

CTS Sample Paper

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Company : CTS
Date :
College :

- * 5 sections
- * 8 questions each (40 q totally)
- * 60 minutes
- * 5 different sets of question papers
- * 1 Mark each
- * 0.25 negative marking

CTS_BLACK

vocabulary, strings, dominoes, functions, coding

(each section 8 ques)

CTS_BROWN

word series, numerical series, functions, figures, verbal

(each section 8 ques)

CTS_VIOLET

functions, strings, bricks, jigsaw puzzle, cryptic clues

(each section 8 ques)

CTS_RED

1. 8 functions
2. 4 cryptic clues ,4 anagrams
3. 4 tetris figures, 4 bricks
4. 8 strings

5. 4 jigsaw puzzles 4 number series

INTERVIEW

* puzzles

* technical

BROWN 2002

There were different papers for different sessions.

The paper had 5 sections, $5 * 8 = 40$ Q's. totally.

Section 1 : Functions.

Q: 1 - 8.

$L(x)$ is a function defined. functions can be defined as

$L(x) = (a, b, ab)$ or $(a, b, (a, b), (a, (b, b)), a, (b, b)) \dots$

two functions were given $A(x)$ & $B(x)$ like

if $l(x) = (a, b, c)$ then $A(x) = (a)$ & $B(x) = (b, c)$

i.e., $A(x)$ contains the first element of the function only.

& $B(x)$ contains the remaining, except the first element.

then the other two functions were defined as

$$C(x) = \begin{cases} * & \text{if } L(x) = () \\ A(x) & \text{if } L(x) = () \text{ \& } B(x) \neq () \\ C(B(x)) & \text{otherwise} \end{cases}$$

$$D(x) = \begin{cases} * & \text{if } L(x) = () \\ ** & \text{if } B(x) = () \\ A(x) & \text{if } L(x) \neq () \text{ \& } B(x) \neq () \\ D(D(x)) & \text{otherwise} \end{cases}$$

1 : if $L(x) = (a, b, (a, b))$ then $C(x)$ is ?

(a): a (b): b (c): c (d): none

2 : if $L(x) = (a,b,(a,b))$ then find $D(x)$

same options as above

3 : if $L(x) = (a,b,(a,b),(b,(b)))$ find $C(x)$

4 : ----- find $D(x)$

5 : if $L(x) = (a,(a,b),(a,b,(a,b))),b$ then find $c(x)$

6 : ----- find $D(x)$

7 : if $L(x) = (a,b,(a,b))$ then find $C(D(x))$

8 : ----- find $D(C(x))$

Section 2 : Word series

Q's : 9 - 16

If $S=aabbc$, $R=ab$, $Q=bc$. Now we define an operator $R \rightarrow Q$ when operated on S , R is replaced by Q , provided Q is a subset of S , otherwise R will be unchanged. Given a set $S = \dots\dots\dots$, when $R \rightarrow Q$, $P \rightarrow R$, Q

$R \rightarrow P$ operated successively on S , what will be new S ? There will be 4 =

9 : if $s=aaababc$ & $p=aa$ $q=ab$ $r=bc$ then applying $p \rightarrow q$, $q \rightarrow r$ & $r \rightarrow p$ will give,

(a): $aaababc$ (b): $abaabbc$ (c): $abcbaac$ (d): none of the

a,b,c

10: if $s=aaababc$ & $p=aa$ $q=ab$ $r=bc$ then applying $q \rightarrow r$ & $r \rightarrow p$ will give,

11: if $s=abababc$ & $p=aa$ $q=ab$ $r=bc$ then applying $p \rightarrow q$, $q \rightarrow r$ & $r \rightarrow p$ will give,

12: if $s=abababc$ & $p=aa$ $q=ab$ $r=bc$ then applying $q \rightarrow r$ & $r \rightarrow p$ will give,

13: if $s=aabc$ & $p=aa$ $q=ab$ $r=ac$ then applying $p \rightarrow q(2)$ $q \rightarrow r(2)$ $r \rightarrow p$ will

give,

(2) means applying the same thing twice.

14: similar type of prob.

15: if $s=abbabc$ $p=ab$ $q=bb$ $r=bc$ then to get $s=abbabc$ which one should be applied.

(a): $p \rightarrow q, q \rightarrow r, r \rightarrow p$

16: if $s=abbabc$ $p=ab$ $q=bb$ $r=bc$ then to get $s=bbcbabc$ which one should be applied.

Let us consider a set of strings such as $S=abcab$. We now consider two

more sets P and Q which also contain strings. An operation $P \rightarrow Q$ is defined in

such a manner that if P is a subset of S , then P is to be replaced by Q . In

the following questions, you are given various sets of strings on which you

have to perform certain operations as defined above. Choose the correct

alternative as your answer.

(the below are some ques from old ques papers)

21. Let $S=abcabc$, $P=bc$, $Q=bb$ and $R=ba$. Then $P \rightarrow Q$, $Q \rightarrow R$, $R \rightarrow P$ changes S to

(A) (B) $abcabc$ (C)

(D) none of A,B,C

22. Let $S=aabbcc$, $P=ab$, $Q=bc$ and $R=cc$. Then $P \rightarrow Q$, $Q \rightarrow R$, $R \rightarrow P$ changes S to

(A) $ababab$ (B) (C)

(D) none of A,B,C

23. Let $S=bcacbc$, $P=ac$, $Q=ca$ and $R=ba$. Then $P \rightarrow Q$, $Q \rightarrow R$, $P \rightarrow R$ changes S to

- (A) (B) (C) $bcabac$
(D) none of A,B,C

24. Let $S=caabcb$, $P=aa$, $Q=ca$ and $R=bc$. Then $P \rightarrow Q$, $P \rightarrow R$, $R \rightarrow Q$ changes S to

- (A) (B) (C)
(D) none of A,B,C

Section 3 : numerical series

Q's : 17 - 24

17: 2,20,80,100, ??

- (a): 121, (b): 116 (c): (d):none

18: 10,16,2146,2218, ??

like these other series were given.

section 3 : series (from other booklet)

transformations

17: 1102211 \rightarrow 0010022

1011001 \rightarrow 2122112

then

2211011 \rightarrow ????

ans may be 0022122

18: 110022 \rightarrow 220011

101121 \rightarrow 121101

Section 4 : figures

19:

^ ^ ^
| -> <- | -> |
^ : ^ :: ^ : ?
| -> <- | <- |

ans is :

^
| <-
^
| ->

Section 5 : Verbal

if the word is "body"

then its meaning of its first part is..

(1) -(head)- (a) purpose (b) man (c)obstacle

(d)(ans:c for blockhead)

(2) (dust)- (a) container(b)celestial body

(c)groom(d)(ans: c for star dust)

(3) (stream)-(a) mountain (b) straight (c) (d)

(ans:a)

(4) (crash)- (a) course (b) stock3 anagram

first find the anagram of the given word & then

choose the meaning of the anagram from the options.

1. latter ->rattle 2..spread 3.risque

4.dangled(ansjogged)...

Quest of red set.

i)

Series Transformation

1) If 102101->210212 then 112112->?

2) if 102101-> 200111 then 112112->?

Again there r 4 choices.

3) If 102101->101201 then 112112->?

Again there r 4 choices.

Tips:The 1st one all change 0->1, 1->2, 2->1

The 2nd on alternate do not change

The 3rd it is just reverse of the original string

ii)

Target=127: Brick=24,17,13: Operation available= +,/,*,-

Again there r 4 choices.For ex choice b)20,6,7

Tips:Answer is b one bcos $20*6+7=127$.Hence it is the answer

Q:1)U HAVE TO MAKE A TARGET =102; THE ANSWER FROM THE OPTION IS (6,17,2,1)

2)TARGET=41;FIVE NO.S WERE GIVEN;25 22 16 5 1 U CAN USE THE NO.S ONLY

ONCE&CAN PERFORM OPERATION +,MULTIPLY,-,/,()ONCE;

OPTIONS WERE;

A)25 22 16 5 B)25 22 16 1 C)25 22 5 1 D)25 16 5 1)

4 SUCH QUESTINS ARE THERE.

2)87

3)146

4)127

THERE ARE SOME FIGURATIVE QUESTION;SEE FROM COMPETITION MASTER,I CANT
REMEBER THE FIGURE.4 QUESTIONS ARE THERE

iii)

Cryptic Sentence. Form word

A sentence is there .a cryptical clue is hidden in the sentence. Find out answer from the opticon.

1)a friend in rome

a)aerodrome b)palindine c)palindrome d)condome

ans:palindrome

2)Rowed them across

a)crosswiz b)acropolis c)acroword d)crossword

Ans:crossword/crossover

3)cuticle cutting the filly glass

a)cubicle b)uphilly c)cutglass d)cutlass

Ans:cutlass

4)hat jumps upward in a water closet

a)watch b)witch

ans:watch/whatever

Tips:The 1st oneJumble out the word SHORE to get the word HORSE and then get the adjective
of the word HORSE as TROJAN

The 2nd one lips->slip->freudian/french

iv)

Anagram noun form the corresponding adjectives

There re options.

Q:some nouns are jumbled on ,you have to rearrange, look for a suitable adjective:

Make a phrase then.

1)shore

a)aegean b)Indian c)trojan d)Spartan

ans:trojan

2)sire

a)dutch b)rome c)herculean d)mercurial

ans:mercurial

3)ourcage

a)english b)rome c)dutch d)Spartan

ans:Spartan

4)lips

Again there r 4 choices.

Ans:freudian/french

v)

Jigsaw puzzle as given in the book by Edgar Thorpe, of TMH Publications

vi)

FUNCTIONS same as CTS_BLACK\fun

vii)

$x, y \rightarrow$ strings of G st there is at least one G in x and y

$xoxy$ valid

$xoy \rightarrow xoxy$ invalid

Find valid & invalid strings

viii) there were a couple of (seven to be precise) figures (tetris type if u remember that game) given in the main theme. The 10 questions that followed showed patterns which were formed due to combination of the 7 basic figs. NOTE: the intersecting part of the combined fig. always gets subtracted from the total combination

Hello Shivesh

CTS paper was of diff pattern this time and there were atleast 5 different sets of question papers given to students. Of the type i recvd, as i told there wer 10x4 questions for 60 mins.

section:

4) last section(thats bcoz i remeber it well)

had meaningful words whose anagrams are nouns and we hav to choose the best adjective from the list to describe this noun:

ex: shore (word given)

choices: a) roman b) spanish c) trojan d)....

ans: c) trojan

shore is anagram(jumbled form of) 'horse' and trojan-horse is the best match

3) there were a couple of (seven to be precise)figures (tetris type if u remember that game) given in the main theme. The 10 questions that followed showed patterns which were formed due to combination of the 7basic figs. NOTE: the intersecting part of the combined fig. always gets subtracted from the total combination

2) This section had the funda of xOy where x and y represented strings of Gs . The test was to find the valid or invalid patterns with ref. to the rules

1) L =list of objects

ex: $L=\{a,b,c,d\}$ where a,b,c,d are objects

$P(L)$ was a function(dont remembr xatly)

$M(L)$ was another function defined etc

in the following questions $P(x)$ etc were given to be found out.

Note : this may take considerable amnt of time. so take intelligent guesses