

**Q7** (B)

**Q8** (A)

**Q9** (A)

**Q10** (C)



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## Hints & Solutions

### Q1 Text Solution:

Ans: (b)

#### Explanation:

We can observe that each alphabet has a symbol/letter associated with it.

Letter	B	R	O	T	H	E	R
Code	\$	&	5	3	@	4	&

And,

Letter	D	R	E	A	M
Code	9	&	4	7	*

Similarly, THREAD will be written as 3@&479.

Hence, option (b) is correct.

### Q2 Text Solution:

Ans: (c)

#### Explanation:

We know that soap is used for washing clothes.  
But soap is called 'pen'.

So, 'pen' is used for washing clothes.

Hence, option (c) is correct.

### Q3 Text Solution:

Ans: (a)

#### Explanation:

In a certain code language, 'sa ra ga' means 'dogs are barking'...(1)

'ra jo ma' means 'dogs and horses'...(2)

'mo sa ko', means 'donkeys are mad'...(3)

From equations (1) and (2), we can observe that 'ra and dogs' are common in both the cases.

It means ra is coded for dogs.

From equations (1) and (3), we can observe that 'sa and are' are common in both the cases.

This means 'sa' is coded for 'are'.

So, from equation (1), we conclude that ga is coded for barking.

Hence, option (a) is correct.

### Q4 Text Solution:

Ans: (d)

#### Explanation:

In a code language 'EINSTEIN' is written as 'DJMTSFHO'.

The pattern used in the above code is as follows:

E	E - 1	D
I	I + 1	J
N	N - 1	M
S	S + 1	T
T	T - 1	S
E	E + 1	F
I	I - 1	H
N	N + 1	O

And,

B	B - 1	A
A	A + 1	B
T	T - 1	S

Similarly, 'RUTHERFORD' is written as 'QVSIDSEPQE'

R	R - 1	Q
U	U + 1	V
T	T - 1	S
H	H + 1	I
E	E - 1	D
R	R + 1	S
F	F - 1	E
O	O + 1	P
R	R - 1	Q
D	D + 1	E

Hence, option (d) is correct.

### Q5 Text Solution:

Ans: (c)

#### Explanation:

The numerical values of alphabets are:

IHG = 987

FED = 654

CBA = 321

According to the question,

IHG = 1974 = 2 × 987

FED = 1308 = 2 × 654



So, CBA =  $2 \times 321 = 642$

Hence, option (c) is correct.

**Q6 Text Solution:**

Ans: (d)

**Explanation:**

We have to assign a prime number to each alphabet.

A	B	C	D	E	F	G
2	3	5	7	11	13	17
H	I	J	K	L	M	N
19	23	29	31	37	41	43
O	P	Q	R	S	T	U
47	53	59	61	67	71	73
V	W	X	Y	Z		
79	83	89	97	101		

We can observe that

P = 53, E = 11 and T = 71

So, PET is written as 531171.

Hence, option (d) is correct.

**Q7 Text Solution:**

Ans: (b)

Explanation:

We observe that the code is square of sum of the numerical value assigned to each alphabet.

Given, KITE = 2025

We know, K = 11, I = 9, T = 20 and E = 5

Also,  $(11 + 9 + 20 + 5)^2 = 45^2 = 2025$

Also, ATE = 676

We know, A = 1, T = 20 and E = 5

Also,  $(1 + 20 + 5)^2 = 26^2 = 676$

Similarly, in case of REST,

R = 18, E = 5, S = 19 and T = 20

So,  $(18 + 5 + 19 + 20)^2 = (62)^2 = 3844$

So, the code for REST is 3844

Hence, option (b) is correct.

**Q8 Text Solution:**

Ans: (a)

Explanation:

We are given that,

APPEAL = 367683 and PLAY = 8369

We can clearly see that in the case of APPEAL, there are two P's and two A's and 3 and 6 are coming two times each in the coded form.

So, A or P can be coded as 3 or 6 while E or L can be coded as 7 or 8

From PLAY = 8369, we can say that L = 8 and Y = 9

So, E = 7

In case of PEARL, there should be 3, 6, 7, 8 and for R there should be another digit.

Now, we go by the options.

In option (a) and (d), 3678 is coming but in option (d), there is 9 but 9 corresponds to Y.

So, there should be another digit for R that is 4.

Hence, option (a) is correct.

**Q9 Text Solution:**

Ans: (a)

Explanation:

We can observe the following pattern

A	A - 2	Y
C	C + 2	E
C	C - 2	A
E	E + 2	G
N	N - 2	L
T	T + 2	V

And,

P	P - 2	N
R	R + 2	T
O	O - 2	M
D	D + 2	F
U	U - 2	S
C	C + 2	E
T	T - 2	R

Similarly, DIRECT will be coded as BKPGAV

D	D - 2	B
I	I + 2	K
R	R - 2	P
E	E + 2	G
C	C - 2	A
T	T + 2	V

Hence, option (a) is correct.



**Q10 Text Solution:****Ans: (c)****Explanation:**

We can observe that in the given code, DENSE – FRODE and COMPANY – ZMBONND

For DENSE;

$D + 1 = E$ ;  $E - 1 = D$ ;  $N + 1 = O$ ;  $S - 1 = R$ ;  $E + 1 = F$

Now, 'E', 'D', 'O', 'R' and 'F' are written in reverse order for the coding i.e. FRODE

Similarly for COMPANY;

$C + 1 = D$ ;  $O - 1 = N$ ;  $M + 1 = N$ ;  $P - 1 = O$ ;  $A + 1 = B$ ;  
 $N - 1 = M$ ;  $Y + 1 = Z$

Now, 'D', 'N', 'N', 'O', 'B', 'M' and 'Z' are written in reverse order for the coding i.e. ZMBONND

Similarly, CLARIFY will be coded as ZEJQBKD:

$C + 1 = D$ ;  $L - 1 = K$ ;  $A + 1 = B$ ;  $R - 1 = Q$ ;  $I + 1 = J$ ;  $F - 1 = E$ ;  $Y + 1 = Z$

Now, 'D', 'K', 'B', 'Q', 'J', 'E' and 'Z' are written in reverse order for the coding i.e. ZEJQBKD

**Hence, option (c) is correct.**

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