28. To find the answer to the above question, which of the given statements is not necessary ?

(a) A   (b) B   (c) C   (d) D   (e) None of these

29. In a certain code language, *'nee muk pic'* means *'grave and concern'*; *'ill dic so'* means *'every body else'*; and *'tur muk so'* means *'body and soul'*. Which of the following would mean *'every concern'* ?   **(Bank P.O. 1995)**

(a) dic pic   (b) ill nee   (c) pic nee

(d) Can't be determined   (e) None of these

30. In a certain code language, *'Ka Bi Pu Ya'* means *'You are very intelligent'*; *'Ya Lo Ka Wo'* means *'They seem very intelligent'*; *'La Pu Le'* means *'You can see'* and *'Sun Pun Yun Ya'* means *'How intelligent she is'*. In that language, which of the following words means *'are'* ?

(a) Ka   (b) Bi   (c) Le   (d) Pu   (e) Ya

31. If in a certain code, *'bir le nac'* means *'green and tasty'*; *'pic nac hor'* means *'tomato is green'* and *'coc bir hor'* means *'food is tasty'*. Which of the following means *'tomato is tasty'* in that code ?

(a) bir le hor   (b) pic hor nac   (c) hor bir pic   (d) None of these

32. In a certain code language, *'kew xas huma deko'* means *'she is eating apples'*; *'kew tepo qua'* means *'she sells toys'* and *'sul lim deko'* means *'I like apples'*. Which word in that language means *'she'* and *'apples'* ?

(a) xas & deko   (b) xas & kew   (c) kew & deko

(d) kew & xas   (e) deko & tepo

33. If *'cinto baoli tsi nzro'* means *'her village is Sarurpur'*; *'mhi cinto keepi tsi oind'* means *'her first love is literature'* and *'oind geit tsi cinto pki'* means *'literature collection is her hobby'*, which word would mean *'literature'* ?

(a) cinto   (b) baoli   (c) oind   (d) geit

Questions 34 to 36   **(Bank P.O. 1998)**

In a certain code, *'il be pee'* means *'roses are blue'*; *'sik hee'* means *'red flowers'* and *'pee mit hee'* means *'flowers are vegetables'*.

34. How is *'red'* written in that code ?

(a) hee   (b) sik   (c) be   (d) Cannot be determined   (e) None of these

35. How is *'roses'* written in that code ?

(a) il   (b) pee   (c) be   (d) Cannot be determined   (e) None of these

36. How is *'vegetables are red flowers'* written in this code ?

(a) pee sik mit hee   (b) sik pee hee be   (c) il sik mit hee

(d) Cannot be determined   (e) None of these

ANSWERS

1. (c) : In the second and third statements, the common code word is *'sen'* and the common word is *'but'*. So, *'sen'* means *'but'*.

2. (e) : In the first and second statements, the common code words *'nee'* and *'see'* mean *'are'* and *'you'*. So, in the second statement, the remaining code *'ble'* means *'where'*.

3. (b) : In the first and second statements, the common code word is *'mot'* and the common word is *'is'*. So, *'mot'* means *'is'*.

In the second and third statements, the common code word is *'baj'* and the common word is *'dancing'*. So, *'baj'* means *'dancing'*.

Thus, in the second statement, *'min'* means *'good'*.

4. (c) : In the first and second statements, the common code word is *'rps'* and the common word is *'morning'*. So, *'rps'* means *'morning'*.

In the first and third statements, common code is *'ski'* and the common word is *'nice'*. So, *'ski'* means *'nice'*.

Thus, in the first statement, *'tri'* means *'Sunday'*.

5. (a) : In the first and second statements, the common code word is *'nie'* and the common word is *'some'*. So, *'nie'* means *'some'*.

In the first and third statements, the common code word is *'pie'* and the common word is *'good'*. So, *'pie'* means *'good'*.

Thus, in the first statement, *'bi'* means *'jokes'*.

6. (a) : In the first and second statements, the common code word is *'nat'* and the common word is *'harmful'*. So, *'nat'* stands for *'harmful'*.

In the second and third statements, the common code word is *'dor'* and the common word is *'avoid'*. So, *'dor'* stands for *'avoid'*.

Thus, in the second statement, *'vog'* means *'habit'*.

7. (c) : In the first and second statements, the common code word is *'gnr'* and the common word is *'Olympic'*. So, *'gnr'* means *'Olympic'*.

In the second and third statements, the common code is *'hyto'* and the common word is *'games'*. So, *'hyto'* means *'games'*.

Thus, in the second statement, *'emf'* means *'summer'*.

8. (d): In the first and third statements, the common code word is *'peru'* and the common word is *'fine'*. So, *'peru'* means *'fine'*.

In the second and third statements, the common code word is *'lisa'* and the common word is *'clear'*. So, *'lisa'* means *'clear'*.

Thus, in the third statement, *'dona'* means *'weather'*.

9. (d) : In the first and second statements, the common code word is *'dan'* and the common word is *'house'*. So, *'dan'* stands for *'house'*.

In the second and third statements, the common code word is *'fit'*. So, *'fit'* stands for *'is'*.

Thus, in the second statement, *'kon'* stands for *'good'*.

10. (c) : In the second and third statements, the common code words are *'Pe'*, *'Mink'* and *'May'* and the common words are *'are'*, *'not'* and *'ripe'*.

So, in the third statement, *'Nue'* stands for *'mangoes'*.

11. (a) : In the first and second statements, the common code word is *'Kun'* and the common word is *'Dogs'*. So, *'Kun'* means *'Dogs'*.

In the first and third statements, the common code word is *'Tom'* and the common word is *'are'*. So, *'Tom'* means *'are'*.

Thus, in the first statement, *'Sud'* means *'barking'*.

12. (a) : In the first and third statements, the common code word is *'fin'* and the common word is *'fruit'*. So, *'fin'* stands for *'fruit'*.

In the second and third statements, the common code word is *'sig'* and the common word is *'lily'*. So, *'sig'* stands for *'lily'*.

Thus, in the third statement, *'lon'* means *'and'*.

13. (a) : In the first and second statements, the common code word is *'tingo'* and the common word is *'flower'*. So, *'tingo'* stands for *'flower'*.

In the second and third statements, the common code word is *'mst'* and the common word is *'sweet'*. So, *'mst'* stands for *'sweet'*.

Thus, in the second statement, *'rho'* stands for *'fragrance'*.

14. (d) : We can find the code for *'food'* from the first and second statements. Now, to find the code for *'hot'*, we need the code for *'bring'* which cannot be determined from the given information.

15. (b) : In the first and second statements, the common code word is *'nro'* and the common word is *'down'*. So, *'nro'* means *'down'*.

In the second and third statements, the common code word is *'bsi'* and the common word is *'he'*. So, *'bsi'* means *'he'*.

Thus, in the second statement, *'mit'* means *'goes'*.

16. (c) : In the first and third statements, the common code word is *'na'* and the common word is *'are'*. So, *'na'* stands for *'are'*.

In the second and third statements, the common code word is *'tok'* and the common word is *'bad'*. So, *'tok'* stands for *'bad'*.

Thus, in the third statement, *'tim'* stands for *'they'*.

17. (e) : Since all the statements have been used to find the answer, so none of the given statements can be dispensed with.

18. (b) : In statements B and C, the common code word is *'re'* and the common word is *'summer'*. So, *'re'* means *'summer'*.

19. (c) : Clearly, both statements A and D are superfluous.

20. (c) : In statements A and B, the common code word is *'na'* and the common word is *'water'*. So, *'na'* means *'water'*.

In statements B and D, the common code word is *'jo'* and the common word is *'life'*. So, *'jo'* means *'life'*.

Thus, in statement B, *'tod'* represents *'is'*.

21. (b) : Clearly, statement C is not necessary and hence can be dispensed with.

22. (e) : In statements A and B, the common code word is *'zci'* and the common word is *'good'*. So, *'zci'* stands for *'good'*.

In statements A and D, the common code word is *'das'* and the common word is *'little'*. So, *'das'* stands for *'little'*.

So, in (A), *'mxy'* means *'frock'*.

23. (c) : Clearly, statement (C) is not required.

24. (d) : In statements (A) and (B), the common code word is *'pod'* and the common word is *'boy'*. So, *'pod'* stands for *'boy'*.

In statements (A) and (D), the common code word is *'joc'* and the common word is *'very'*. So, *'joc'* stands for *'very'*.

So, in (A), *'na'* stands for *'bright'*.

25. (b) : Clearly, statement (C) is not required and can be dispensed with.

26. (a) : In the first and second statements, the common code words are *'ki'* and *'ma'* and the common words are *'is'* and *'playing'*. So, *'ki'* and *'ma'* are the codes for *'is'* and *'playing'*.

In the second and fourth statements, the common code word is *'kop'* and the common word is *'tennis'*. So, *'kop'* stands for *'tennis'*.

Thus, in the second statement, *'ja'* stands for 'Asha'.

27. (a) : In statements (B) and (C), the common code word is *'Tim'* and the common word is *'knowledge'*. So, *'Tim'* stands for *'knowledge'*.

In statement (B) and (D), the common code word is *'Bis'* and the common word is *'seek'*. So, *'Bis'* stands for *'seek'*.

So, in (B), *'Nak'* stands for *'Always'*.

28. (a) : Clearly, statement (A) is not required.

29. (d) : Proceeding as in above questions, the code for *'every'* is either *'ill'* or *'dic'* and the code for *'concern'* is either *'nee'* or *'pic'*.

30. (b) : In the first and second statements, the common code words are *'Ka'* and *'Ya'* and the common words are *'very'* and *'intelligent'*. So, *'Ka'* and *'Ya'* are the codes for *'very'* and *'intelligent'*.

In the first and third statements, the common code word is 'Pu' and the common word is 'You'. So, 'Pu' stands for 'You'.

Thus, in the first statement, 'Bi' stands for 'are'.

31. (c) : In the first and second statements, the common code word is 'nac' and the common word is 'green'. So, 'nac' stands for 'green'.

In the second and third statements, the common code word is 'hor' and the common word is 'is'. So, 'hor' stands for 'is'.

So, in the second statement, 'pic' means 'tomato'. In the first and third statements, the common code word is 'bir' and the common word is 'tasty'. So, 'bir' stands for 'tasty'.

32. (c) : In the first and second statements, the common code word is 'kew' and the common word is 'she'. So, 'kew' stands for 'she'.

In the first and third statements, the common code word is 'deko' and the common word is 'apples'. So, 'deko' stands for 'apples'.

33. (c) : In the first and second statements, the common code words are 'cinto' and 'tsi' and the common words are 'her' and 'is'. So, 'cinto' and 'tsi' are the codes for 'her' and 'is'.

In the second and third statements, the common code words are 'cinto', 'tsi' and 'oind' and the common words are 'her', 'is' and 'literature'.

Now, 'cinto' and 'tsi' are codes for 'her' and 'is'. So, 'oind' stands for 'literature'.

34. (b) : In the second and third statements, the common code word is 'hee' and the common word is 'flowers'. So, 'hee' stands for 'flowers'.

Thus, in the second statement, 'sik' stands for 'red'.

35. (d) : Since from the given information, we can only find the code for 'are' in the first statement, it cannot be determined which of the remaining two codes for 'roses'.

36. (a) : Clearly, the required code will consist of the same codes as in the third statement with the code for 'red' added to it.

TYPE 6 : MIXED NUMBER CODING

In this type of questions, a few groups of numbers each coding a certain short message, are given. Through a comparison of the given coded messages, taking two at a time, the candidate is required to find the number code for each word and then formulate the code for the message given.

Ex. 1. In a certain code, '786' means 'study very hard', '958' means 'hard work pays' and '645' means 'study and work'. Which of the following is the code for 'very' ? **(S.B.I.P.O. 1994)**

(a) 8   (b) 6   (c) 7   (d) Can't be determined   (e) None of these

Sol.   In the first and second statements, the common word is 'hard' and the common code digit is '8'. So, '8' means 'hard'.

In the first and third statements, the common word is 'study' and the common code digit is '6'. So, '6' means 'study'.

Thus, in the first statement, '7' means 'very'. Hence, the answer is (c).

Ex. 2. If in a certain code language, '324' means 'Light is bright', '629' means 'Girl is beautiful' and '4758' means 'I prefer bright clothes', which digit means 'Light' in that language ?

(a) 3   (b) 2   (c) 4   (d) 7   (e) 5

Sol. In the first and second statements, the common word is '*is*' and the common code digit is '2'. So, '2' means '*is*'.

In the first and third statements, the common word is '*bright*' and the common code digit is '4'. So, '4' means '*bright*'.

Thus, in the first statement, '3' means '*Light*'. Hence, the answer is (*a*).

EXERCISE 4H

1. In a certain code, '37' means '*which class*' and '583' means '*caste and class*'. What is the code for '*caste*' ? **(Bank P.O. 1993)**
   (*a*) 3   (*b*) 7   (*c*) 8   (*d*) Either 5 or 3   (*e*) Either 5 or 8

2. In a certain code language, '743' means '*mangoes are good*'; '657' means '*eat good food*' and '934' means '*mangoes are ripe*'. Which digit means '*ripe*' in that language ? **(Hotel Management, 1992)**
   (*a*) 9   (*b*) 4   (*c*) 5   (*d*) 7

3. In a certain code language, '134' means '*good and tasty*'; '478' means '*see good pictures*' and '729' means '*pictures are faint*'. Which of the following digits stands for '*see*' ?
   (*a*) 9   (*b*) 2   (*c*) 1   (*d*) 8

4. In a certain code, '247' means '*spread red carpet*'; '256' means '*dust one carpet*' and '234' means '*one red carpet*'. Which digit in that code means '*dust*' ?
   (*a*) 2   (*b*) 3   (*c*) 5   (*d*) 6   (*e*) Can't say
   (R.B.I., 1990)

5. In a certain code language, '123' means '*bright little boy*', '145' means '*tall big boy*' and '637' means '*beautiful little flower*'. Which digit in that language means '*bright*' ?
   (*a*) 1   (*b*) 3   (*c*) 4   (*d*) 6   (*e*) None of these

6. In a certain code, '256' means '*you are good*'; '637' means '*we are bad*' and '358' means '*good and bad*'. Which of the following represents '*and*' in that code ?
   (*a*) 2   (*b*) 5   (*c*) 8   (*d*) 3
   (Railways, 1994)

7. In a certain code, '467' means '*leaves are green*'; '485' means '*green is good*' and '639' means '*they are playing*'. Which digit stands for '*leaves*' in that code ?
   (*a*) 4   (*b*) 6   (*c*) 7   (*d*) 3   (*e*) None of these
   (Bank P.O. 1991)

8. In a certain code language, '851' means '*good sweet fruit*'; '783' means '*good red rose*' and '341' means '*rose and fruit*'. Which of the following digits stands for '*sweet*' in that language ? **(B.S.R.B. 1998)**
   (*a*) 8   (*b*) 5   (*c*) 1   (*d*) 3   (*e*) None of these

9. In a certain code language, '479' means '*fruit is sweet*'; '248' means '*very sweet voice*' and '637' means '*eat fruit daily*'. Which digit stands for '*is*' in that code ?
   (*a*) 7   (*b*) 9   (*c*) 4   (*d*) Can't be determined   (*e*) None of these
   (B.S.R.B. 1995)

10. In a certain code language, '123' means '*hot filtered coffee*'; '356' means '*very hot day*' and '589' means '*day and night*'. Which digit stands for '*very*' ?
    (*a*) 9   (*b*) 5   (*c*) 8   (*d*) 2   (*e*) 6

11. In a certain code, '256' means *'red colour chalk'*; '589' means *'green colour flower'* and '245' means *'white colour chalk'*. Which digit in that code means *'white'* ?
    (a) 2   (b) 4   (c) 5   (d) Can't be determined   (e) None of these
                                                                                    (Bank P.O. 1991)

12. In a certain code language, '526' means *'sky is blue'*; '24' means *'blue colour'* and '436' means *'colour is fun'*. Which digit in that language means *'fun'* ?
    (a) 5   (b) 4   (c) 3   (d) 2   (e) None of these

13. In a certain code language, '381' means *'Hari is honest'*; '162' means *'Shashi is intelligent'* and '948' means *'Hari should go'*. Which digit in that language means *'honest'* ?
    (a) 3   (b) 8   (c) 1   (d) 9   (e) None of these

14. In a certain code, '253' means *'books are old'*; '546' means *'man is old'* and '378' means *'buy good books'*. What stands for *'are'* in that code ?   (S.B.I.P.O. 1990)
    (a) 2   (b) 4   (c) 5   (d) 6   (e) 9

15. In a certain code, '975' means *'Throw away garbage'*; '528' means *'Give away smoking'* and '213' means *'Smoking is harmful'*. Which digit in that code means *'Give'* ?
    (a) 5   (b) 2   (c) 8   (d) 3   (e) None of these

Directions (*Questions 16-17*) :

In a certain code, '289' means *'read from paper'*; '276' means *'tea from field'* and '85' means *'wall paper'*.

16. Which of the following is the code for *'tea'* ?
    (a) 2   (b) 6   (c) Either 2 or 6
    (d) Either 2 or 7   (e) Either 7 or 6

17. Which of the following is the code for *'paper'* ?
    (a) 2   (b) 8   (c) 9
    (d) Can't be determined   (e) None of these

Directions (*Questions 18-19*) :

(A) '134' means *'you are well'*;

(B) '758' means *'they go home'*;

(C) '839' means *'we are home'*.   (Bank P.O. 1994)

18. Which of the following represents *'they'* in that code language ?
    (a) 5   (b) 7   (c) 3   (d) 8   (e) Data inadequate

19. Which of the statements can be dispensed with while answering the above question ?
    (a) A only   (b) B only   (c) A or C only
    (d) B and C only   (e) None of these

20. In a certain code language, '617' means *'sweet and hot'*; '735' means *'coffee is sweet'* and '263' means *'tea is hot'*. Which of the following would mean *'coffee is hot'* ?
    (a) 731   (b) 536   (c) 367   (d) 753   (e) None of these

21. In a certain code language, *'3a, 2b, 7c'* means *'Truth is Eternal'*; *'7c, 9a, 8b, 3a'* means *'Enmity is not Eternal'* and *'9a, 4d, 2b, 8b'* means *'Truth does not perish'*. Which of the following means *'enmity'* in that language ?   (S.B.I.P.O. 1991)
    (a) 3a   (b) 7c   (c) 8b   (d) 9a   (e) None of these

ANSWERS

1. (e) : In the given statements, the common code digit is '3' and the common word is 'class'. So, '3' means 'class'.

Thus, in the second statement, either 5 or 8 stands for 'caste'.

2. (a) : In the first and third statements, the common code digits are '4' and '3' and the common words are 'mangoes' and 'are'.

So, '4' and '3' are the codes for 'mangoes' and 'are'.

Thus, in the third statement, '9' means 'ripe'.

3. (d) : In the first and second statements, the common code digit is '4' and the common word is 'good'. So, '4' stands for 'good'.

In the second and third statements, the common code digit is '7' and the common word is 'pictures'. So, '7' means 'pictures'.

Thus, in the second statement, '8' means 'see'.

4. (c) : In the first and second statements, the common code digit is '2' and the common word is 'carpet'. So, '2' means 'carpet'.

In the second and third statements, the common code digit is '6' and the common word is 'one'. So, '6' means 'one'.

Therefore, in the second statement, '5' means 'dust'.

5. (e) : In the first and second statements, the common code digit is '1' and the common word is 'boy'. So, '1' means 'boy'.

In the first and third statements, the common code digit is '3' and the common word is 'little'. So, '3' means 'little'.

Thus, in the first statement, '2' means 'bright'.

6. (c) : In the first and third statements, the common code digit is '5' and the common word is 'good'. So, '5' means 'good'.

In the second and third statements, the common code digit is '3' and the common word is 'bad'. So, '3' means 'bad'.

Thus, in the third statement, '8' means 'and'.

7. (c) : In the first and second statements, the common code digit is '4' and the common word is 'green'. So, '4' means 'green'.

In the first and third statements, the common code digit is '6' and the common word is 'are'. So, '6' means 'are'.

Thus, in the first statement, '7' means 'leaves'.

8. (b) : In the first and second statements, the common code digit is '8' and the common word is 'good'. So, '8' means 'good'.

In the first and third statements, the common code digit is '1' and the common word is 'fruit'. So, '1' means 'fruit'.

Thus, in the first statement, '5' means 'sweet'.

9. (b) : In the first and second statements, the common code digit is '4' and the common word is 'sweet'. So, '4' means 'sweet'.

In the first and third statements, the common code digit is '7' and the common word is 'fruit'. So, '7' means 'fruit'.

Thus, in the first statement, '9' means 'is'.

10. (e) : In the first and second statements, the common code digit is '3' and the common word is 'hot'. So, '3' means 'hot'.

In the second and third statements, the common code digit is '5' and the common word is 'day'. So, '5' means 'day'.

Thus, in the second statement, '6' means 'very'.

11. (b) : In the second and third statements, the common code digit is '5' and the common word is 'colour'. So, '5' means 'colour'.

In the first and third statements, '5' means 'colour'. The other common code digit is '2' and the common word is 'chalk'. So, '2' means 'chalk'.

Thus, in the third statement, '4' means 'white'.

12. (c) : In the first and third statements, the common code digit is '6' and the common word is 'is'. So, '6' means 'is'.

In the second and third statements, the common code digit is '4' and the common word is 'colour'. So, '4' means 'colour'.

Thus, in the third statement, '3' means 'fun'.

13. (a) : In the first and second statements, the common code digit is '1' and the common word is 'is'. So, '1' means 'is'.

In the first and third statements, the common code digit is '8' and the common word is 'Hari'. So, '8' stands for 'Hari'.

Thus, in the first statement, '3' means 'honest'.

14. (a) : In the first and second statements, the common code digit is '5' and the common word is 'old'. So, '5' means 'old'.

In the first and third statements, the common code digit is '3' and the common word is 'books'. So, '3' means 'books'.

Thus, in the first statement, '2' means 'are'.

15. (c) : In the first and second statements, the common code digit is '5' and the common word is 'away'. So, '5' means 'away'.

In the second and third statements, the common code digit is '2' and the common word is 'smoking'. So, '2' means 'smoking'.

Thus, in the second statement, '8' means 'Give'.

Questions 16-17

In the first and second statements, the common code digit is '2' and the common word is 'from'. So, '2' is the code for 'from'.

In the first and third statements, the common code digit is '8' and the common word is 'paper'. So, '8' is the code for 'paper'.

16. (e) : Clearly, in the second statement, either '7' or '6' may be the code for 'tea'.

17. (b) : As shown above, '8' is the code for 'paper'.

Questions 18-19

We can find the code for 'home' from the second and third statements.

For finding the code for 'they', we need the code for 'go' which cannot be determined from the given data.

18. (e) : Data inadequate

19. (a) : Clearly, statement A is not necessary.

20. (b) : In the first and third statements, the common code digit is '6' and the common word is 'hot'. So, '6' means 'hot'.

In the second and third statements, the common code digit is '3' and the common word is 'is'. So, '3' means 'is'.

In the first and second statements, the common code digit is '7' and the common word is 'sweet'.

So, in the second statement, '5' means 'coffee'.

Clearly, '536' would mean 'coffee is hot'.

21. (c) : In the second and third statements, the common code is '9a' and the common word is 'not'. So, '9a' means 'not'.

In the first and second statements, the common codes are '7c' and '3a' and the common words are 'is' and 'Eternal'.

So, in the second statement, '8b' means 'enmity'.

TYPE 7 : DECIPHERING INDIVIDUAL LETTER CODES BY ANALYSIS

In this type of questions, certain sample words are given along with their codes. The candidate is required to decipher individual codes for different letters by comparing, taking two words at a time, and then answer the given questions accordingly.

Example : *Below, in column I, are given some words. These have been translated into a code language. The code equivalents of the words in column I given in column II are not necessarily opposite to the corresponding words. Moreover, the codes for the different letters in each word have also not been given in the same order as these letters occur in the original word. Study the two columns carefully and then of the four alternatives given in each question, find the one that has the code equivalents of the letters of the word given in the question. This is your answer.* (Hotel Management, 1996)

Column I	Column II
DELIBERATION	aemrqs
CONSIDERATE	ccehlmo
GHOSTLIKE	cfhmoqqrx
WORLDLY	cdgmqrsxz
KNOWLEDGE	adefmopqqsz
ROCKET	cefkmopqqszz

1. SOLACE
   (a) aedpqr   (b) acemoq   (c) acdmpq   (d) demopq
2. KNIGHT
   (a) fgrsxz   (b) gprsxz   (c) fhmpqr   (d) ghrxyz
3. WORDY
   (a) fhlmq   (b) ehlmo   (c) efhlm   (d) adeop
4. NOTICE
   (a) acdeqs   (b) afmqsz   (c) efhpqs   (d) fghpqr
5. BLOAT
   (a) lkpqz   (b) hmpqz   (c) cmpqs   (d) ckmps

Solution : We first find the exact codes of the given words.

DELIBERATION is a twelve-letter word. So, its code is cefkmopqqszz.

CONSIDERATE is an eleven-letter word. So, its code is adefmopqqsz.

GHOSTLIKE and KNOWLEDGE are nine-letter words and the codes are cfhmoqqrx and cdgmqrsxz. KNOWLEDGE has two E's and so its code will also contain two identical letters. Thus, its code is cfhmoqqrx.

So, the code for GHOSTLIKE is cdgmqrsxz.

WORLDLY is a seven-letter word. So, its code is ccehlmo.

ROCKET is a six-letter word. So, its code is aemrqs.

Rearranging the words and their codes, we have :

DELIBERATION	cefkmopqqszz
CONSIDERATE	adefmopqqsz
GHOSTLIKE	cdgmqrsxz
WORLDLY	ccehlmo
KNOWLEDGE	cfhmoqqrx
ROCKET	aemrqs

The common letter in the given words is O and the common code letter is **m**. So, **m** stands for **O**.

In WORLDLY and ROCKET, the common code letter m stands for O. The other common code letter e stands for **R**.

In GHOSTLIKE and WORLDLY, the other common code letter c stands for **L**.

In DELIBERATION and WORLDLY, the common code letters, c, e and m stand for L, R and O respectively. The other common code letter o stands for **D**.

In WORLDLY and KNOWLEDGE, the common code letters, m, c and o stand for O, L and D respectively. So, the other common code letter **h** stands for **W**.

In KNOWLEDGE, there are two E's and the letter q occurs twice in the code. So, q stands for **E**.

In KNOWLEDGE and ROCKET, the common code letters m and q stand for O and E respectively. So, the other common code **r** stands for **K**.

In GHOSTLIKE and ROCKET, the common code letters, m, r and q stand for O, K and E respectively. So, the other common code letter s stands for **T**.

In ROCKET, the remaining code letter **a** stands for **C**.

In GHOSTLIKE and KNOWLEDGE, the common code letters m, c, r and q stand for O, L, K and E respectively. So, the other common code letter **x** stands for **G**.

In KNOWLEDGE, the remaining code letter **f** stands for **N**.

In DELIBERATION and GHOSTLIKE, the common code letters q, c, s and m stand for E, L, T and O respectively. So, the common code letter **z** stands for **I**.

In CONSIDERATE and GHOSTLIKE, the common code letters m, z, q and s stand for O, I, E and T respectively. So, the common code letter **d** stands for **S**.

In GHOSTLIKE, the remaining code letter **g** stands for **H**.

In CONSIDERATE, the remaining code letter **p** stands for **A**.

In DELIBERATION, the remaining code letter **k** stands for **B**.

The information can be summarised as below :

Code	m	e	c	o	h	l	q	r	s	a	x	f	z	d	g	p	k
Letter	O	R	L	D	W	Y	E	K	T	C	G	N	I	S	H	A	B

1. (c) : The code for S is **d**, for O is **m**, for L is **c**, for A is **p**, for C is **a** and for E is **q**.
   So, the code for SOLACE is dmcpaq or acdmpq.
2. (a) : The code for K is **r**, for N is **f**, for I is **z**, for G is **x**, for H is **g** and for T is **s**.
   So, the code for KNIGHT is rfzxgs or fgrsxz.
3. (b) : The code for W is **h**, for O is **m**, for R is **e**, for D is **o** and for Y is **l**.
   So, the code for WORDY is hmeol or ehlmo.
4. (b) : The code for N is **f**, for O is **m**, for T is **s**, for I is **z**, for C is **a** and for E is **q**.
   So, the code for NOTICE is fmszaq or afmqsz.
5. (d) : The code for B is **k**, for L is **c**, for O is **m**, for A is **p** and for T is **s**.
   So, the code for BLOAT is kcmps or ckmps.

EXERCISE 4I

Directions (*Questions 1 to 10*) : *According to a code language, words in capital letters in column I are written in small letters in column II. The letters in column II are jumbled up. Decode the language and choose the correct code for the word given in each question.*

Column I   **Column II**
(1) CURSE   (A) opkif

17. S   (a) k   (b) p   (c) v   (d) None of these
18. T   (a) a   (b) b   (c) e   (d) None of these

Directions (Questions 19 to 25) : *Below in column I are given some words and in column II are given their equivalents in some code language. Words in column II do not appear in the same order as in column I. Moreover, the order of letters is also jumbled. Decode the language and choose the correct alternative which is the equivalent of the given word.*

Column I	Column II
(1) TAPE	(A) moij
(2) COUP	(B) lhhpok
(3) TIE	(C) nls
(4) ROTATE	(D) nhpk
(5) SAY	(E) nkpl
(6) TREAT	(F) msr
(7) YEAR	(G) khlph
(8) SIP	(H) hrp
(9) TYRE	(I) pmlh

19. SOUP
     (a) osmj   (b) sojm   (c) osjm   (d) somj   (e) joms
20. REACT
     (a) lhpjk   (b) lihpr   (c) pkjih   (d) jklph   (e) kplih
21. TRACE
     (a) hiklp   (b) hlkip   (c) hklip   (d) piklh   (e) pklih
22. POSSESS
     (a) msoopoo   (b) mosspss   (c) porrprr   (d) mpiioii   (e) mpjjojj
23. CREATE
     (a) ljhkhn   (b) jknlhn   (c) jlphip   (d) ikplhp   (e) ilpkhp
24. EASY
     (a) lnps   (b) lpns   (c) pisn   (d) pnls   (e) snpl
25. CURE
     (a) ijkp   (b) pikj   (c) ikpj   (d) kipj   (e) jikp

Directions (Questions 26 to 35) : *In column I, some words are given. In column II, their codes are given but they are not arranged in the same order in which they are in column I. Study the letters in both columns and find out the code to the letter given in each of the following questions.*

(A.A.O. Exam, 1986)

Column I	Column II	Column I	Column II
(1) BID	(A) nnrw	(8) ROSE	(H) iotx
(2) BAT	(B) emps	(9) VEX	(I) aceenoww
(3) BAD	(C) lwz	(10) WAVE	(J) elu
(4) CHEAP	(D) aejmnq	(11) NAMELY	(K) befms
(5) HILL	(E) kms	(12) FAMILIAR	(L) moty
(6) PORK	(F) emrux	(13) HAZY	(M) elz
(7) QUOTE	(G) ehqr	(14) VAGUE	(N) dfmtu

(2) INCUR	(B) fbpoc
(3) TALLY	(C) ughvg
(4) CADET	(D) rkufh
(5) DRIP	(E) rotc
(6) TOIL	(F) jugc
(7) VARY	(G) vwoh

1. DAIRY
   - (a) cvohr
   - (b) gkvbf
   - (c) rctvo
   - (d) whtou
2. TODAY
   - (a) rjuyh
   - (b) kjuvh
   - (c) rjuvh
   - (d) rjuvk
3. PIECE
   - (a) fvuyr
   - (b) fktck
   - (c) fbocv
   - (d) frgkp
4. CIVIL
   - (a) gfwcc
   - (b) ghcww
   - (c) ggwfc
   - (d) gwffc
5. SUSTAIN
   - (a) hibucpi
   - (b) hkcrjbk
   - (c) hwojfvw
   - (d) hgpukgc
6. TRIED
   - (a) ukfhr
   - (b) ubovc
   - (c) ukhbp
   - (d) ukorc
7. RACE
   - (a) kovp
   - (b) kbcf
   - (c) khfo
   - (d) krbh
8. ENVOY
   - (a) kbjwu
   - (b) jvbkw
   - (c) hjbvw
   - (d) vbpuk
9. RIVET
   - (a) wckou
   - (b) ckwiu
   - (c) wckov
   - (d) kcvow
10. SUN
    - (a) pih
    - (b) bih
    - (c) pib
    - (d) ikh

Directions (*Questions 11 to 18*) : *In column I below, some words are given. In column II, their codes are given but they are not arranged in the same order in which they are in column I. Study the letters in both the columns and find out the code to the letter given in each of the following questions, from among the given alternatives.* (A.A.O. Exam, 1988)

Column I	Column II
(1) SOUND	(A) abi
(2) ADDRESS	(B) cjmv
(3) CRUX	(C) ikmop
(4) NET	(D) ijktv
(5) CRONY	(E) jkgotv
(6) CROWDY	(F) blooppv

11. A	(a) b	(b) l	(c) v	(d) None of these
12. C	(a) j	(b) k	(c) l	(d) None of these
13. D	(a) k	(b) l	(c) m	(d) None of these
14. N	(a) a	(b) e	(c) q	(d) None of these
15. O	(a) i	(b) j	(c) k	(d) None of these
16. R	(a) o	(b) p	(c) v	(d) None of these

26. B	(a) l	(b) u	(c) e	(d) z
27. C	(a) e	(b) z	(c) u	(d) p
28. D	(a) e	(b) z	(c) u	(d) k
29. F	(a) r	(b) f	(c) w	(d) c
30. G	(a) a	(b) c	(c) b	(d) j
31. H	(a) t	(b) r	(c) l	(d) s
32. A	(a) r	(b) t	(c) s	(d) e
33. K	(a) h	(b) j	(c) i	(d) k
34. M	(a) b	(b) a	(c) c	(d) d
35. Z	(a) h	(b) g	(c) f	(d) i

Directions (*Questions 36 to 40*) : *According to a code language, words in column I are given in column II. Decode the language and choose the correct code for each of the words given in the following questions. The letters in column II need not appear in the same order as they do in column I.*

Column I	Column II	Column I	Column II
(1) CHIEF	(A) knqwy	(9) BASED	(I) gstnd
(2) NIGHT	(B) akwjh	(10) PSYCO	(J) qutzb
(3) THIRD	(C) kvhwg	(11) TOWEL	(K) nzche
(4) MONEY	(D) njumz	(12) FALSE	(L) ynest
(5) WOMAN	(E) zcjms	(13) DOWRY	(M) cvguz
(6) WORKS	(F) ctvzo	(14) STOCK	(N) toqhz
(7) BASIC	(G) dtwsq	(15) TRAIN	(O) swhvj
(8) HENRY	(H) jvunk		

36. AUGUST
    (a) hhatdb   (b) llstah   (c) altpss   (d) nstddz

37. BOARD
    (a) wtvgz   (b) ctdzg   (c) sdwqz   (d) gzdvs

38. JUNIOR
    (a) jlwzvf   (b) clogwj   (c) flogvz   (d) ljfzco

39. DIGEST
    (a) kwghqv   (b) angwht   (c) aknthj   (d) gonqwt

40. DEAF
    (a) tgnz   (b) knty   (c) ygns   (d) wgsd

Directions (*Questions 41 to 45*) : *In each of the following questions, a word has been written in four different code languages. One of the code languages is common to all the five questions. The code equivalent of the word in that code language is your answer in each question.*

(Hotel Management, 1997)

41. CLUSTER
    (a) YHPQDXE   (b) BKTUSDQ   (c) BITSVEO   (d) XFJNOQP

42. LIGHT
    (a) IIVWJD   (b) KHIGS   (c) CIMKN   (d) KJHGS

43. TRIVIAL
    (a) SQHXHCK   (b) DEVCVZH   (c) VOHXHAI   (d) SQJUJBK

44. NUMBER

    (a) ZJAWQP   (b) MTOADQ   (c) GPTMXE   (d) MVNAFQ

45. BRAVE

    (a) AQBUF   (b) WRYJQ   (c) DOAXE   (d) MEZCX

ANSWERS

Questions 1 to 10

In CURSE and VARY, the common code letter is **o** and the common letter is **R**. So, o stands for **R**.

In CADET and VARY, the common code letter is **h** and the common letter is **A**. So, h stands for **A**.

In TALLY and VARY, the common code letter **h** means **A**. The other common code letter is **v** and the other common letter is **Y**. So, v stands for **Y**.

Thus, in VARY, the remaining code letter **w** stands for **V**.

In CADET and TOIL, the common code letter is **u** and the common letter is **T**. So, u stands for **T**.

In INCUR and TOIL, the common code letter is **c** and the common letter is **I**. So, c stands for **I**.

In TALLY and TOIL, the common code letter **u** stands for **T**. The other common code letter is **g** and the other common letter is **L**. So, g stands for **L**.

Thus, in TOIL, the remaining code letter **j** stands for **O**.

In CADET and DRIP, the common code letter is **r** and the common letter is **D**. So, r stands for **D**.

In DRIP, o stands for **R**, c stands for **I**. So, the remaining code letter **t** stands for **P**.

In INCUR, CURSE and CADET, the common code letter is **f** and the common letter is **C**. So, f stands for **C**.

In INCUR and CURSE, the common code letters **f** and **o** mean **C** and **R** respectively. So, the remaining code letter **p** stands for **U**.

Thus, in INCUR, the remaining code letter **b** stands for **N**.

In CURSE and CADET, the common code letter **f** means **C**. So, the other common code letter **k** means **E**.

Thus, in CURSE, the remaining code letter **i** means **S**.

The information can be summarised as below :

Code	o	h	v	w	u	c	g	j	r	t	f	p	b	k	i
Letter	R	A	Y	V	T	I	L	O	D	P	C	U	N	E	S

1. (a) : The code for D is **r**, for A is **h**, for I is **c**, for R is **o** and for Y is **v**.
    So, code for DAIRY is **rhcov**.

2. (c) : The code for T is **u**, for O is **j**, for D is **r**, for A is **h** and for Y is **v**.
    So, the code for TODAY is **ujrhv**.

3. (b) : The code for P is **t**, for I is **c**, for E is **k** and for C is **f**.
    So, the code for PIECE is **tckfk** or **fktck**.

4. (a) : The code for C is **f**, for I is **c**, for V is **w** and for L is **g**.
    So, the code for CIVIL is **fcwcg** or **gfwcc**.

5. (a) : The code for S is **i**, for U is **p**, for T is **u**, for A is **h**, for I is **c** and for N is **b**.
    So, the code for SUSTAIN is **ipiuhcb** or **hibucpi**.

6. (d) : The code for T is **u**, for R is **o**, for I is **c**, for E is **k** and for D is **r**.
    So, the code for TRIED is **uockr** or **ukorc**.

7. (c) : The code for R is **o,** for A is **h,** for C is **f** and for E is **k.**
So, the code for RACE is ohfk or khfo.

8. (b) : The code for E is **k,** for N is **b,** for V is **w,** for O is **j** and for Y is **v.**
So, the code for ENVOY is kbwjv or jvbkw.

9. (a) : The code for R is **o,** for I is **c,** for V is **w,** for E is **k** and for T is **u.**
So, the code for RIVET is ocwku or wckou.

10. (c) : The code for S is **i,** for U is **p** and for N is **b.**
So, the code for SUN is ipb or pib.

Questions 11 to 18

Clearly, the only three letter word is NET. So, its code is abi. The only four letter word is CRUX. So, its code is cjmv. The two five letter words are SOUND and CRONY and codes are ikmop, and ijktv. Clearly, CRONY has two common letters C and R with CRUX and the letters j and v in the code for CRUX are common with the code ijktv. So, the code for CRONY is ijktv and that for SOUND is ikmop. The only six letter word is CROWDY. So, its code is jkgotv. The only seven letter word is ADDRESS. So, its code is blooppv. So, rearranging the words and their codes, we have :

NET	abi
CRUX	cjmv
CRONY	ijktv
SOUND	ikmop
CROWDY	jkgotv
ADDRESS	blooppv

In NET and CRONY, the common code letter is i and the common letter is **N.**
So, i stands for **N.**
In NET and ADDRESS, the common code letter is **b** and the common letter is **E.**
So, **b** stands for **E.** Thus, in NET, the remaining code letter **a** stands for **T.**
In CRUX and ADDRESS, the common code letter is **v** and the common letter is **R.**
So, **v** stands for **R.**
In CRUX and CRONY, the common code letter **v** stands for **R.** So, the other common code letter **j** stands for **C.**
In CRUX and SOUND, the common code letter is **m** and the common letter is **U.**
So, **m** stands for **U.**
Thus, in CRUX, the remaining code letter **c** stands for **X.**
In CRONY and SOUND, the common code letter **i** stands for **N.** So, the other common code letter **k** stands for **O.**
Thus, in CRONY, the remaining code letter **t** stands for **Y.**
In SOUND and CROWDY, the common code letter **k** means **O.** So, the other common code letter **o** stands for **D.**
Thus, in SOUND, the remaining code letter **p** stands for **S.**
In CROWDY, the remaining code letter **g** stands for **W.**
In ADDRESS, the remaining code letter **l** stands for **A.**
Thus, the information can be summarised as follows :

Code	i	b	a	v	j	m	c	k	t	o	g	p	l
Letter	N	E	T	R	C	U	X	O	Y	D	W	S	A

11. (b) : Clearly, the code letter for A is **l.**
12. (a) : Clearly, the code letter for C is **j.**
13. (d) : The code letter for D is **o** and none among the choices.
14. (d) : The code letter for N is **i** and none among the choices.

15. (c) : The code letter for O is **k.**

16. (c) : The code letter for R is **v.**

17. (b) : The code letter for S is **p.**

18. (a) : The code letter for T is **a.**

Questions 19 to 25

The only seven letter word is **ROTATE.** So, its code is **lhhpok.**

The only five letter word is **TREAT.** So, its code is **khlph.**

The four letter words are TAPE, COUP, YEAR and TYRE and the codes are moij, nhpk, nkpl and pmlh. **COUP** has one letter O common with ROTATE. So, its code is **moij** which has only one code letter 'o' common with that of ROTATE.

TAPE has one letter P common with COUP. So, its code is **pmlh** which has one code letter 'm' common with that of COUP. YEAR and TYRE have the codes nhpk and nkpl, the common code letters n, k and p standing for Y, E and R. Now in TREAT, the letter T appears twice and in its code the letter h appears twice. So, h is for T. Thus, the code for **TYRE** is **nhpk** and that for **YEAR** will be **nkpl.**

The three letter words are TIE, SAY, SIP and the three letter codes are nls, msr, hrp. The code 'h' is for T. So, **TIE** is coded as **hrp. SIP** has I common with TIE. So, its code will be **msr.** Thus, the code for **SAY** is **nls.**

Rearranging the words and their codes, we have :

SAY	nls
SIP	msr
TIE	hrp
YEAR	nkpl
TYRE	nhpk
TAPE	pmlh
COUP	moij
TREAT	khlp
ROTATE	lhhpok

In SAY and SIP, the common code letter is **s** and the common letter is S. So, **s** stands for **S.**

In SAY and TYRE, the common code letter is **n** and the common letter is **Y.** So, **n** stands for **Y.** Thus, in SAY, the remaining code letter l stands for **A.**

In SIP and TIE, the common code letter is **r** and the common letter is I. So, **r** stands for **I.** Thus, in SIP, the remaining code letter **m** stands for **P.**

In TIE and YEAR, the common code letter is **p** and the common letter is **E.** So, **p** stands for **E.** Thus, in TIE, the remaining code letter **h** stands for **T.**

In YEAR and TYRE, the common code letters **n** and **p** stand for **Y** and **E.** So, the remaining common code letter **k** stands for **R.**

In COUP and ROTATE, the common code letter **o** stands for **O.**

Thus, in COUP, the remaining code letters **i** and **j** stand for **C** and **U.**

Thus, the information can be summarised as follows :

Code	s	n	l	r	m	p	h	k	o	j	i
Letter	S	Y	A	I	P	E	T	R	O	U	C

19. (b) : The code for S is **s,** for O is **o,** for U is **j** or **i** and for P is **m.** But in the question, i is nowhere mentioned. So, code for U is **j.** Thus, the code for SOUP is **sojm.**

20. (e) : The code for R is **k,** for E is **p,** for A is **l,** for C is **i** and for T is **h.** So, the code for REACT is **kplih.**

21. (c) : The code for T is **h**, for R is **k**, for A is **l**, for C is **i** and for E is **p**. So, the code for TRACE is hklip.

22. (b) : The code for P is **m**, for O is **o**, for S is **s** and for E is **p**. So, the code for POSSESS is mosspss.

23. (d) : The code for C is **i**, for R is **k**, for E is p, for A is l and for T is **h**. So, the code for CREATE is ikplhp.

24. (c) : The code for E is **p**, for A is **l**, for S is **s** and for Y is **n**. So, the code for EASY is plsn.

25. (a) : The code for C is **i**, for U is **j**, for R is **k** and for E is **p**. So, the code for CURE is ijkp.

Questions 26 to 35

The only eight letter word is **FAMILIAR**. So, its code is **aceenoww**.

The only six letter word is **NAMELY**. So, its code is **aejmnq**.

The five letter words are CHEAP, QUOTE and VAGUE and the codes are emrux, befms, afmtu. A is common to FAMILIAR, CHEAP and VAGUE. So, the common code letter e stands for A and thus CHEAP and VAGUE have codes emrux and befms. So, the code for **QUOTE** is **afmtu**. VAGUE has two common letters with QUOTE. So, its code is **befms**. Thus, the code for **CHEAP** is **emrux**.

The four letter words are HILL, PORK, ROSE, WAVE, HAZY and the codes are nnrw, emps, ehqr, iotx, and moty. Only HILL has a letter repeated twice. So, its code is **nnrw**. Only WAVE has three letters common with VAGUE. So, its code is **emps**. The code for A is e. So, the code containing e and a code letter common with HILL is the code for HAZY. Thus, code for **HAZY** is **ehqr**. Now the code having common letter with that of WAVE is the code for ROSE. So, the code for **ROSE** is **moty**. Thus, the code for **PORK** is **iotx**.

The three letter words are BID, BAT, BAD and VEX and the codes are lwz, kms, elu and elz. **VEX** has two letters common with WAVE. So, its code is **kms**. **BAT** has a letter T common with QUOTE. So, its code is **elu**. **BAD** has two letters common with BAT. So, its code is **elz**. So, the code for **BID** is **lwz**.

Rearranging the words and their codes, we have :

BID	lwz
BAD	elz
BAT	elu
VEX	kms
PORK	iotx
ROSE	moty
HAZY	ehqr
WAVE	emps
HILL	nnrw
CHEAP	emrux
VAGUE	befms
QUOTE	dfmtu
NAMELY	aejmnq
FAMILIAR	aceenoww

In BID, BAD and BAT, the common code letter is **l** and the common letter is **B**. So, l stands for **B**. In BID and BAT, the other common code letter z stands for **D**. So, the remaining code letter **w** in BID stands for **I** and **e** in BAD stands for **A**. In WAVE and ROSE, the common code letter is **m** and the common letter is **E**. So, m stands for **E**. In VEX and WAVE, the other common code letter s stands for **V**. Thus, in VEX, the remaining code letter **k** stands for **X**. In WAVE, the remaining code letter p stands for **W**. In PORK and QUOTE, the common code letter is **t** and the common letter is O. So, t stands for **O**.

In PORK and ROSE, the other common code letter **o** stands for **R**.

In PORK and CHEAP, the common code letter is **x** and the common letter is **P**. So, **x** stands for **P**.

Thus, in PORK, the remaining code letter **i** stands for **K**.

In ROSE, the remaining code letter **y** stands for **S**.

In HAZY and NAMELY, the other common code letter **q** stands for **Y**.

In HAZY and HILL, the common code letter is **r** and the common letter is **H**. So, **r** stands for **H**.

Thus, in HAZY, the remaining code letter **h** stands for **Z**.

In HILL, the code repeated twice is **n** and letter is **L**. So, **n** stands for **L**.

In CHEAP, the remaining code letter **u** stands for **C**.

In VAGUE and QUOTE, the common code letter **m** means **E**.

So, the remaining code letter **f** stands for **U**.

Thus, in VAGUE, the remaining code letter **b** means **G**.

In QUOTE, the remaining code letter **d** stands for **Q**.

In NAMELY and FAMILIAR, the common code letter **e** and **n** stand for **A** and **L** respectively. So, the remaining common code letter **a** stands for **M**. Thus, in NAMELY, the remaining code letter **j** stands for **N**. In FAMILIAR, the remaining code letter **c** stands for **F**.

The information can be summarised as below :

Code	l	z	w	e	m	s	k	p	t	o	x	i
Letter	B	D	I	A	E	V	X	W	O	R	P	K
Code	y	q	r	h	n	u	f	b	d	a	j	c
Letter	S	Y	H	Z	L	C	U	G	Q	M	N	F

26. (*a*) : The code for B is **l**.

27. (*c*) : The code for C is **u**.

28. (*b*) : The code for D is **z**.

29. (*d*) : The code for F is **c**.

30. (*c*) : The code for G is **b**.

31. (*b*) : The code for H is **r**.

32. (*d*) : The code for A is **e**.

33. (*c*) : The code for K is **i**.

34. (*b*) : The code for M is **a**.

35. (*a*) : The code for Z is **h**.

Questions 36 to 40

In CHIEF and PSYCO, the common code letter is **q** and the common letter is **C**. So, **q** stands for **C**.

In CHIEF and MONEY, the common code letter **n** stands for **E**.

In CHIEF and HENRY, the common code letter **n** stands for **E**. So, the other common code letter **k** stands for **H**.

In CHIEF and BASIC, the common code letter **q** stands for **C**. So, the other common code letter **w** stands for **I**.

Thus, in CHIEF, the remaining code letter **y** stands for **F**.

In NIGHT and MONEY, the common code letter **j** stands for **N**.

In NIGHT and TOWEL, the common code letter **h** stands for **T**.

Thus, in NIGHT, the remaining code letter **a** stands for **G**.

In THIRD and BASED, the common code letter **g** stands for **D**.

Thus, in THIRD, the remaining code letter **v** stands for **R**.

In MONEY and WORKS, the common code letter **z** stands for **O**.

In MONEY and PSYCO, the common code letter **z** stands for **O**.

So, the other common code letter **u** stands for **Y**. In MONEY and WOMAN, the common code letter **z** stands for **O** and **j** stands for **N**. So, the remaining code letter **m** stands for **M**. In WORKS and TOWEL, the common code letter **z** stands for **O**.

So, the remaining common code letter **c** stands for **W**.

In WORKS and BASIC, the common code letter is **t** and the common letter is **S**.

So, **t** stands for **S**. Thus, in WORKS, the remaining code letter **o** stands for **K**.

In BASIC and FALSE, the common code letter **t** stands for **S**.

So, the other common code letter **s** stands for **A**.

In BASIC and BASED, the common code letters **s** and **t** stand for **A** and **S** respectively.

So, the remaining code letter **d** stands for **B**. In PSYCO, the remaining code letter **b** stands for **P**.

The information can be summarised as follows : -

Code	q	n	k	w	y	j	h	a	g	v	z	u	m	c	t	o	s	d	b
Letter	C	E	H	I	F	N	T	G	D	R	O	Y	M	W	S	K	A	B	P

36. (*b*) : The code for A is **s**, for G is **a**, for S is **t** and for T is **h**.

So, the code contains the letters, **sath** which are contained in llstah only.

37. (*d*) : The code for B is **d**, for O is **z**, for A is **s**, for R is **v** and for D is **g**.

So, BOARD is coded as dzsvg or gzdvs.

38. (*a*) : The code for U as in Q. 36 is **l**, for N is **j**, for I is **w**, for O is **z** and for R is **v**.

So, the code for JUNIOR contains ljwzv.

39. (*b*) : The code for D is **g**, for I is **w**, for G is **a**, for E is **n**, for S is **t** and for T is **h**.

So, the code for DIGEST is gwanth or angwht.

40. (*c*) : The code for D is **g**, for E is **n**, for A is **s** and for F is **y**.

So, the code for DEAF is gnsy or ygns.

Questions 41 to 45

This is a special type of problem. In such type of questions, the code letters in the code equivalent of the word are in the same sequence as the letters in the word.

41. (*a*) : Clearly, the letters E and R are common to CLUSTER, NUMBER and BRAVE.

According to the alternatives in Q. 41, the codes for E and R could be X and E or D and Q or E and O or Q and P.

According to the alternatives in Q. 44, the codes for E and R could be Q and P or D and Q or X and E or F and Q.

According to the alternatives in Q. 45, the codes for E and R could be F and Q or Q and R or E and O or X and E.

The codes common to all the three possibilities above are X and E.

Since only (*a*) contains these codes, so (*a*) is the right code equivalent for CLUSTER.

Thus, code for C is Y, for L is H, for U is P, for S is Q, for T is D and so on.

42. (*a*) : The code for L is H and only (*a*) contains H at the first place.

43. (*b*) : The code for T is D and only (*b*) contains D at the first place.

44. (*c*) : The codes for E and R are X and E respectively and only (*c*) contains X and E at the last two places.

45. (*d*) : The codes for R and E are E and X respectively and only (*d*) contains E and X at the corresponding places *i.e.*, the second and fifth places.

5. BLOOD RELATIONS

In these tests, the success of a candidate depends upon the knowledge of the blood relations, some of which are summarized below to help solve these tests.

Mother's or father's son	Brother
Mother's or father's daughter	Sister
Mother's or father's brother	Uncle
Mother's or father's sister	Aunt
Mother's or father's father	Grandfather
Mother's or father's mother	Grandmother
Son's wife	Daughter-in-Law
Daughter's husband	Son-in-Law
Husband's or wife's sister	Sister-in-Law
Husband's or wife's brother	Brother-in-Law
Brother's son	Nephew
Brother' daughter	Niece
Uncle or aunt's son or daughter	Cousin
Sister's husband	Brother-in-Law
Brother's wife	Sister-in-Law
Grandson's or Grand daughter's daughter	Great grand daughter

TYPE 1 : DECIPHERING JUMBLED UP DESCRIPTIONS

In this type of questions, a round-about description is given in the form of certain small relationships and direct relationship between the persons concerned is to be deciphered.

Ex. 1. Pointing to a photograph, a man said, "I have no brother or sister but that man's father is my father's son." Whose photograph was it ?

    (a) His own   (b) His son's   (c) His father's

    (d) His nephew's   (e) None of these   **(Hotel Management, 1996)**

Sol. Since the narrator has no brother, his father's son is he himself. So, the man who is talking is the father of the man in the photograph or the man in the photograph is his son.

Hence, the answer is (b).

Ex. 2. Anil introduces Rohit as the son of the only brother of his father's wife. How is Rohit related to Anil ?

    (a) Cousin   (b) Son   (c) Uncle   (d) Son-in-law   (e) Brother

Sol. The relations may be analysed as follows :

Father's wife — Mother; Mother's brother — Uncle; Uncle's son — Cousin.
So, Rohit is Anil's cousin. Hence, the answer is (a).

Ex. 3. Pointing towards a person in a photograph, Anjali said, "He is the only son of the father of my sister's brother." How is that person related to Anjali ?

(a) Mother   (b) Father   (c) Maternal uncle

(d) Cousin   (e) None of these   **(Bank P.O. 1994)**

Sol. The relations may be analysed as follows :

Sister's brother — Brother; Brother's father — Father; Father's son — Brother.

So, the person in the photograph is Anjali's brother.

Hence, the answer is (e).

Ex. 4. Pointing out to a photograph, a man tells his friend, "She is the daughter of the only son of my father's wife." How is the girl in the photograph related to the man ?

(a) Daughter   (b) Cousin   (c) Mother   (d) Sister   (e) Niece

Sol. The relations may be analysed as follows :

Father's wife — Mother; Mother's only son — Himself.

So, the girl is man's daughter.

Hence, the answer is (a).

Ex. 5. X introduces Y saying, "He is the husband of the grand daughter of the father of my father." How is Y related to X ?

(a) Brother   (b) Son   (c) Brother-in-law   (d) Nephew   (e) Son-in-law

Sol. The relations may be analysed as follows :

Father's father — Grandfather; Grandfather's Grand daughter — Sister; Sister's husband — Brother-in-law.

So, Y is X's brother-in-law.

Hence, the answer is (c).

Ex. 6. Pointing out to a lady, Rajan said, "She is the daughter of the woman who is the mother of the husband of my mother." Who is the lady to Rajan ?

(a) Aunt   (b) Grand daughter   (c) Daughter   (d) Sister   (e) Sister-in-law

Sol. The relations may be analysed as follows :

Mother's husband — Father; Father's mother — Grandmother; Grandmother's daughter — Father's sister; Father's sister — Aunt.

So, the lady is Rajan's aunt.

Hence, the answer is (a).

EXERCISE 5A

1. Pointing to a man on the stage, Rita said, "He is the brother of the daughter of the wife of my husband." How is the man on the stage related to Rita ?

   (a) Son   (b) Husband   (c) Cousin   (d) Nephew   (e) Brother-in-law

2. Showing the man receiving the prize, Saroj said, "He is the brother of my uncle's daughter." Who is the man to Saroj ?

   (a) Son   (b) Brother-in-law   (c) Nephew   (d) Uncle   (e) Cousin

3. Pointing to a man, a woman said, "His mother is the only daughter of my mother." How is the woman related to the man ?   **(Bank P.O. 1998)**

   (a) Mother   (b) Daughter   (c) Sister   (d) Grandmother   (e) None of these

4. Pointing to a photograph, a person tells his friend, "She is the grand daughter of the elder brother of my father." How is the girl in the photograph related to his man ?
   (a) Niece   (b) Sister   (c) Aunt   (d) Sister-in-law   (e) Maternal aunt

5. Pointing to a photograph, Vipul said, "She is the daughter of my grandfather's only son." How is Vipul related to the girl in the photograph ?   **(B.S.R.B. 1997)**
   (a) Father   (b) Brother   (c) Cousin   (d) Data inadequate   (e) None of these

6. A woman introduces a man as the son of the brother of her mother. How is the man related to the woman ?
   (a) Nephew   (b) Son   (c) Cousin   (d) Uncle   (e) Grandson

7. Looking at a portrait of a man, Harsh said, "His mother is the wife of my father's son. Brothers and sisters I have none." At whose portrait was Harsh looking ?   **(M.B.A. 1998)**
   (a) His son   (b) His cousin   (c) His uncle   (d) His nephew   (e) None of these

8. A man said to a lady, "Your mother's husband's sister is my aunt." How is the lady related to the man ?
   (a) Daughter   (b) Grand daughter   (c) Mother   (d) Sister   (e) Aunt

9. If Neena says, "Anita's father Raman is the only son of my father-in-law Mahipal", then how is Bindu, who is the sister of Anita, related to Mahipal ?
   (a) Niece   (b) Daughter   (c) Wife   (d) Daughter-in-law   (e) None of these
                                                                              (Bank P.O. 1996)

10. Pointing to a girl in the photograph, Amar said, "Her mother's brother is the only son of my mother's father." How is the girl's mother related to Amar ?
    (a) Mother   (b) Sister   (c) Aunt   (d) Grandmother   (e) None of these
                                                                              (Railways, 1994)

11. A girl introduced a boy as the son of the daughter of the father of her uncle. The boy is girl's
    (a) Brother   (b) Son   (c) Uncle   (d) Son-in-law   (e) Nephew

12. If X is the brother of the son of Y's son, how is X related to Y ?
    (a) Son   (b) Brother   (c) Cousin   (d) Grandson   (e) Uncle

13. Pointing to a gentleman, Deepak said, "His only brother is the father of my daughter's father." How is the gentleman related to Deepak ?
    (a) Grandfather   (b) Father   (c) Brother-in-law   (d) Uncle   (e) None of these
                                                                              (Bank P.O. 1997)

14. Introducing a man to her husband, a woman said, "his brother's father is the only son of my grandfather." How is the woman related to his man ?
    (a) Mother   (b) Aunt   (c) Sister   (d) Daughter   (e) Grandmother

15. Pointing out to a lady, a girl said, "She is the daughter-in-law of the grandmother of my father's only son." How is the lady related to the girl ?
    (a) Sister-in-law   (b) Mother   (c) Aunt   (d) Mother-in-law   (e) Cousin

16. Rita told Mani, "The girl I met yesterday at the beach was the youngest daughter of the brother-in-law of my friend's mother." How is the girl related to Rita's friend ?
    (a) Cousin   (b) Daughter   (c) Niece   (d) Friend   (e) Aunt

17. If Kamal says, "Ravi's mother is the only daughter of my mother", how is Kamal
    related to Ravi ?   (S.B.I.P.O. 1994)
    (a) Grandfather   (b) Father   (c) Brother
    (d) Cannot be determined (e) None of these
18. Rahul told Anand, 'Yesterday I defeated the only brother of the daughter of my
    grandmother.' Whom did Rahul defeat ?
    (a) Son   (b) Father   (c) Brother   (d) Father-in-law   (e) Cousin
19. When Anuj saw Manish, he recalled, "He is the son of the father of my daughter."
    Who is Manish ?
    (a) Brother-in-law (b) Brother (c) Cousin (d) Uncle (e) Nephew
20. Pointing to a photograph, a lady tells Pramod, "I am the only daughter of this
    lady and her son is your maternal uncle." How is the speaker related to Pramod's
    father ?   (Hotel Management, 1995)
    (a) Sister-in-law (b) Wife (c) Either (a) or (b) (d) Neither (a) nor (b)
21. Introducing a man, a woman said, "He is the only son of my mother's mother."
    How is the woman related to the man ?
    (a) Mother   (b) Aunt   (c) Sister   (d) Niece   (e) None of these
22. Pointing to a man in a photograph, Asha said, "His mother's only daughter is
    my mother." How is Asha related to that man ?
    (a) Nephew   (b) Sister   (c) Wife   (d) Niece   (e) Grand daughter
23. Pointing to a photograph, a woman says, "This man's son's sister is my mother-
    in-law." How is the woman's husband related to the man in the photograph ?
    (a) Grandson   (b) Son   (c) Son-in-law   (d) Nephew   (e) None of these
                                                                      (M.B.A. 1994)
24. Introducing a man, a woman said, "His wife is the only daughter of my father."
    How is that man related to the woman ?
    (a) Brother   (b) Father-in-law   (c) Maternal uncle
    (d) Husband   (e) None of these
25. Deepak said to Nitin, "That boy playing with the football is the younger of the
    two brothers of the daughter of my father's wife." How is the boy playing football
    related to Deepak ?
    (a) Son   (b) Brother   (c) Cousin   (d) Nephew   (e) Brother-in-law
26. Pointing to the lady on the platform, Manju said, "She is the sister of the father
    of my mother's son." Who is the lady to Manju ?
    (a) Mother   (b) Sister   (c) Aunt   (d) Niece   (e) None of these
27. Arun said, "This girl is the wife of the grandson of my mother." Who is Arun
    to the girl ?
    (a) Father   (b) Grandfather   (c) Husband
    (d) Father-in-law   (e) None of these
28. Pointing to a man in a photograph, a woman said, "His brother's father is the
    only son of my grandfather." How is the woman related to the man in the
    photograph ?   (B.S.R.B. 1996)
    (a) Mother   (b) Aunt   (c) Sister   (d) Daughter   (e) Grandmother
29. Pointing to a person, a man said to a woman, "His mother is the only daughter
    of your father." How was the woman related to the person ?
    (a) Aunt   (b) Mother   (c) Wife   (d) Daughter   (e) None of these

30. A man pointing to a photograph says, "The lady in the photograph is my nephew's maternal grandmother." How is the lady in the photograph related to the man's sister who has no other sister ? **(Hotel Management, 1997)**

(a) Cousin   (b) Sister-in-law   (c) Mother   (d) Mother-in-law

31. Pointing to a lady, a man said, "The son of her only brother is the brother of my wife." How is the lady related to the man ?

(a) Mother's sister   (b) Grandmother   (c) Mother-in-law

(d) Sister of father-in-law   (e) Maternal aunt

32. Pointing to an old man, Kailash said, "His son is my son's uncle." How is the old man related to Kailash ?

(a) Brother   (b) Uncle   (c) Father   (d) Grandfather   (e) None of these

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ANSWERS

1. (a) : Wife of husband — Herself; Brother of daughter — Son.
   So, the man is Rita's son.

2. (e) : Brother of uncle's daughter — Uncle's son — Cousin.
   So, the man is Seema's cousin.

3. (a) : Only daughter of my mother — Myself.
   So, the woman is man's mother.

4. (a) : Brother of father — Uncle; Uncle's grand daughter — daughter of uncle's son — daughter of cousin — niece.

5. (b) : My grandfather's only son — My father.
   So, the girl is the daughter of Vipul's father *i.e.,* Vipul is the girl's brother.

6. (c) : Brother of mother — Uncle; Uncle's son — Cousin.

7. (a) : Since Harsh has no brother or sister, so he is his father's only son.
   Now, wife of my father's son — my wife.
   So, Harsh's wife is the man's mother or the man is Harsh's son.

8. (d) : Your mother's husband — Your father; Your father's sister — Your aunt.
   So, lady's aunt is man's aunt and therefore lady is man's sister.

9. (e) : Only son of Neena's father-in-law Mahipal — Neena's husband.
   So, Raman is Neena's husband and Anita and Bindu are his daughters.
   Thus, Bindu is the grand daughter of Mahipal.

10. (c) : Only son of Amar's mother's father — Amar's maternal uncle.
   So, the girl's maternal uncle is Amar's maternal uncle. Thus, the girl's mother is Amar's aunt.

11. (a) : Daughter of uncle's father — Uncle's sister — Mother; Mother's son — Brother.

12. (d) : Son of Y's Son — Grandson; Brother of Y's grandson — Y's grandson.

13. (d) : Father of Deepak's daughter's father — Deepak's father.
   So, the man's brother is Deepak's father or the man is the brother of Deepak's father *i.e.,* Deepak's uncle.

14. (c) : Only son of her grandfather — Her father; man's brother's father — man's father.
   So, man's father is her father *i.e.,* She is the man's sister.

15. (b) : My father's only son — My brother; Grandmother of my brother — My grandmother; Daughter-in-law of my grandmother — My mother.
   So, the lady is girl's mother.

16. (a) : Daughter of brother-in-law — Niece; Mother's niece — Cousin.
   So, the girl is the cousin of Rita's friend.

17. (e) : Only daughter of Kamal's mother — Kamal's sister.
So, Ravi's mother is Kamal's sister or Kamal is the brother of Ravi's mother *i.e.*, Ravi's maternal uncle.
18. (b) : Daughter of grandmother — Aunt; Aunt's only brother — Father.
19. (a) : Anuj's daughter's mother — Anuj's wife ; Anuj's wife's father — Anuj's father-in-law; Father-in-law's son — Anuj's brother-in-law.
So, Manish is Anuj's brother-in-law.
20. (b) : Clearly, the speaker's brother is Pramod's maternal uncle. So, the speaker is Pramod's mother or his father's wife.
21. (d) : My mother's mother — My grandmother; My grandmother's only son — My maternal uncle.
So, the woman is man's niece.
22. (d) : Asha's mother's mother is man's mother *i.e.*, Asha's mother is man's sister or Asha is man's niece.
23. (a) : Man's son's sister — Man's daughter.
So, the man's daughter is the mother of the woman's husband. Thus, the woman's husband is the grandson of the man in the photograph.
24. (d) : Only daughter of my father — Myself. So, the man is woman's husband.
25. (b) : Father's wife — Mother; Mother's daughter — Sister; Sister's younger brother — My younger brother. So, the boy is Deepak's brother.
26. (c) : Manju's mother's son — Manju's brother; Manju's brother's father — Manju's father; Father's sister — Manju's aunt.
27. (d) : Mother's grandson — Son; Son's wife — Daughter-in-law.
28. (c) : Only son of woman's grandfather — Woman's father; Man's brother's father — Man's father. So, the woman is man's sister.
29. (a) : Daughter of your father — Your sister.
So, the person's mother is woman's sister or the woman is person's aunt.
30. (c) : Clearly, the lady is the grandmother of man's sister's son *i.e.*, the mother of the mother of man's sister's son *i.e.*, the mother of man's sister.
So, the lady is man's mother.
31. (d) : Brother of my wife — My brother-in-law; Son of lady's brother is the brother-in-law of the man. So lady's brother is man's father-in-law *i.e.*, the lady is the sister of man's father-in-law.
32. (c) : Kailash's son's uncle — Kailash's brother. So, the old man's son is Kailash's brother *i.e.*, the old man is Kailash's father.

TYPE 2 : RELATION PUZZLE

In this type, mutual blood relations or other informations of more than two persons are mentioned and information about any two is mentioned.

Ex. 1. A and B are brothers. C and D are sisters. A's son is D's brother. How is B related to C ? **(M.B.A. 1998)**

(a) Father   (b) Brother   (c) Grandfather   (d) Uncle   (e) None of these

Sol. Clearly, B is the brother of A; A's son is D's brother. This means D is the daughter of A. Since C and D are sisters, C is also the daughter of A.
So, B is the uncle of C.
Hence, the answer is (d).

Ex. 2. Given that

1. A is the mother of B;
2. C is the son of A;

3. D is the brother of E;

4. E is the daughter of B.

The grandmother of D is   (S.C.R.A. 1994)

(*a*) A   (*b*) B   (*c*) C   (*d*) D   (*e*) E

Sol.   D is the brother of E and E is the daughter of B. This means that D is the son of B.

Also, A is the mother of B.

So, A is the grandmother of D.

Hence, the answer is (*a*).

Ex. 4. A and B are married couple. X and Y are brothers. X is the brother of A. How is Y related to B ?

(*a*) Brother-in-Law   (*b*) Brother   (*c*) Son-in-Law

(*d*) Cousin   (*e*) None of these

Sol.   A and B are husband and wife. Since X and Y are brothers, and X is the brother of A, Y is also the brother of A. Thus, Y is the brother-in-law of B. Hence, the answer is (*a*).

Ex. 5. Read the following information carefully and answer the questions given below :

There are six children playing football namely A, B, C, D, E and F. A and E are brothers. F is the sister of E. C is the only son of A's uncle. B and D are the daughters of the brother of C's father.

1. How is C related to F ?

(*a*) Cousin   (*b*) Brother   (*c*) Son   (*d*) Uncle   (*e*) None of these

2. How many male players are there ?

(*a*) One   (*b*) Three   (*c*) Five   (*d*) Six   (*e*) Four

3. How many female players are there ?

(*a*) Two   (*b*) Three   (*c*) Five   (*d*) One   (*e*) Four

4. How is D related to A ?

(*a*) Uncle   (*b*) Sister   (*c*) Niece   (*d*) Cousin   (*e*) None of these

Solution :

1. F is E's and hence A's sister. So, C is also the son of F's uncle and is, therefore, F's cousin. So, the answer is (*a*).

2. As given, A and E are brothers. Hence both are males. F is the sister of E and hence female. C is the son and hence male. B and D are daughters and hence female. Thus, there are three males. So, the answer is (*b*).

3. Clearly, from the solution of **2**, we find that there are three females. So, the answer is (*b*).

4. Clearly, D's father is the brother of C's father and C's father is A's uncle. So, D's father is also A's uncle. Thus, D is A's cousin. Hence, the answer is (*d*).

EXERCISE 5B

1. A party consists of grandmother, father, mother, four sons and their wives and one son and two daughters to each of the sons. How many females are there is all ?

(*a*) 14   (*b*) 16   (*c*) 18   (*d*) 24   (*e*) None of these

2. Lakshmi and Meena are Rohan's wives. Shalini is Meena's step-daughter. How is Lakshmi related to Shalini ?
   (a) Sister   (b) Mother-in-Law   (c) Mother
   (d) Step-mother   (e) None of these

3. Daya has a brother Anil. Daya is the son of Chandra. Bimal is Chandra's father. In terms of relationship, what is Anil of Bimal ?   **(C.B.I. 1994)**
   (a) Son   (b) Grandson   (c) Brother   (d) Grandfather

4. Rahul's mother is the only daughter of Monika's father. How is Monika's husband related to Rahul ?   **(Bank P.O. 1994)**
   (a) Uncle   (b) Father   (c) Grandfather
   (d) Brother   (e) Data inadequate

5. If (i) M is brother of N; (ii) B is brother of N; and (iii) M is brother of D, then which of the following statements is definitely true ?   **(B.S.R.B. 1995)**
   (a) N is brother of B   (b) N is brother of D   (c) M is brother of B
   (d) D is brother of M   (e) None of these

6. Deepak is brother of Ravi. Rekha is sister of Atul. Ravi is son of Rekha. How is Deepak related to Rekha ?   **(C.B.I. 1997)**
   (a) Son   (b) Brother   (c) Nephew   (d) Father

7. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D ?   **(Assistant Grade, 1996)**
   (a) Grandmother   (b) Grandfather   (c) Daughter   (d) Grand daughter

8. Given that : 1. A is brother of B.
                  2. C is father of A.
                  3. D is brother of E.
                  4. E is daughter of B.
   Then, uncle of D is   **(S.C.R.A. 1993)**
   (a) A   (b) B   (c) C   (d) E

9. Q is the brother of R; P is the sister of Q; T is the brother of S; S is the daughter of R. Who are the cousins of Q ?
   (a) R and P   (b) P and T   (c) Q and T
   (d) S and T   (e) None of these

10. E is the son of A. D is the son of B. E is married to C. C is B's daughter. How is D related to E ?
    (a) Brother   (b) Uncle   (c) Father-in-Law
    (d) Brother-in-Law   (e) None of these

11. A is father of C and D is son of B. E is brother of A. If C is sister of D, how is B related to E ?   **(Assistant Grade, 1997)**
    (a) Daughter   (b) Brother-in-Law   (c) Husband   (d) Sister-in-Law

12. Q's mother is sister of P and daughter of M. S is daughter of P and sister of T. How is M related to T ?   **(Bank P.O. 1995)**
    (a) Grandmother   (b) Father   (c) Grandfather
    (d) Grandfather or Grandmother   (e) None of these

Directions (Questions 13 to 15) : Read the following information and answer the questions given below :

A is the son of B. C, B's sister has a son D and a daughter E. F is the maternal uncle of D.

13. How is A related to D ?
     (a) Cousin   (b) Nephew   (c) Uncle   (d) Brother
14. How is E related to F ?
     (a) Sister   (b) Daughter   (c) Niece   (d) Wife
15. How many nephews does F have ?
     (a) Nil   (b) One   (c) Two   (d) Three

Directions (Questions 16-17) : Read the following information and answer the questions given below it :   **(S.S.C. 1993)**

A is the father of C. But C is not his son.
E is the daughter of C. F is the spouse of A.
B is the brother of C. D is the son of B.
G is the spouse of B. H is the father of G.

16. Who is the grandmother of D ?
     (a) A   (b) C   (c) F   (d) H
17. Who is the son of F ?
     (a) B   (b) C   (c) D   (d) E
18. C is A's father's nephew. D is A's cousin but not the brother of C. How is D related to C ?
     (a) Father   (b) Sister   (c) Mother   (d) Aunt
19. P is the son of Q while Q and R are the sisters to one another. T is the mother of R. If S is the son of T, which of the following statements is correct ?
     (a) T is the brother of Q.   (b) S is the cousin of P.
     (c) Q and S are sisters.   (d) S is the maternal uncle of P.
     (e) R is the grandfather of P.
20. A is the brother of B. B is the brother of C. D is the father of A. Based on these three statements, which of the following statements cannot be definitely true ?
     (a) B is the brother of A.   (b) B is the son of D.
     (c) A is the brother of C.   (d) C is the brother of A.
     (e) A, B and C are D's children.   **(B.S.R.B. 1997)**
21. A is father of X ; B is mother of Y. The sister of X and Z is Y. Which of the following statements is definitely not true ?
     (a) B is the mother of Z.   (b) X is the sister of Z.   (c) Y is the son of A.
     (d) B has one daughter.   (e) B is the wife of A.
22. Rajan is the brother of Sachin and Manick is the father of Rajan. Jagat is the brother of Priya and Priya is the daughter of Sachin. Who is the uncle of Jagat ?
     (a) Rajan   (b) Sachin   (c) Manick   (d) None of these
                                                    (Transmission Executives' 1994)
23. Neelam, who is Deepak's daughter, says to Deepika, "Your mother Rekha is the younger sister of my father who is the third child of Ramlal." How is Ramlal related to Deepika ?
     (a) Uncle   (b) Father   (c) Grandfather   (d) Father-in-Law

24. P is the brother of Q and R. S is R's mother. T is P's father. Which of the following statements cannot be definitely true ?

(a) T is Q's father.   (b) S is P's mother.   (c) P is S's son.

(d) T is S's husband.   (e) Q is T's son.

25. P is the brother of D. X is the sister of P. A is the brother of F. F is the daughter of D. M is the father of X. Who is the uncle of A ?

(a) X   (b) P   (c) F   (d) M

26. K is the brother of N and X. Y is the mother of N and Z is the father of K. Which of the following statements is not definitely true ?

(a) K is the son of Z.   (b) Y is the wife of Z.   (c) K is the son of Y.

(d) K is the father of X.   (e) N is the brother of X.

27. A woman walking with a boy meets another woman and on being asked about her relationship with the boy, she says, "My maternal uncle and his maternal uncle's maternal uncle are brothers." How is the boy related to the woman ?

(a) Nephew   (b) Brother-in-Law   (c) Son   (d) Grandson   (e) Husband

Directions (*Questions 28 to 31*) : *Read the information given below and answer the questions that follow :*   (B.S.R.B. 1998)

  (i)   In a family of six persons A, B, C, D, E and F, there are two married couples.

  (ii)   D is grandmother of A and mother of B.

  (iii)   C is wife of B and mother of F.

  (iv)   F is the grand daughter of E.

28. What is C to A ?

(a) Daughter   (b) Grandmother   (c) Mother

(d) Cannot be determined   (e) None of these

29. How many male members are there in the family ?

(a) Two   (b) Three   (c) Four

(d) Cannot be determined   (e) None of these

30. Which of the following is true ?

(a) A is brother of F.   (b) A is sister of F.   (c) D has two grandsons.

(d) B has two daughters.   (e) None of these.

31. Who among the following is one of the couples ?

(a) CD   (b) DE   (c) EB

(d) Cannot be determined   (e) None of these

Directions (*Questions 32 to 37*) : *Study the following information carefully and answer the questions given below it :*

All the six members of a family A, B, C, D, E and F are travelling together. B is the son of C but C is not the mother of B. A and C are a married couple. E is the brother of C. D is the daughter of A. F is the brother of B.

32. How many male members are there in the family ?

(a) 1   (b) 2   (c) 3   (d) 4

33. Who is the mother of B ?

(a) D   (b) F   (c) E   (d) A

34. How many children does A have ?

(a) One   (b) Two   (c) Three   (d) Four

35. Who is the wife of E ?

    (a) A   (b) F   (c) B   (d) Can't be determined

36. Which of the following is a pair of females ?

    (a) AE   (b) BD   (c) DF   (d) AD

37. How is E related to D ?

    (a) Father   (b) Brother   (c) Uncle   (d) Can't be determined

Directions (*Questions 38 to 42*) : *Read the information given below and answer the questions that follow* :   **(Bank P.O. 1995)**

    I. A, B, C, D, E and F are six members of a family.

    II. One couple has parents and their children in the family.

    III. A is the son of C and E is the daughter of A.

    IV. D is the daughter of F who is the mother of E.

38. Who are the male members in the family ?

    (a) A and C   (b) C and F   (c) A, B and D

    (d) Cannot be determined   (e) None of these

39. Which of the following pairs is the parents of the children ?

    (a) BC   (b) CF   (c) BF

    (d) Cannot be determined   (e) None of these

40. Which of the following pairs is the parents of the couple ?

    (a) AB   (b) BC   (c) AF   (d) CF   (e) None of these

41. How many female members are there in the family ?

    (a) Two   (b) Three   (c) Four

    (d) Can't be determined   (e) None of these

42. What relationship do D and E bear to each other ?

    (a) Sister and Brother   (b) Mother and Son

    (c) Grandmother and Grand daughter   (d) Sister   (e) None of these

43. A, B, C, D, E, F and G are members of a family consisting of four adults and three children, two of whom, F and G are girls. A and D are brothers and A is a doctor. E is an engineer married to one of the brothers and has two children. B is married to D and G is their child. Who is C ?   **(I.A.S. 1998)**

    (a) A's son   (b) E's daughter   (c) F's father   (d) G's brother

Directions (*Questions 44 to 48*) : *Read the following information carefully and answer the questions given below it* :

    In a family, there are six members A, B, C, D, E and F. A and B are a married couple, A being the male member. D is the only son of C, who is the brother of A. E is the sister of D. B is the daughter-in-law of F, whose husband has died.

44. How is F related to A ?

    (a) Mother   (b) Sister-in-Law   (c) Sister

    (d) Mother-in-Law   (e) None of these

45. How is E related to C ?

    (a) Sister   (b) Daughter   (c) Cousin   (d) Aunt   (e) Mother

46. Who is C to B ?

    (a) Brother   (b) Brother-in-Law   (c) Nephew

    (d) Son-in-Law   (e) None of these

47. How many male members are there in the family ?

    (a) One   (b) Two   (c) Three   (d) Four   (e) Five

48. How is F related to C ?

    (a) Mother-in-Law   (b) Sister-in-Law (c) Mother   (d) Aunt   (e) Sister

49. Shobha is the niece of Ashish. Ashish's mother is Priya. Kamla is Priya's mother. Kamla's husband is Hari. Krishna is the mother-in-law of Hari. How is Shobha related to Hari ?   **(Assistant Grade, 1996)**

    (a) Daughter   (b) Great granddaughter   (c) Grandniece

    (d) Great grandson's daughter

Directions (*Questions 50 to 54*) : *Study the following information carefully and answer the questions given below it :*   **(Railways, 1998)**

There are six persons A, B, C, D, E and F. C is the sister of F. B is the brother of E's husband. D is the father of A and grandfather of F. There are two fathers, three brothers and a mother in the group.

50. Who is the mother ?

    (a) A   (b) B   (c) D   (d) E

51. Who is E's husband ?

    (a) B   (b) C   (c) A   (d) F

52. How many male members are there in the group ?

    (a) One   (b) Two   (c) Three   (d) Four

53. How is F related to E ?

    (a) Uncle   (b) Husband   (c) Son   (d) Daughter

54. Which of the following is a group of brothers ?

    (a) ABF   (b) ABD   (c) BFC   (d) BDF

Directions (*Questions 55 to 60*) : *Read the following information carefully and answer the questions given below it :*

A family consists of six members P, Q, R, X, Y and Z. Q is the son of R but R is not mother of Q. P and R are a married couple. Y is the brother of R. X is the daughter of P. Z is the brother of P.

55. Who is the brother-in-law of R ?

    (a) P   (b) Z   (c) Y   (d) X

56. Who is the father of Q ?

    (a) R   (b) P   (c) Z   (d) None of these

57. How many children does P have ?

    (a) One   (b) Two   (c) Three   (d) Four

58. How many female members are there in the family ?

    (a) One   (b) Two   (c) Three   (d) Four

59. How is Q related to X ?

    (a) Husband   (b) Father   (c) Brother   (d) Uncle

60. Which is a pair of brothers ?

    (a) P and X   (b) P and Z   (c) Q and X   (d) R and Y

Directions (*Questions 61 to 65*) : *Study the information given below and answer the questions that follow :*

There is a family of six persons A, B, C, D, E and F. They are Lawyer, Doctor, Teacher, Salesman, Engineer and Accountant. There are two married couples in the

family. D, the Salesman is married to the Lady Teacher. The Doctor is married to the Lawyer. F, the Accountant is the son of B and brother of E. C, the Lawyer is the daughter-in-law of A. E is the unmarried Engineer. A is the grandmother of F.

61. How is E related to F ?

(a) Brother   (b) Sister   (c) Cousin

(d) Cannot be determined   (e) None of these

62. What is the profession of B ?

(a) Teacher   (b) Doctor   (c) Lawyer

(d) Cannot be determined   (e) None of these

63. What is the profession of A ?

(a) Lawyer   (b) Teacher   (c) Doctor

(d) Cannot be determined   (e) None of these

64. Which of the following is one of the couples ?

(a) F and D   (b) D and B   (c) E and A

(d) A and C   (e) None of these

65. How is D related to F ?

(a) Grandfather   (b) Father   (c) Uncle

(d) Brother   (e) None of these

Directions (*Questions 66 to 70*) : *Read the following information carefully and answer the questions below :*

A family consists of six members P, Q, R, S, T and U. There are two married couples. Q is a doctor and the father of T. U is grandfather of R and is a contractor. S is grandmother of T and is a housewife. There is one doctor, one contractor, one nurse, one housewife and two students in the family.

66. Who is the husband of P ?

(a) R   (b) U   (c) Q   (d) S   (e) T

67. Who is the sister of T ?

(a) R   (b) U   (c) T

(d) Information insufficient   (e) None of these

68. What is the profession of P ?

(a) Doctor   (b) Nurse   (c) Doctor or Nurse

(d) Housewife   (e) None of these

69. Which of the following are two married couples ?

(a) US, QT   (b) US, QP   (c) TS, RU   (d) US, RP   (e) None of these

70. Which of the following is definitely a group of male members ?

(a) QU   (b) QUT   (c) QUP   (d) UT   (e) None of these

Directions (*Questions 71 to 73*) : *Read the following information carefully and answer the questions that follow :*   (S.B.I.P.O. 1995)

In a village of Bastar district in Madhya Pradesh, only two types of people live who belong to a tribal class. The first type is known as class A, while the other is known as class B. In that village, there is no other type of person except these two. The activities of both types of people are governed by perfectly patterned norms of social behaviour. Each person of the tribe has to obey the norms. They are rigid about this.

As far as marriage is concerned, the following norms are to be followed

(A) The people of class A cannot marry any other member of their own class, though they can marry members of class B.

(B) After being married, each male member ceases to be a member of that class in which he was born but automatically, he becomes the member of the other class to which his wife belongs.

(C) As far as females are concerned, they remain the members of their own class after being married.

(D) On his birth, the child automatically becomes the member of his mother's class.

(E) When any male member becomes widower or divorcee, then he again belongs to the group in which he was born.

(F) Nobody can marry more than one person according to social laws.

71. Any class B female can have

    (P) Grandfather born in class A

    (Q) Grandmother born in class A

    (a) Only (P) can be true   (b) Only (Q) can be true

    (c) Either (P) or (Q) can be true   (d) Neither (P) and (Q) can be true

    (e) Both (P) and (Q) can be true

72. One boy, who was born in class B (boy and his wife both can have married and unmarried brothers),

    (a) can have his daughter in class B   (b) can have a son-in-law born in class A

    (c) can have his uncle from any class   (d) can have a divorced son in class B

    (e) can have a daughter-in-law born in class A.

73. Which of the following marriages is not permissible according to the social laws ?

    (a) Any girl of class B marries his mother's brother.

    (b) Any widower marries his wife's sister.

    (c) Any boy of class B marries his father's sister.

    (d) Any widower born in class A marries his brother's widow.

    (e) Any widow marries the former divorced husband of her daughter.

ANSWERS

1. (a) : Grandmother is one female, mother is another, wives of four sons are the four females and two daughters of all four sons are eight females.

   So, in all there are $1 + 1 + 4 + 8 = 14$ females.

2. (c) : Shalini is Meena's step-daughter means Shalini is the daughter of the other wife of Rohan. So, Shalini is the daughter of Lakshmi or Lakshmi is the mother of Shalini.

3. (b) : Anil is the brother of Daya and Daya is the son of Chandra. So, Anil is the son of Chandra. Now, Bimal is the father of Chandra.

   So, Anil is the grandson of Bimal.

4. (b) : Clearly, the only daughter of Monika's father is Monika herself. So, Rahul's mother is Monika. Thus, Monika's husband is the father of Rahul.

5. (c) : M is the brother of N and B is the brother of N.

   So, M is the brother of B.

6. (a) : Deepak is the son of Ravi, who is the son of Rekha. Thus, Deepak is the son of Rekha.

7. (d) : A is the sister of B and B is the daughter of C. So, A is the daughter of C. Also, D is the father of C. So, A is the granddaughter of D.

8. (a) : Clearly, D is the brother of E and E is the daughter of B. So, D is the son of B. Also, A is the brother of B. So, A is the uncle of D.

9. (d) : T is the brother of S, who is the daughter of R. So, T and S are the children of R. Now, Q is the brother of R. So, T and S are the cousins of Q.

10. (d) : C is B's daughter and D is B's son. So, D is the brother of C. E is a male married to C. So, E is the husband of C, whose brother is D. So, D is the brother-in-law of E.

11. (a) : A is father of C and C is sister of D. So, A is father of D. But D is son of B. So, B is the mother of D and wife of A. Also, E is the brother of A. So, B is the sister-in-law of E.

12. (a) : S is daughter of P and sister of T. So, T is daughter of P. Now, the sister of P is the daughter of M. This means that P is also the daughter of M. Clearly, T is the granddaughter of M. So, M is the Grandfather or Grandmother of T.

13. (a) : A is the son of B and D is the son of the sister of B. So, A is the cousin of D.

14. (c) : E is the daughter of C and D is the son of C. So, F, who is the maternal uncle of D, is also the maternal uncle of E. Thus, E is the niece of F.

15. (c) : Clearly, F is the maternal uncle of D means F is the brother of D's mother *i.e.*, F is the brother of C. C is the sister of B. So, F is the brother of B who is A's mother. Thus, F is the maternal uncle of A. So, A and D are the nephews of F *i.e.*, F has two nephews.

16. (c) : D is the son of B, B is the brother of C and A is the father of C. This means that B is the father of D and A is the father of B. So, A is the grandfather of D. Now, F is the spouse of A. So, F is the grandmother of D.

17. (a) : As explained above, B is the son of A and F is the spouse of A. So, B is the son of F.

18. (b) : C is A's father's nephew means C is the son of A's father's brother *i.e.*, C is the cousin of A. D is also A's cousin. So, D must be real brother or sister of C. But D is not brother of C. So, D must be sister of C.

19. (d) : Q and R are sisters. So, T is the mother of R means T is the mother of Q and R. S is the son of T means S is the brother of Q. Thus, P is the son of Q means S is the maternal uncle of P.

20. (d) : A is the brother of B and B is the brother of C. So, C may be the brother or sister of A.

21. (c) : A is the father of X and Y is the sister of X. So, Y is the daughter of A.

22. (a) : Jagat is the brother of Priya and Priya is the daughter of Sachin. So, Jagat is the son of Sachin. Now, Rajan is the brother of Sachin. Thus, Rajan is the uncle of Jagat.

23. (c) : Neelam's father is Deepak. Deepika's mother is Rekha. Deepak is the third child of Ramlal. So, Deepak's younger sister Rekha is the daughter of Ramlal. So, Ramlal is father of Rekha and grandfather of her daughter Deepika.

24. (e) : P, Q, R are children of same parents. So, S who is R's mother and T, who is P's father will be mother and father of all three. However, it is not mentioned whether Q is male or female. So, (e) cannot be definitely true.

25. (b) : A is the brother of F who is the daughter of D. So, A is the son of D. P is the brother of D. So, P is the uncle of A.

26. (e) : K is the brother of N and X. So, Y, who is the mother of N and Z, who is the father of K, will be mother and father of all three. However, it is not mentioned whether N is male or female.

So, the statement (e) cannot be definitely true.

27. (c) : Boy's maternal uncle will be brother of boy's mother. Maternal uncle of mother's brother and maternal uncle of lady are brother means lady is sister of mother's brother *i.e.*, lady is the mother of the boy. So, the boy is woman's son.

28. (c) : C is the wife of B and D is mother of B. So, C is the grandmother of A. So, C is the mother of A.

29. (*d*) : Clearly, the sex of A cannot be determined.

30. (*e*) : The sex of A is not known. So, neither (*a*) nor (*b*) is definitely true. Clearly, D is the grandmother of A and F.

31. (*b*) : C is wife of B. So, one couple is BC. Now, D is grandmother of A. B is the son of D and his wife C is the mother of F. So, D is also the grandmother of F. But F is the granddaughter of E. So, E is the grandfather of F and the husband of D. Thus, DE is another couple.

Questions 32 to 37

B is the son of C but C is not the mother of B means C is the father of B. A is married to C means A is the mother of B. F is brother of B means F is son of A and C. D is daughter of A means D is daughter of A and C.

32. (*d*) : A is the mother and hence female. B is the son and hence male. C is the husband and hence male. D is the daughter and hence female. E is the brother and hence male. F is the son and hence male. So, there are four males.

33. (*d*) : Clearly, A is the mother of B.

34. (*c*) : A has son B, son F and daughter D *i.e.* three children.

35. (*d*) : Clearly, from the data available, the wife of E cannot be determined.

36. (*d*) : Clearly, the females are only the mother A and the daughter D.

37. (*c*) : E is the brother of C who is the father of D. So, E is the uncle of D.

Questions 38 to 42

E is the daughter of A and F is the mother of E. So, A is the father of E and hence the husband of F. Now, D is the daughter of F. So, D and E are the daughters of A and F.

Also, A is the son of C. Now, only B remains. Thus, B and C are the parents of A.

38. (*d*) : The sex of B and C cannot be determined.

39. (*e*) : Clearly, A and F are the parents of the children D and E.

40. (*b*) : Clearly, B and C are the parents of the couple.

41. (*c*) : Clearly, the females in the family are : either B or C, F, D and E.

42. (*d*) : Clearly, D and E are sisters.

43. (*a*) : E is married to A or D. But B is married to D. Thus, E is married to A. Thus, A, B, D, E are the four adults and C, F, G are the three children in the family. B and D have a child G.

A and E have two children. They are C and F.

Now, only F and G are girls. So, C is a boy. Thus, C is A's or E's son.

Questions 44 to 48

A is a male and married to B. So, A is the husband and B is the wife. C is the brother of A. D is the son of C. E, who is the sister of D will be the daughter of C. B is the daughter-in-law of F whose husband has died means F is the mother of A.

44. (*a*) : Clearly, F is the mother of A.

45. (*b*) : Clearly, E is the daughter of C.

46. (*b*) : C is the brother of A who is the husband of B. So, C is the brother-in-law of B.

47. (*c*) : A is a male. B, the wife, is female. C, the brother, is male. D, the son, is male. E, the sister, is female. F, the mother, is a female. So, there are three males.

48. (*c*) : F is the mother of A and C is the brother of A. So, F is the mother of C

49. (*b*) : Shobha is the niece of Ashish means Ashish is the uncle of Shobha. Now, Priya is Ashish's mother. So, Priya is the grandmother of Shobha. Hari is Priya's father. So, Shobha is the great granddaughter of Hari.

Questions 50 to 54

D is father of A and grandfather of F. So, A is father of F. Thus, D and A are the two fathers. C is the sister of F. So, C is the daughter of A. Since there is only one mother, it is evident that E is the wife of A and hence the mother of C and F. So, B is brother of A. There are three brothers. So, F is the brother of C.

50. (d) : Clearly, E is the mother.
51. (c) : Clearly, A is E's husband.
52. (d) : A, the father, is male. B, the brother, is male. C, the sister, is female. D, the grandfather, is male. E, the mother, is female. F, the brother, is male. So, there are four males.
53. (c) : Clearly, F is the son of A.
54. (a) : Clearly, B and A are brothers. F is the brother of C. So, three brothers are A, B, F.

Questions 55 to 66

Q is the son of R but R is not the mother. So, R is the father of Q. P is married to R. So, P is the wife of R and the mother of Q. X is the daughter of P and hence of R and so she is the sister of Q. Y is the brother of R and Z is the brother of P.

55. (b) : R is the husband of P and Z is the brother of P. So, Z is the brother-in-law of R.
56. (a) : R is the father of Q.
57. (b) : Clearly, Q is the son of P and X is the daughter of P. So, P has two children.
58. (b) : There are two females only — mother P and daughter X.
59. (c) : X is the sister of Q who is a male. So, Q is brother of X.
60. (d) : Clearly, Y is brother of R who is a male. So, Y and R are a pair of brothers.

Questions 61 to 65

C is the daughter-in-law of A who is the grandmother of F means C is the mother of F. But F is the son of B. So, B is C's husband. But C, the lawyer, is married to the Doctor. So, B is the Doctor. F, the Accountant, will be the son of B and C. E is the unmarried Engineer. So, the other married couple can be that of grandmother of F *i.e.* A and D. But D, the Salesman, is married to the Lady Teacher. So, D, the Salesman, is the grandfather of F, father of B and the husband of A, the Lady Teacher.

61. (d) : Clearly, from the given data, the relation between E and F cannot be determined.
62. (b) : Clearly, B is the Doctor.
63. (b) : A is the Lady Teacher.
64. (e) : The two couples are C and B; and D and A which is none among the choices.
65. (a) : D is the grandfather of F.

Questions 66 to 70

Q, the Doctor, is the father of T. S, the Housewife, is the grandmother of T and hence the mother of Q. Since there are only two married couples one being that of Q, the grandfather of R *i.e.* U must be married to S. Thus, R and T will be both children of Q and these must be the students. So, P, who remains, shall be the wife of Q and she alone can be the nurse. Thus, U must be the contractor.

66. (c) : The husband of P will be Q.
67. (a) : Clearly, R and T are children of same parents. So, R will be the sister of T.
68. (b) : P is the nurse.
69. (b) : The two married couples are Q, P and U, S.
70. (a) : Clearly, for definite the males are Q, the father and U, the grandfather.
71. (b) : The mother of class B female belongs to class B. So, her father was born in class A. Thus, her father's mother belonged to class A, and father's father was born in class B. So, the Grandfather belongs to class B and Grandmother belongs to class A.

72. (c) : The boy born in class B will marry a girl of class A. So, the daughter will belong to class A. Thus, (a) is false.

Since the boy's daughter will belong to class A, she would marry a boy of class B and so the son-in-law would be from class B. So, (b) is false.

The boy, born in class B, will have mother born in class B and father born in class A. So, his uncle (*i.e.* mother's brother or father's brother) can be from class A or B. So, (c) is true.

73. (a) : A girl of class B will have mother born in class B and so the mother's brother will also belong to class B. Since people of any class cannot marry the members of their own class, so the condition in (a) is not permissible.

TYPE 3 : CODED RELATIONS

In such questions, the relationships are represented by certain codes or symbols such as +, −, ×, ÷, *, □ etc. Then relationships between certain persons, given in the form of these codes, are to be analysed.

Ex. 1. If A + B means *A is the sister of B*; A − B means *A is the brother of B*; A × B means *A is the daughter of B*, which of the following shows the relation that *E is the maternal uncle of D* ?

(a) D + F × E   (b) D − F × E   (c) D × F + E

(d) D × F − E   (e) None of these.

Sol. Clearly, E is the maternal uncle of D means D is the daughter of the sister (say F) of E *i.e.* D × F + E.

Hence, the answer is (c).

Ex. 2. *Read the following information carefully and answer the questions that follow :*

A + B means *A is the son of B*; A − B means *A is the wife of B*; A × B means *A is the brother of B*; A ÷ B means *A is the mother of B* and A = B means *A is the sister of B.*

1. What does P + R − Q mean ?
   (a) Q is the father of P.   (b) Q is the son of P.
   (c) Q is the uncle of P.   (d) Q is the brother of P.
2. What does P × R ÷ Q mean ?
   (a) P is the brother of R.   (b) P is the father of Q
   (c) P is the uncle of Q.   (d) P is the nephew of Q.
3. What does P = R + Q mean ?
   (a) P is the aunt of Q.   (b) P is the daughter of Q.
   (c) P is the niece of Q.   (d) P is the sister of Q.
4. What does P = R ÷ Q mean ?
   (a) P is the aunt of Q.   (b) P is the sister of Q.
   (c) Q is the niece of P.   (d) Q is the daughter of P.

Solution :

1. Clearly, P + R − Q means P is the son of R who is the wife of Q *i.e.* Q is the father of P. Hence, the answer is (a).
2. P × R ÷ Q means P is the brother of R who is the mother of Q *i.e.* P is the uncle of Q. So, the answer is (c).

3. P = R + Q means P is the sister of R who is the son of Q *i.e.* P is the daughter of Q.
   So, the answer is (*b*).
4. P = R + Q means P is the sister of R who is the mother of Q *i.e.* P is the aunt of Q.
   So, the answer is (*a*).

EXERCISE 5C

1. P + Q means *P is the brother of Q*; P – Q *means P is the mother of Q and* P × Q
   means *P is the sister of Q. Which of the following means M is the maternal uncle
   of R ?*
   (*a*) M + K + R   (*b*) M – R + K   (*c*) M + K – R
   (*d*) M + K × R   (*e*) None of these

2. If A + B means *A is the brother of B*; A ÷ B means *A is the father of B and*
   A × B means *A is the sister of B*, which of the following means *M is the uncle
   of P ?*   (S.B.I.P.O. 1997)
   (*a*) N × P + M   (*b*) M + S ÷ R + P   (*c*) M ÷ N × P
   (*d*) M + K ÷ T × P   (*e*) None of these.

   **Directions (*Questions 3 to 5*) : Read the following information and answer
   the questions given below it :**
   A ÷ B means *A is the daughter of B*; A × B means *A is the son of B* and A – B
   means *A is the wife of B.*

3. If P × Q – S, which of the following is true ?
   (*a*) S is wife of Q   (*b*) S is father of P   (*c*) P is daughter of Q
   (*d*) Q is father of P   (*e*) None of these

4. If T – S × B – M, which of the following is not true ?
   (*a*) B is mother of S   (*b*) M is husband of B   (*c*) T is wife of S
   (*d*) S is daughter of B   (*e*) S is son of B

5. If Z × T – S × U + P, what is U to Z.
   (*a*) Mother   (*b*) Grandmother   (*c*) Father
   (*d*) Can't be determined   (*e*) None of these.

6. P × Q means *P is the sister of Q*; P + Q means *P is the father of Q*; P – Q means
   P is the mother of Q. Which of the following means S is the aunt of T ?
   (*a*) T × M + S   (*b*) S + T × M   (*c*) S × M + T
   (*d*) S × M + R – T   (*e*) None of these   (B.S.R.B. 1997)

7. If A + B means *A is the son of B*; A – B means *A is the husband of B*; A × B
   means *A is the sister of B*, then which of the following shows the relation *Q is
   the maternal uncle of P ?*
   (*a*) P + B – R × Q   (*b*) P – B + R × Q   (*c*) P + B × R – Q
   (*d*) P × B – R + Q   (*e*) None of these

8. If A + B means *A is the mother of B*; A ÷ B means *A is the brother of B*; A × B
   means *A is the son of B* and A – B means *A is the daughter of B*, which of the
   following means *C is the niece of D ?*
   (*a*) D – C   (*b*) D × P – C   (*c*) C – P ÷ D   (*d*) P + D ÷ C   (*e*) D – P ÷ C

9. If X o Y means *X is the wife of Y*; X ∗ Y means *X is the son of Y* and X □ Y
   means *X is the sister of Y*, which of the following would mean that *A is the
   daughter of B ?*

(a) A * C □ D o B　　　　　(b) A o C * D □ B　　　　　(c) A □ C o D * B

(d) A □ C * D o B　　　　　(e) None of these

Directions (Questions 10 to 12) : Study the information given below and answer the questions that follow :

A + B means *A is the daughter of B*; A – B means *A is the husband of B*; A × B means *A is the brother of B*.

10. If P + Q – R, which of the following is true ?

(a) R is the mother of P　　　　(b) R is the sister-in-law of P

(c) R is the aunt of P　　　　　(d) R is the mother-in-law of P

11. If P × Q + R, which of the following is true ?

(a) P is the brother of R　　　　(b) P is the uncle of R

(c) P is the son of R　　　　　(d) P is the father of R

12. If P + Q × R, which of the following is true ?

(a) P is the niece of R　　　　　(b) P is the daughter of R

(c) P is the cousin of R　　　　(d) P is the daughter-in-law of R

13. If (A) P + Q means *P is the brother of Q*;

    (B) P × Q means *P is the father of Q*;

    (C) P – Q means *P is the sister of Q*,

which of the following represents *S is the niece of T* ?

(a) T × M + S – K　　　　　(b) K – S × M + T　　　　　(c) T + M × S – K

(d) T × S + M – K　　　　　(e) None of these　　　　　**(Bank P.O. 1995)**

14. To find out the answer to the above question, which of the statements can be dispensed with ?

(a) A only　　(b) B only　　(c) C only　　(d) B or C only　　(e) All are necessary

15. If P + Q means *P is the husband of Q*; P ÷ Q means *P is the sister of Q* and P × Q means *P is the son of Q*, which of the following shows *A is the daughter of B* ?　　　　　**(Bank P.O. 1996)**

(a) C × B ÷ A　　　　　(b) B + C × A　　　　　(c) D × B + C ÷ A

(d) A ÷ D × B　　　　　(e) None of these

16. X – Z means *X is the mother of Z*; X × Z means *X is the father of Z* and X + Z means *X is the daughter of Z*. Now, if M – N × T + Q, than which of the following is not true ?　　　　　**(B.S.R.B. 1998)**

(a) T is N's daughter　　(b) N is wife of Q　　(c) M is mother-in-law of Q

(d) Q is wife of N　　(e) T is granddaughter of M

Directions (Questions 17 to 24) : Read the following information carefully and answer the questions given below it :

A + B means *A is the father of B*; A – B means *A is the wife of B*; A × B means *A is the brother of B*; A ÷ B means *A is the daughter of B*.

17. If P ÷ R + S + Q, which of the following is true ?

(a) P is the daughter of Q　　　　(b) Q is the aunt of P

(c) P is the aunt of Q　　　　　(d) P is the mother of Q

18. If P – R + Q, which of the following statements is true ?

(a) P is the mother of Q　　　　(b) Q is the daughter of P

(c) P is the aunt of Q　　　　　(d) P is the sister of Q

19. If P × R ÷ Q, which of the following statements is true ?
    (a) P is the uncle of Q   (b) P is the father of Q
    (c) P is the brother of Q   (d) P is the son of Q
20. If P × R − Q, which of the following is true ?
    (a) P is the brother-in-law of Q   (b) P is the brother of Q
    (c) P is the uncle of Q   (d) P is the father of Q
21. If P + R ÷ Q, which of the following is true ?
    (a) P is the brother Q   (b) P is the son of Q
    (c) P is the husband of Q   (d) P is the father of Q
22. If P ÷ R + Q, which of the following is true ?
    (a) P is the father of Q   (b) P is the brother of Q
    (c) P is the mother of Q   (d) P is the sister of Q
23. If P × R + Q, which of the following is true ?
    (a) P is the uncle of Q   (b) P is the father of Q
    (c) P is the brother-in-law of Q   (d) P is the grandfather of Q
24. If P − R × Q, which of the following is true ?
    (a) P is the sister of Q   (b) Q is the husband of P
    (c) P is the sister-in-law of Q   (d) Q is the son of P

ANSWERS

1. (c) : M is the maternal uncle of R means M is the brother of the mother (say K) of R *i.e.* M + K − R.
2. (d) : M is the uncle of P means M is the brother of the father (say K) of the sister (say T) of P *i.e.* M + K ÷ T × P.
3. (b) : P × Q − S means P is the son of Q who is the wife of S *i.e.* P is the son of S or S is the father of P.
4. (d) : T − S × B − M means T is the wife of S who is the son of B who is the wife of M *i.e.* T is the wife of the son of M (father) *i.e.* T is the daughter-in-law of M. But as this is not given in the choice, so the fact in (d) derived from S × B is true.
5. (b) : Z × T − S × U means Z is the son of T who is the wife of S who is the son of U *i.e.* Z is the son of S who is the son of U *i.e.* Z is the grandson of U or U is the grandmother or grandfather of Z. From the choice, (b) is true.
6. (c) : S is the aunt of T means S is the sister of the father (say M) of T *i.e.* S × M + T.
7. (a) : Q is the maternal uncle of P means P is the son of the sister of Q *i.e.* P is the son of the husband (say B) of the sister (say R) of Q *i.e.* (P + B − R × Q).
8. (c) : C is the niece of D means C is the daughter of the brother (say P) of D *i.e.* C − P ÷ D.
9. (d) : A is the daughter of B means A is the sister of the son (say C) of the wife (say D) of B *i.e.* A □ C • D o B.
10. (a) : P + Q − R means P is the daughter of Q who is the husband of R *i.e.* R is P's mother.
11. (c) : P × Q + R means P is the brother of Q who is the daughter of R *i.e.* P is the son of R.
12. (a) : P + Q × R means P is the daughter of Q who is the brother of R *i.e.* P is the niece of R.
13. (c) : S is the niece of T means T is the brother of the father (say M) of S *i.e.* T + M × S.
14. (c) : Clearly, statement (c) can be dispensed with while answering the above question.
15. (d) : A is the daughter of B means A is the sister of the son (say D) of B *i.e.* A ÷ D × B.

16. (*d*) : M – N × T + Q means M is the mother of N who is the father of T who is the daughter of Q *i.e.* M is the grandmother of the daughter of Q *i.e.* M is the mother of Q. Since this is not given in the choices, so the fact in (*d*) derived from N × T + Q is true.

17. (*c*) : P ÷ R + S + Q means P is the daughter of R who is the father of S who is the father of Q *i.e.* P is the sister of the father (S) of Q *i.e.* P is the aunt of Q.

18. (*a*) : P – R + Q means P is the wife of R who is the father of Q *i.e.* P is the mother of Q.

19. (*d*) : P × R ÷ Q means P is the brother of R who is the daughter of Q *i.e.* P is the son of Q.

20. (*a*) : P × R – Q means P is the brother of R who is the wife of Q *i.e.* P is the brother-in-law of Q.

21. (*c*) : P + R ÷ Q means P is the father of R who is the daughter of Q *i.e.* P is the father of R and Q is the mother of R *i.e.* P is the husband of Q.

22. (*d*) : P ÷ R + Q means P is the daughter of R who is the father of Q *i.e.* P is the sister of Q.

23. (*a*) : P × R + Q means P is the brother of R who is the father of Q *i.e.* P is the uncle of Q.

24. (*c*) : P – R × Q means P is the wife of R who is the brother of Q *i.e.* P is the sister-in-law of Q.

6. PUZZLE TEST

This section comprises of questions put in the form of puzzles involving certain number of items, be it persons or things. The candidate is required to analyse the given information, condense it in a suitable form and answer the questions asked.

The questions on Puzzle Test may be of any of the following types :

    I. Classification Type Questions
   II. Seating/Placing Arrangements
  III. Comparison Type Questions
  IV. Sequential order of things
   V. Selection based on given conditions
  VI. Questions involving family members — their relationship, their professions, their preferences etc.
 VII. Jumbled up Problems

TYPE 1 : CLASSIFICATION TYPE QUESTIONS

This type consists of questions in which certain items belonging to different groups or possessing different qualities are given along with some clues with the help of which the candidate is required to group and analyse the given items and answer the questions accordingly.

Ex. 1. Read the following information carefully and answer the questions that follow :

There are six cities A, B, C, D, E and F.

A is not a hill station.

B and E are not historical places.

D is not an industrial city.

A and D are not historical cities.

A and B are not alike.

1. Which two cities are industrial centres ?
    (a) A and B   (b) E and F   (c) C and D   (d) B and F   (e) A and D

2. Which two cities are historical places ?
    (a) A and C   (b) B and F   (c) C and F   (d) B and E   (e) A and D

3. Which two cities are hill stations ?
    (a) A and B   (b) C and A   (c) B and D   (d) A and F   (e) None of these

4. Which city is a hill station and an industrial centre but not a historical place ?
    (a) E   (b) F   (c) A   (d) B   (e) C

5. Which two cities are neither historical places nor industrial centres ?
    (a) A and B   (b) D and E   (c) F and C   (d) B and D   (e) None of these

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Solution : The given information can be analysed as follows :

	A	B	C	D	E	F
Historical	×	×	√	×	×	√
Industrial	√	×	√	×	√	√
Hill Stations	×	√	√	√	√	√

Since A and B are not alike and because A is industrial, B cannot be industrial but only a hill station. So, we put a cross for B across Industrial.
1. Clearly, A, C, E and F are Industrial Centres. So, the answer is (b).
2. Clearly, C and F are Historical places. So, the answer is (c).
3. Clearly, B, C, D, E and F are Hill stations. So, the answer is (c).
4. E alone is a Hill station and an Industrial centre but not a Historical place. So, the answer is (a).
5. B and D are neither Historical places nor Industrial centres. So, the answer is (d).

Ex. 2. Read the following information carefully and answer the questions that follow :
   (i) Five friends P, Q, R, S and T travelled to five different cities of Chennai, Calcutta, Delhi, Bangalore and Hyderabad by five different modes of transport of Bus, Train, Aeroplane, Car and Boat from Mumbai.
   (ii) The person who travelled to Delhi did not travel by boat.
   (iii) R went to Bangalore by car and Q went to Calcutta by aeroplane.
   (iv) S travelled by boat whereas T travelled by train.
   (v) Mumbai is not connected by bus to Delhi and Chennai. **(Bank P.O. 1995)**

1. Which of the following combinations of person and mode is not correct ?
   (a) P — Bus   (b) Q — Aeroplane   (c) R — Car
   (d) S — Boat   (e) T — Aeroplane
2. Which of the following combinations is true for S ?
   (a) Delhi — Bus   (b) Chennai — Bus   (c) Chennai — Boat
   (d) Data inadequate   (e) None of these
3. Which of the following combinations of place and mode is not correct ?
   (a) Delhi — Bus   (b) Calcutta — Aeroplane   (c) Bangalore — Car
   (d) Chennai + Boat   (e) Hyderabad — Bus
4. The person travelling to Delhi went by which of the following modes ?
   (a) Bus   (b) Train   (c) Aeroplane   (d) Car   (e) Boat
5. Who among the following travelled to Delhi ?
   (a) R   (b) S   (c) T   (d) Data inadequate   (e) None of these

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Solution : The given information can be analysed as follows :
   (A) **Mode of Transport :** R travels by Car, Q by Aeroplane, S by Boat and T by Train. Now, only P remains. So, P travels by Bus.
   (B) **Place of Travel :** R goes to Bangalore, Q to Calcutta. Now, bus transport is not available for Delhi or Chennai. So, P who travels by Bus goes to Hyderabad. S travels by boat and hence, by (ii), did not go to Delhi. So, S goes to Chennai. Now, only T remains. So, T goes to Delhi.

	Place	Mode
P	Hyderabad	Bus
Q	Calcutta	Aeroplane
R	Bangalore	Car
S	Chennai	Boat
T	Delhi	Train

1. Clearly, the incorrect combination is T — Aeroplane. So, the answer is (e).
2. Clearly, the correct combination for S is Chennai — Boat. So, the answer is (c).
3. Clearly, the incorrect combination is Delhi — Bus. So, the answer is (a).
4. Clearly, T travelled to Delhi by Train. So, the answer is (b).
5. Clearly, T travelled to Delhi. So, the answer is (c).

EXERCISE 6A

Directions (*Questions 1 to 5*) : *Read the following information and answer the questions based on it :*   (Bank P.O. 1996)

In a school, there were five teachers. A and B were teaching Hindi and English. C and B were teaching English and Geography. D and A were teaching Mathematics and Hindi. E and B were teaching History and French.

1. Who among the teachers was teaching maximum number of subjects ?
   (a) A   (b) B   (c) C   (d) D   (e) E
2. Which of the following pairs was teaching both Geography and Hindi ?
   (a) A and B   (b) B and C   (c) C and A   (d) D and B   (e) None of these
3. More than two teachers were teaching which subject ?
   (a) History   (b) Hindi   (c) French   (d) Geography   (e) Mathematics
4. D, B and A were teaching which of the following subjects ?
   (a) English only   (b) Hindi and English   (c) Hindi only
   (d) English and Geography   (e) Mathematics and Hindi
5. Who among the teachers was teaching less than two subjects ?
   (a) A   (b) B   (c) D   (d) Data inadequate   (e) There is no such teacher

Directions (*Questions 6 to 10*) : *Study the following information carefully and answer the questions that follow :*   (M.B.A. 1997)

Madhu and Shobha are good in Dramatics and Computer Science.
Anjali and Madhu are good in Computer Science and Physics.
Anjali, Poonam and Nisha are good in Physics and History.
Nisha and Anjali are good in Physics and Mathematics.
Poonam and Shobha are good in History and Dramatics.

6. Who is good in Computer Science, History and Dramatics ?
   (a) Anjali   (b) Madhu   (c) Shobha   (d) Nisha
7. Who is good in Physics, Dramatics and Computer Science ?
   (a) Shobha   (b) Poonam   (c) Madhu   (d) Anjali
8. Who is good in Physics, History and Dramatics ?
   (a) Poonam   (b) Shobha   (c) Madhu   (d) Anjali

9. Who is good in History, Physics, Computer Science and Mathematics ?
   (a) Poonam   (b) Nisha   (c) Madhu   (d) Anjali

10. Who is good in Physics, History and Mathematics but not in Computer Science ?
    (a) Madhu   (b) Poonam   (c) Nisha   (d) Anjali

11. Ravi is not wearing white and Ajay is not wearing blue. Ravi and Sohan wear different colours. Sachin alone wears red.   **(Central Excise, 1992)**
    What is Sohan's colour, if all four of them are wearing different colours ?
    (a) Red   (b) Blue   (c) White   (d) Can't say

Directions (*Questions 12-13*) : *Study the following information and answer the questions given below it :*

    (i)   Kailash, Govind and Harinder are intelligent.

    (ii) Kailash, Rajesh and Jitendra are hard-working.

    (iii) Rajesh, Harinder and Jitendra are honest.

    (iv) Kailash, Govind and Jitendra are ambitious.

12. Which of the following persons is neither hard-working nor ambitious ?
    (a) Kailash   (b) Govind   (c) Harinder   (d) Rajesh   (e) None of these

13. Which of the following persons is neither honest nor hard-working but is ambitious ?
    (a) Kailash   (b) Govind   (c) Rajesh   (d) Harinder   (e) None of these

Directions (*Questions 14 to 17*) : *Read the following information and answer the questions that follow :*   **(Railways, 1993)**

Four youngmen Raj, Prem, Ved and Ashok are friendly with four girls Sushma, Kusum, Vimla and Poonam. Sushma and Vimla are friends. Ved's girl friend does not like Sushma and Vimla. Kusum does not care for Ved. Prem's girl friend is friendly with Sushma. Sushma does not like Raj.

14. Who is Raj's girl friend ?
    (a) Sushma   (b) Kusum   (c) Vimla   (d) Poonam -

15. With whom is Sushma friendly ?
    (a) Raj   (b) Prem   (c) Ved   (d) Ashok

16. Who is Poonam's boy friend ?
    (a) Ashok   (b) Ved   (c) Prem   (d) Raj

17. Who does not like Sushma and Vimla ?
    (a) Poonam   (b) Raj   (c) Ashok   (d) Ved

18. In a cricket season, India defeated Australia twice, West Indies defeated India twice, Australia defeated West Indies twice, India defeated New Zealand twice and West Indies defeated New Zealand twice. Which country has lost most number of times ?
    (a) India   (b) Australia   (c) New Zealand   (d) West Indies
         (I. Tax & Central Excise, 1992)

Directions (*Questions 19 to 21*) : *Read the following information and answer the questions given below it :*

Six students A, B, C, D, E and F are sitting in the field. A and B are from Nehru House while the rest belong to Gandhi House. D and F are tall while the others are short. A, C and D are wearing glasses while the others are not.

19. Which two students, who are not wearing glasses are short ?
    (a) A and F   (b) C and E   (c) B and F   (d) E and F   (e) None of these

20. Which short student of Gandhi House is not wearing glasses ?

    (a) F   (b) E   (c) B   (d) A   (e) Data inadequate

21. Which tall student of Gandhi House is not wearing glasses ?

    (a) B   (b) C   (c) E   (d) F   (e) None of these

22. Six students A, B, C, D, E and F are sitting in the field. A and B are from Delhi while the rest are from Bangalore. D and F are tall while others are short. A, C and D are girls while others are boys. Which is the tall girl from Bangalore ?

    (a) C   (b) D   (c) E   (d) F

                                                      (I. Tax & Central Excise, 1996)

23. On a shelf are placed six volumes side-by-side labelled A, B, C, D, E and F. B, C, E, F have green covers while others have yellow covers. A, D, B are new volumes while the rest are old volumes. A, C, B are law reports while the rest are medical extracts. Which two volumes are old medical extracts and have green covers ?   **(Assistant Grade, 1996)**

    (a) B, C   (b) C, D   (c) C, E   (d) E, F

Directions (*Questions 24 to 28*) : *Read the following information carefully and answer the questions given below it* :

There are six persons A, B, C, D, E and F in a school. Each of the teachers teaches two subjects, one compulsory subject and the other optional subject. D's optional subject was History while three others have it as compulsory subject. E and F have Physics as one of their subjects. F's compulsory subject is Mathematics which is an optional subject of both C and E. History and English are A's subjects but in terms of compulsory and optional subjects, they are just reverse of those of D's. Chemistry is an optional subject of only one of them. The only female teacher in the school has English as her compulsory subject.

24. What is C's compulsory subject ?

    (a) History   (b) Physics   (c) Chemistry   (d) English   (e) Mathematics

25. Who is a female member in the group ?

    (a) A   (b) B   (c) C   (d) D   (e) E

26. Which of the following has same compulsory and optional subjects as those of F's ?

    (a) D   (b) B   (c) A   (d) C   (e) None of these

27. Disregarding which is the compulsory and which is the optional subject, who has the same two subject combination as F ?

    (a) A   (b) B   (c) E   (d) D   (e) None of these

28. Which of the following groups has History as the compulsory subject ?

    (a) A, C, D   (b) B, C, D   (c) C, D   (d) A, B, C   (e) A, D

Directions (*Questions 29 to 32*) : *Read the following information carefully and answer the questions that follow* :   **(Bank P.O. 1996)**

    (i) Jayant, Kamal, Namita, Asha and Tanmay are five members of a family.

    (ii) They have their birth dates from January to May, each member in one of these months.

    (iii) Each one likes one particular item for his/her birthday out of Bengali Sweets, Chocolates, Pastries, Ice Cream and Dry Fruits.

    (iv) The one who likes Pastries is born in the month which is exactly middle in the months given.

    (v) Asha does not like Ice cream but brings Chocolates for Jayant in February.

    (vi) Tanmay who is fond of Bengali sweets is born in the next month immediately after Namita.

    (vii) Namita does not like Dry fruits or Ice cream.

29. What is the choice of Asha ?

  (a) Pastries   (b) Dry fruits   (c) Bengali sweets

  (d) Cannot be determined   (e) None of these

30. Which combination of month and item is true for Jayant ?

  (a) March — Pastries   (b) February — Pastries   (c) February — Ice cream

  (d) Cannot be determined   (e) None of these

31. What is the choice of Kamal ?

  (a) Ice cream   (b) Bengali sweets   (c) Dry fruits

  (d) Cannot be determined   (e) None of these

32. In which month was Kamal born ?

  (a) January   (b) May   (c) January or May

  (d) Data inadequate   (e) None of these

Directions (*Questions 33 to 37*) : *Read the following information carefully and answer the questions that follow* :   (S.B.I.P.O. 1997)

    (i) P, Q, R, S, T and U are six students procuring their Master's degree in six different subjects — English, History, Philosophy, Physics, Statistics and Mathematics.

    (ii) Two of them stay in hostel, two stay as paying guest (PG) and the remaining two stay at their home.

    (iii) R does not stay as PG and studies Philosophy.

    (iv) The students studying Statistics and History do not stay as PG.

    (v) T studies Mathematics and S studies Physics.

    (vi) U and S stay in hostel. T stays as PG and Q stays at home.

33. Who studies English ?

  (a) R   (b) S   (c) T   (d) U   (e) None of these

34. Which of the following combinations of subject and place of stay is not correct ?

  (a) English — Hostel   (b) Mathematics — PG   (c) Philosophy — Home

  (d) Physics — Hostel   (e) None of these

35. Which of the following pairs of students stay one each at hostel and at home ?

  (a) QR   (b) SR   (c) US   (d) Data inadequate   (e) None of these

36. Which subject does Q study ?

  (a) History   (b) Statistics   (c) History or Statistics

  (d) Data inadequate   (e) None of these

37. Which of the following pairs of students stay at home ?

  (a) PQ   (b) QR   (c) RS   (d) ST   (e) None of these

Directions (*Questions 38 to 42*) : *Study the following information and answer the questions given below it* :   (Stenographer's Exam, 1994)

Rohit, Kunal, Ashish and John are students of a school. Three of them stay far from the school and one near it. Two study in class IV, one in class V and one in class VI. They study Hindi, Mathematics, Social Science and Science. One is good at all the four subjects while another is weak in all of these. Rohit stays far from the school and is good at Mathematics only while Kunal is weak in Mathematics

only and stays close to the school. Neither of these two nor Ashish studies in class VI. One who is good at all the subjects studies in class V.

38. Name the boy who is good at all the subjects.

(a) Rohit   (b) Kunal   (c) Ashish   (d) John

39. Name the boy who is weak in all the subjects.

(a) Rohit   (b) Kunal   (c) Ashish   (d) John

40. Which two boys are good at Hindi ?

(a) Rohit and Kunal   (b) Kunal and Ashish

(c) Ashish and John   (d) John and Rohit

41. Which two boys are good at Mathematics ?

(a) Rohit and Ashish   (b) Kunal and Ashish

(c) John and Ashish   (d) Rohit and John

42. Other than Rohit and the boy good at all the subjects, who else stays far from the school ?

(a) Rohit   (b) Kunal   (c) Ashish   (d) John

Directions (Questions 43 to 45) : Study the given information carefully and answer the questions that follow :   (Bank P.O. 1997)

(i) There are six friends A, B, C, D, E and F.

(ii) Each one is proficient in one of the games, namely Badminton, Volleyball, Cricket, Hockey, Tennis and Polo.

(iii) Each owns a different coloured car, namely yellow, green, black, white, blue and red.

(iv) D plays Polo and owns a yellow coloured car.

(v) C does not play either Tennis or Hockey and owns neither blue nor yellow coloured car.

(vi) E owns a white car and plays Badminton.

(vii) B does not play Tennis, he owns a red coloured car.

(viii) A plays Cricket and owns a black car.

43. Who plays Volleyball ?

(a) B   (b) C   (c) F

(d) Data inadequate   (e) None of these

44. Which coloured car F owns ?

(a) Green   (b) Blue   (c) Either Green or Blue

(d) Data inadequate   (e) None of these

45. Which of the following combinations of colour of car and game played is not correct ?

(a) Yellow — Polo   (b) Green — Tennis   (c) Black — Cricket

(d) Red — Hockey   (e) None of these

46. In a group of six women, there are four dancers, four vocal musicians, one actress and three violinists. Girija and Vanaja are among the violinists while Jalaja and Shailja do not know how to play on the violin. Shailja and Tanuja are among the dancers. Jalaja, Vanaja, Shailja and Tanuja are all vocal musicians and two of them are also violinists. If Pooja is an actress, who among the following is both a dancer and a violinist ?   (I.A.S. 1993)

(a) Jalaja   (b) Shailja   (c) Tanuja   (d) Pooja

ANSWERS

Questions 1 to 5

The given information may be analysed as under :

	English	Hindi	Mathematics	Geography	History	French
A	√	√	√			
B	√	√		√	√	√
C	√			√		
D		√	√			
E					√	√

1. (b) : B teaches maximum number of subjects *i.e.* 5.
2. (e) : Only B teaches both Hindi and Geography.
3. (b) : Three teachers were teaching Hindi — A, B and D.
4. (c) : D, B and A were teaching Hindi.
5. (e) : None of the teachers was teaching less than two subjects.

Questions 6 to 10

The given information can be analysed as under :

	Dramatics	Computer Sc.	Physics	History	Mathematics
Madhu	√	√	√		
Shobha	√	√		√	
Anjali		√	√	√	√
Poonam	√		√	√	
Nisha			√	√	√

6. (c) : Shobha is good in Computer Science, History and Dramatics.
7. (c) : Madhu is good in Physics, Dramatics and Computer Science.
8. (a) : Poonam is good in Physics, History and Dramatics.
9. (d) : Anjali is good in History, Physics, Computer Science and Mathematics.
10. (c) : Nisha is good in Physics, History and Mathematics but not in Computer Science.
11. (d) : The fourth colour and some more information are required.

Questions 12-13

We may prepare a table as under :

	Intelligent	Hard-working	Honest	Ambitious
Kailash	√	√		√
Govind	√			√
Harinder	√		√	
Rajesh		√	√	
Jitendra		√	√	√

12. (c) : Harinder is neither hard-working nor ambitious.
13. (b) : Govind is ambitious but neither honest nor hard-working.

Questions 14 to 17

Sushma and Vimla are friends and Prem's girl friend is friendly with Sushma. This means that **Prem's girl friend is Vimla.**

Ved's girl friend does not like Sushma and Vimla. So, she is either Kusum or Poonam. But Kusum does not care for Ved. So, **Ved's girl friend is Poonam.**

Sushma does not like Raj. So, **Raj's girl friend is Kusum.**

Clearly, **Ashok's girl friend is Sushma.**

14. (*b*) : Raj's girl friend is Kusum.

15. (*d*) : Sushma is friendly with Ashok.

16. (*b*) : Poonam's boy friend is Ved.

17. (*a*) : Ved's girl friend *i.e.*, Poonam does not like Sushma and Vimla.

18. (*c*) : Australia was defeated twice by India.

India was defeated twice by West Indies.

West Indies was defeated twice by Australia.

New Zealand was defeated twice by India and twice by West Indies *i.e.* 4 times in all.

Questions 19 to 21

We may prepare a table as under :

	Nehru House	Gandhi House	Tall	Short	Glasses	No glasses
A	√			√	√	
B	√			√		√
C		√		√	√	
D		√	√		√	
E		√		√		√
F		√	√			√

19. (*c*) : B and E are short and not wearing glasses.

20. (*b*) : E belongs to Gandhi House, is short and does not wear glasses.

21. (*d*) : F belongs to Gandhi House, is tall and is not wearing glasses.

22. (*b*) :

	Delhi	Bangalore	Tall	Short	Girls	Boys
A	√			√	√	
B	√			√		√
C		√		√	√	
D		√	√		√	
E		√		√		√
F		√	√			√

Clearly, D is the tall girl from Bangalore.

23. (*d*) :

	Green Cover	Yellow Cover	New Volume	Old Volume	Law Reports	Medical Extracts
A		√	√		√	
B	√	–	√		√	
C	√			√	√	
D		√	√			√
E	√			√		√
F	√			√		√

Clearly, E and F are old volumes which have green covers and are medical extracts.