

UNIT

3

Coding-Decoding

A *CODE* is a system of giving a signal and *DECODING* is a method to decipher the *CODE*.

The Coding and Decoding Test is, therefore, to judge a candidate's ability to decipher the code language. While solving the problems on coding-decoding, the English alphabets and their number value helps the candidate's performance.

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

Example 1. If GIVE is coded as 5137 and BAT is coded as 924, how is GATE coded?

- (a) 5427
- (b) 2547
- (c) 5247
- (d) 5724
- (e) 2475

Sol: Clearly it can be seen that G is coded as 5; A as 2, T as 4 and E as 7. So the code for GATE is 5247. The correct choice is (c).

Example 2. If B = 2, H = 8 and CAB = 6, then what is the number value of RACE?

- (a) 31
- (b) 30
- (c) 28
- (d) 27
- (e) 29

Sol: Clearly, in a given code:

A = 1, B = 2, C = 3 etc.

Now C A B = 3 + 1 + 2 = 6.

∴ RACE = 18 + 1 + 3 + 5 = 27. Hence, the answer is (d).

Example 3. In a certain code, 15789 is written as XTZAL and 2346 is written as NPSU. How is 23549 written in that code?

- (a) NPTUL
- (b) PNTSL
- (c) NPTSL
- (d) NBTSL
- (e) None of these

Sol: Looking into the method of coding, it is clear that 2 is coded as N, 3 as P, 5 as T, as S and 9 as L. So, 23549 is coded as NPTSL. The answer is (c).

Example 4. In a certain code, ROAD is written as URDG. How is SWAN written in that code?

- (a) VXDQ
- (b) VZDQ
- (c) UXDQ
- (d) VZCO
- (e) None of these

Sol: Clearly, in ROAD, each letter is moving 3 steps forward to write URDG. So accordingly moving each letter of SWAN 3 steps forward we can write it as VZDQ. So the answer is (b).

Example 5. If in a certain language REMOTE is coded as ROTEME, which word would be coded as PNIICC?

- (a) NPIICC
- (b) PICCIN
- (c) PINCIC
- (d) PICNIC
- (e) PICINC

Sol: The groups of second and third letters; fourth and fifth letters in the word interchange places in that code. Hence, the word PICNIC would be coded as PNIICC.

Example 6. If in a certain code language ABCD is written as ZYXW, then how is the word DANCE written in that code?

- (a) WZMXV (b) MXZWV
(c) VMZXM (d) ZMWXV
(e) MZWXV

Sol: The role of coding is T_{+n} is coded as T_{-n} .
A is the first letter from the start which is coded as first letter from the end i.e. Z and so on.
 \therefore DANCE is coded as WZMXV. The answer is (a).

Example 7. If sky is called sea, sea is called water, water is called air, air is called cloud and cloud is called river, then what do we drink when thirsty?

- (a) Sky (b) Air
(c) Water (d) Sea
(e) Cloud

Sol: One drinks 'water' when thirsty and as given 'water' is called air. So we drink air when thirsty. The answer is (b).

Example 8: If 'tee see pee' means 'Drink fruit juice'; 'see kee lee' means 'Juice is Sweet' and 'Lee ree mee' means 'He is intelligent', which word is that language means 'sweet'?

- (a) see (b) kee
(c) lee (d) pee
(e) tee

Sol: We have
'tee see pee' as 'Drink fruit juice' ... (i)
'see kee lee' as 'Juice is sweet' ... (ii)
'lee ree mee' as 'He is intelligent' ... (iii)
From (i) and (ii), the common word is 'Juice' and the common code is 'see'. So 'see' means 'Juice' from (ii) and (iii), the common word is 'is' and the common code is 'lee'. So 'lee' means 'is'.

Thus in (ii), the remaining word 'sweet' is coded as 'kee'. Therefore, the answer is (b).

Example 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

Sol: In the first and second statements, the common code digit is '4' and common word is 'sweet' so '4' means 'sweet' similarly from first and third statement, we find that '7' means 'fruit'. Thus in the second statement, '9' means 'is'. Therefore, the answer is (b).

EXERCISE

TYPE I

- If in a certain language MYSTIFY is coded as NZTUJG, how is NEMESIS coded in that language?
(a) MDLHRDR (b) OFNFTJT
(c) ODNHTDR (d) PGOKUGU
- In a certain code language TAP is written as SZO, then in the same code language, FREEZE is written as
(a) EQDFYG (b) ESDFYF
(c) GQFDYF (d) EQDDYD
- In a certain code SIKKIM is written as THLJLJL. How is TRAINING written in that code?
(a) SQBHOHOH (b) UQBHOHOF
(c) UQBJOHHO (d) UQBJOHOH
- In a certain code, MENTION is written as LNEITNO. How is PATTERN written in that code?
(a) APTTREM (b) PTAETNR
(c) OTAETNR (d) OTAETRN
- In a certain code, FORGE is written as FPTJL. How is CULPRIT written in that code?
(a) CSJNPGR (b) CVMQSTU
(c) CVNSVNZ (d) CXOSULW

TYPE II

- If in a certain language CARROM is coded as BZQQNL, which word will be coded as HOUSE?
(a) IPVTF (b) GNTRD
(c) INVRF (d) GPTID
- If in a certain language, NEOMAN is coded as OGRQFT, which word will be coded as ZKCLUP?

- (a) YJBKTO (b) XIAJSN
(c) YIZHPJ (d) YIAQKJ
8. If in a certain language, POPULAR is coded as QPQVMBS, which word would be coded as GBNPVT?
- (a) FAMOSU (b) FAMOUS
(c) FASOUM (d) FOSAUM
9. If in a certain language, CALCUTTA is coded as GEPGYXXE which word would be coded as FSQFCE?
- (a) BOMBYA (b) BOMBAY
(c) BOMYAB (d) BOBAYM
10. If in a certain language, MACHINE is coded as LBBIHOD, which would be coded as SLTMFNB?
- (a) RKSLEMA (b) TKULGMC
(c) RMSNEOA (d) TMUNGOC

TYPE III

11. If in a certain language A is coded as 1, B is coded as 2, and so on, how is BIDDIC coded in that code?
- (a) 294493 (b) 284563
(c) 375582 (d) 394492
12. If PAINT is coded as 74128 and EXCEL is coded as 93596, then how would you decode ACCEPT?
- (a) 455978 (b) 547978
(c) 554978 (d) 735961
13. If D = 4, and cover = 63, then BASIS =?
- (a) 49 (b) 50
(c) 54 (d) 55
14. If PALAM could be given the code number 43, what code number can be given to SANTACRUZ?
- (a) 75 (b) 85
(c) 120 (d) 123
15. If Z = 52 and ACT = 48, then BAT will be equal to
- (a) 39 (b) 41
(c) 44 (d) 46

TYPE IV

16. If the cook is called butler, butler is called manager, manager is called teacher, teacher is

called clerk and clerk is called principal, who will teach in the class?

- (a) Cook (b) Butler
(c) Manager (d) Clerk
17. If diamond is called gold, gold is called silver, silver is called ruby and ruby is called emerald, which is the cheapest jewel?
- (a) Diamond (b) Silver
(c) Gold (d) Ruby
18. If eye is called hand, hand is called mouth, mouth is called ear, ear is called nose and nose is called tongue, with which of the following would a person hear?
- (a) Eye (b) Mouth
(c) Nose (d) Ear
19. If rat is called dog, dog is called mangoose, mangoose is called lion, lion is called snake and snake is called an elephant, which is reared as pet?
- (a) Rat (b) Dog
(c) Mongoose (d) Lion
20. If finger is called toe, toe is called foot, foot is called thumb, thumb is called ankle, ankle is called palm and palm is called knee, which one finger has different name?
- (a) Thumb (b) Ankle
(c) Knee (d) Palm

TYPE V

21. If 'nso ptr kli chn' stands for 'sharma get marriage gift', 'ptr lnm wop chn' stands for 'wife gives marriage gift', 'tti wop nhi' stands for 'he gives nothing' what would mean 'gives'?
- (a) chn (b) nhi
(c) ptr (d) wop
22. If 'tee see pee' means 'Drink fruit juice'; 'see kee lee' means 'Juice is sweet' and 'lee ree mee' means 'He is intelligent', which word in that language means 'sweet'?
- (a) see (b) kee
(c) lee (d) pee
23. If 'sti nro kti' stands for 'clouds pour down'; 'nro bsi mit' stands for 'down he goes' and 'bsi nro zpi' stands for 'died down he', which word would mean 'goes'?

- (a) nro (b) mit
(c) kti (d) bsi
24. In a certain code language,
(A) 'pit na som' means 'bring me water';
(B) 'na jo tod' means 'water is life';
(C) 'jo lin kot' means 'Life and death'.
Which of the following represents 'is' in that language?
(a) jo (b) na
(c) tod (d) lin
25. In a certain code language,
(i) 'il be pee' means 'rasers are blue';
(ii) 'sik nee' means 'red flowers';
(iii) 'pee mit hee' means 'flowers are vegetables'.
How is 'vegetables are red flowers' written in that code?
(a) pee sik mit hee (b) sik pee hee be
(c) il sik mit hee (d) cannot be determined

TYPE VI

26. 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'?
(a) 8 (b) 6
(c) 7 (d) Cannot be determined
27. 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
28. In a certain code language '526' means 'sky is blue'; '24' means 'blue colour' and '436' means 'colour is fun'. Which of the following digit stands for 'fun'?
(a) 5 (b) 4
(c) 3 (d) 2
29. In a certain code:
(A) '134' means 'you are well';
(B) '758' means 'they go home';
(C) '839' means 'we are home'.
Which of the following represents 'they' in that code language?
(a) 5 (b) 7

- (c) 8 (d) Data inadequate
30. 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?
(a) 3a (b) 7c
(c) 8b (d) 9a

ANSWERS AND SOLUTIONS

TYPE I

- (b) Each letter of the word MYSTIFY is moved one step forward to obtain the corresponding letter of the code.
- (d) Each letter in the given word is moved one step backward to obtain the corresponding letter of the code.
- (b) The letters in the given word are moved alternately one step forward and one step backward to obtain the letters of the code.
- (c) Clearly, to obtain the code, the first letter of the word is moved one step backward and the remaining letters are moved in reverse order taking two at a time.
- (c) First letter remains the same and other letters move one, two, three and four steps forward to obtain the corresponding letters of the code.

TYPE II

- (a) Each letter of the word is one step ahead of the corresponding letter of the code.
- (c) Clearly, the letters in the word are 1, 2, 3, 4, 5 and 6 places before the corresponding alphabets in the given code.
- (b) Each letter of the word is one step behind the corresponding letter of the code.
- (a) Each letter of the word is four steps behind the corresponding letter of the code.
- (b) In the code, we have alternately one letter one step behind and the other one step ahead of the corresponding letter in the word.

TYPE III

11. (a)
12. (a)
13. (b) Clearly $A = 1, B = 2, C = 3$ etc.
 $\therefore \text{COVER} = 3 + 15 + 22 + 5 + 18 = 63$
 $\therefore \text{BASIS} = 2 + 1 + 19 + 9 + 19 = 50$.
14. (d) In the given code $A = 1, B = 2, C = 3, \dots$,
 $Z = 26$
So $\text{PALAM} = 16 + 1 + 12 + 1 + 13 = 43$.
 $\therefore \text{SANTACRUZ} = 19 + 1 + 14 + 20 + 1$
 $+ 3 + 18 + 21 + 26 = 123$
15. (d) In the given code, $A = 2, B = 4, C = 6, \dots$
 $Z = 52$
So $\text{ACT} = 2 + 6 + 40 = 48$
 $\therefore \text{BAT} = 4 + 2 + 40 = 46$.

TYPE IV

16. (d) A teacher teaches in a class and as given 'teacher' is called 'clerk'. So a 'clerk' will teach in the class.
17. (d) Cheapest jewel is 'silver' and since silver is called ruby, 'ruby' is the cheapest.
18. (c) A person hears with his 'ears' but 'ear' is called 'nose'. So a person will hear with the 'nose'.
19. (c) Clearly 'dog' is reared as pet. But 'dog' is called 'mongoose'. So 'mongoose' is reared as pet.
20. (b) Clearly, the thumb is a finger having a different name. But 'thumb' is called 'ankle'. So 'ankle' is the finger that has a different name.

TYPE V

21. (d) In the second and third statements, the common word is 'gives' and the common code is 'wop'. So 'wop' means 'gives'. Hence, the answer is (d).
22. (b) In the first and second statements, the common word is 'juice' and the common code word is 'see'. So 'see' means 'juice'. In the second and third statements, the common word is 'is' and the common code

is 'lee'. So 'lee' means 'is'. Thus, in the second statement, the remaining word is 'sweet' is coded as 'kee'.

23. (b)
24. (c) From (A) and (B), the common code word is 'ria' and the common word is 'water'. So 'na' means 'water'. Similarly in statements (B) and (C), 'jo' means 'life'.
 \therefore statement (B) gives the meaning of 'tod' as 'is'.
25. (a) From second and third statements, we find that 'hee' means 'flowers'. Thus in second statement 'sik' means 'red'. Clearly the required code will consist of the same codes as in the third statement with the code for 'red' added to it.

TYPE VI

26. (c) From 1st and 2nd statements, the common word is 'hard' and the common code digit is '8'. So '8' means 'hard'. In the same way, from 1st and 3rd statements, we see that '6' means 'study'. Thus in the first statement, '7' means 'very'.
27. (a) In the first and second statements, we find that '2' means 'is'. In the first and third statements, we find that '4' means 'bright'. Thus in the first statement, '3' means 'light'.
28. (c) In the first and third statements '6' means 'is'. In the second and third statements we get '4' means 'colour'. Thus in the third statement, '3' means 'fun'.
29. (d) From 2nd and 3rd statements, we can find the code for 'home'. To find the code for 'they', we need the code for 'go' which cannot be determined from the data. Thus data is inadequate to find the code for 'they'.
30. (c) In the 2nd and third statements, we find that '9a' means 'not'. In the 1st and 2nd statements, the common codes are '7c' and '3a' whereas the common words are 'is' and 'Eternal'. So in the second statement, '8b' means 'Enmity'.