CS & IT ENGINEERING

Data Structure & Programming

Stack *and Queues*

DPP 02 *Discussion Notes*

By- Pankaj Sharma sir

01 Question

02 Discussion

Q.1 Consider the following infix expression:
P-Q/(R*S)+T*U
The prefix notation of the given expression is-

[MCQ]

(A) -+P/Q*RS*TU

(B) +-P/Q*RS*TU

(C) +-/PQ*RS*TU

(D) None of the above.

P-Q/(RXS)+TXU

P-Q/[XRS]+TXU

+-P/Q*RS*TU

P-[/QXRS]+TXU

P-[/QXRS]+[XTU]

[-P/QXRS]+[XTU]

(B)

Q.2

Consider the following expression:
P+Q/R-S*T^U/V-W

PQR/+STU^*V/-W-

The post fix notation of the given expression is-

[MCQ]

A PQR/+STU^*V/-W-

B PQ+RS-TU^*V/-W-

C PQR/-STU^*V/W+-

D None of the above

P+Q/R-S*T^U/V-W

P+Q/R-S*[TU^]/V-W

P+[QR/]-S*[TU^]/V-W

P+[QR/]-[STU^*]/V-W

P+[QR/]-[STU^*V/]-W

[PQR/+]-[STU^*V/]-W

[PQR/+STU^*V/-]-W

Q.3 Consider the following prefix notation: /^*+abc/de^gh

The postfix notation of the given expression is-

[MCQ]

$((a+b)*c)^{(d/e)} / (g^h)$

(B) ab+c*de/^gh^/

(A) abc+*de/^gh^/

(C) abc+de/*^gh^/

(D) None of the above

/ ^ * + a b c / d e ^ g h

/ ^ * + a b c (/ d e) g ^ h

/ ^ * (+ a b) c (d/e), (g^h)

/ ^ * (a+b), c, d/e, g^h

/ , ^ , (a+b)*c , d/e , g^h

/ , [(a+b)*c]^(d/e) , g^h

Q.3

Consider the following prefix notation:
/^*+abc/de^gh
The postfix notation of the given expression is-

[MCQ]

(B) ab+c*de/^gh^/

(A) abc+*de/^gh^/

(C) abc+de/*^gh^/

(D) None of the above

Q.4

Consider the following infix expression:

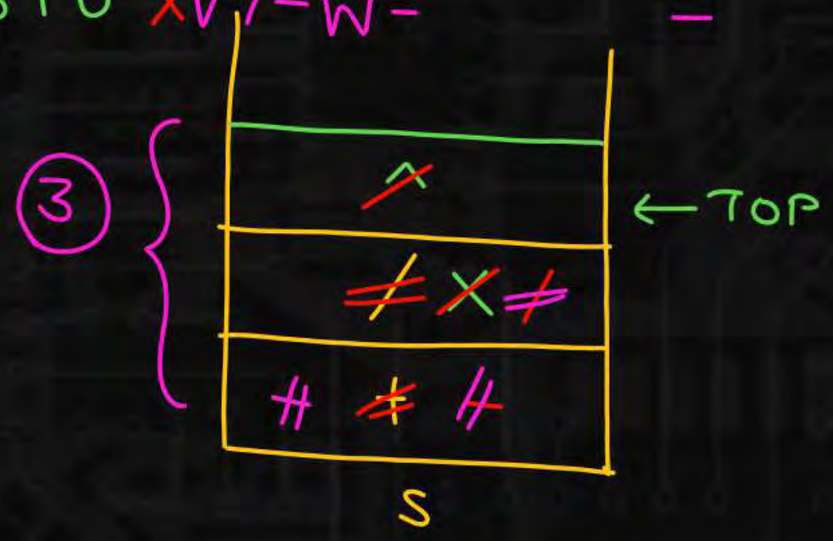
P+Q/R-S*T^U/V-W

The maximum size of the operator stack required to convert the given infix to postfix notation is 3.

[NAT]

infix: P+Q/R-S*T^U/V-W Eos

o/p: PQR/+STU^*V/-W-



Q.5

[MCQ]

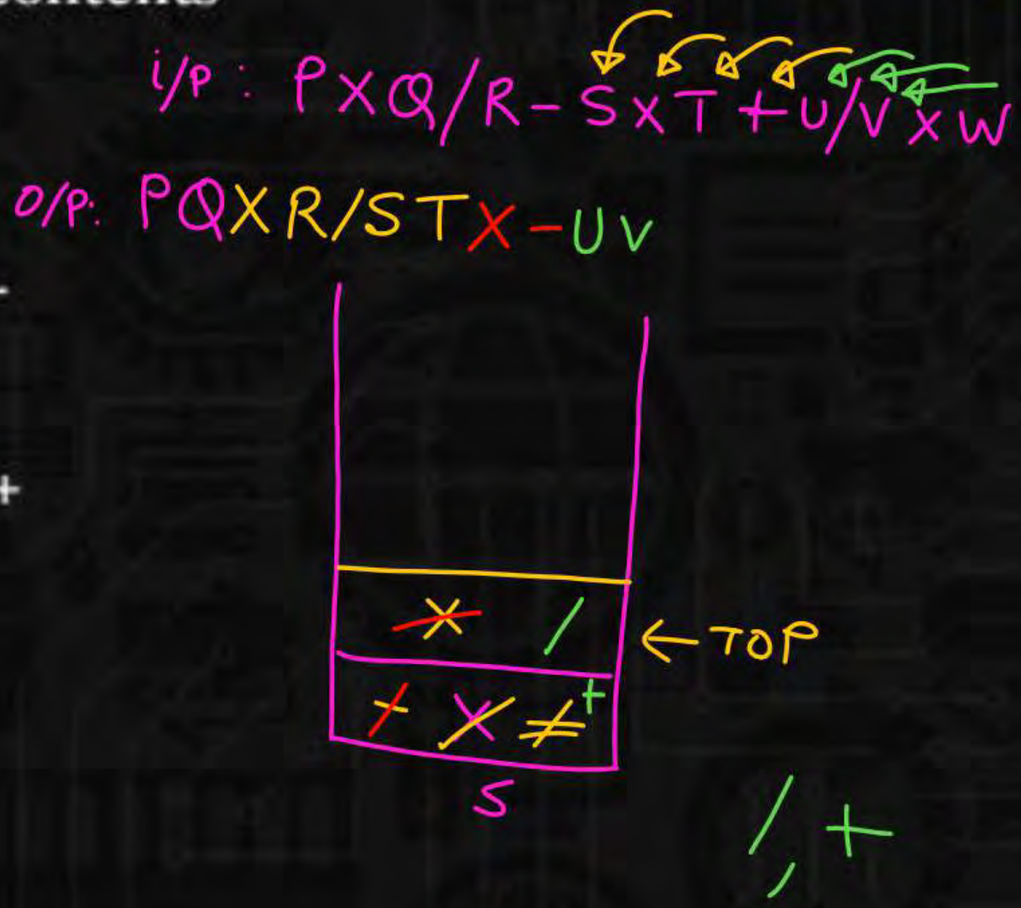
Consider the following infix expression:
P*Q/R-S*T+U/V*W
On reaching the symbol V, the top two contents of the
operator stack are:

A) /, *

B) /, -

C) *, +

D) /, +



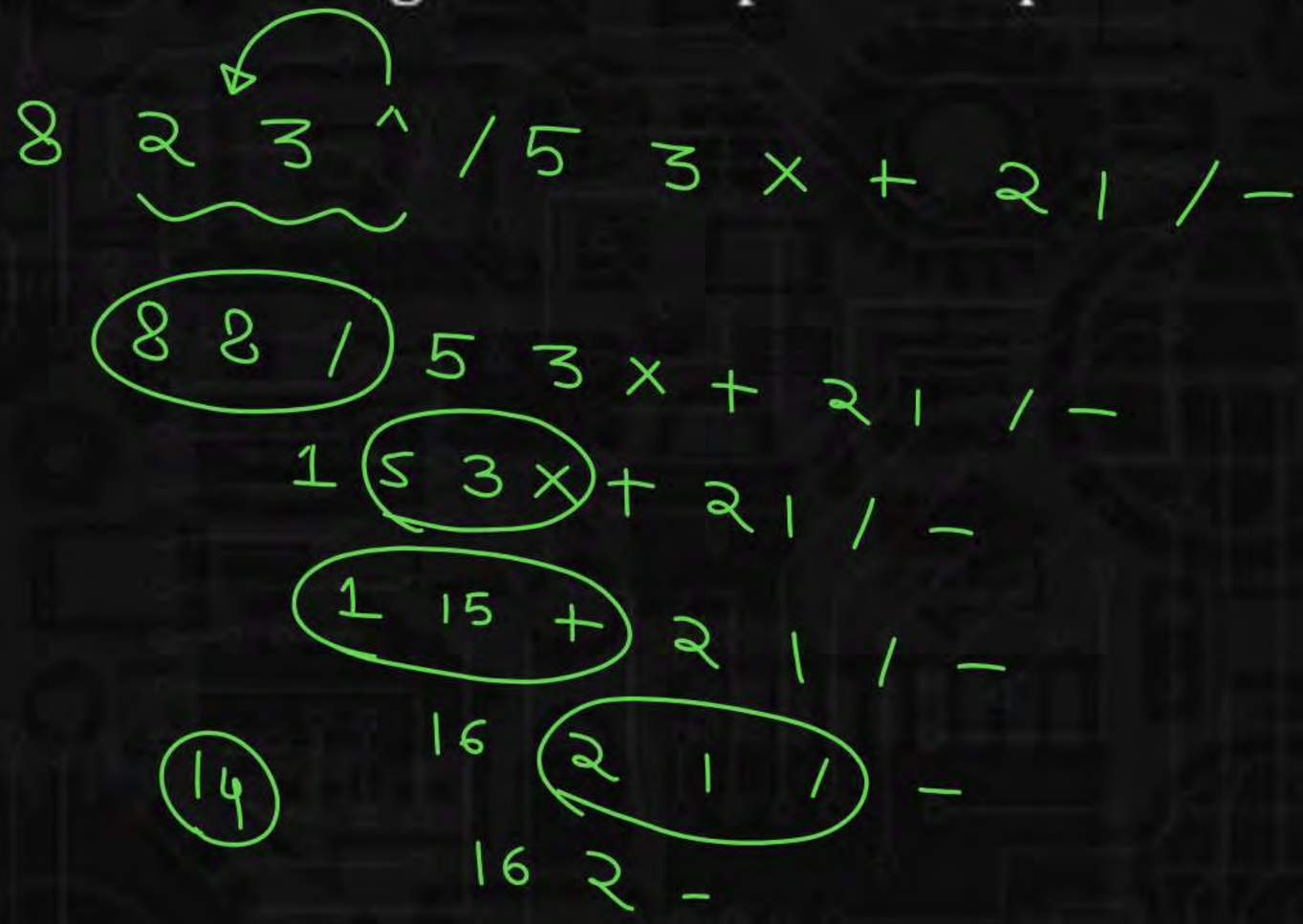
Q.6

Consider the following postfix expression:

8 2 3 ^ / 5 3 * + 2 1 / -

The result of evaluating the above postfix expression is 14.

[NAT]



Q.7

Let X be the result when the below postfix expression is evaluated:

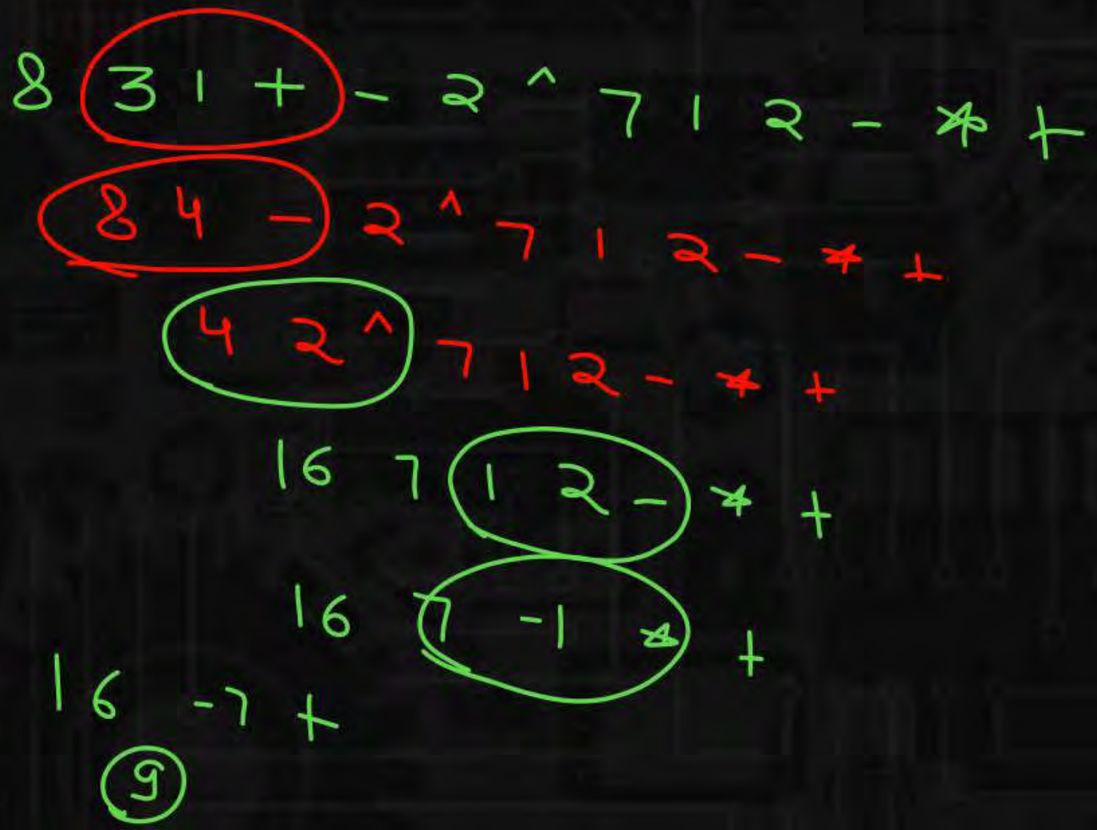
X = 8 3 1 + - 2 ^ 7 1 2 - * +

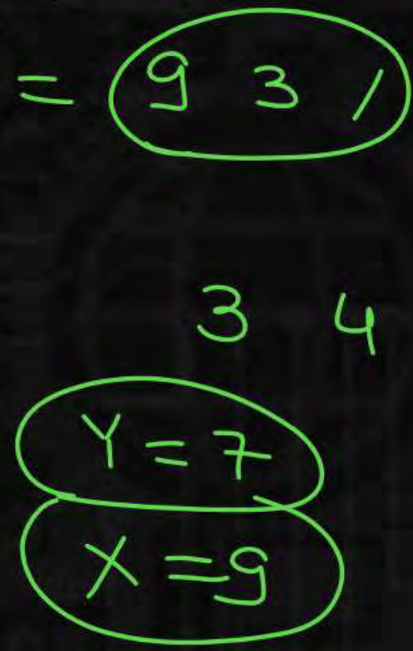
And Y be the result of the following postfix expression:

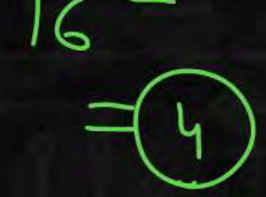
Y= X 3 / 4 +

The value of (X+Y)0.5 is ____4____

[NAT]







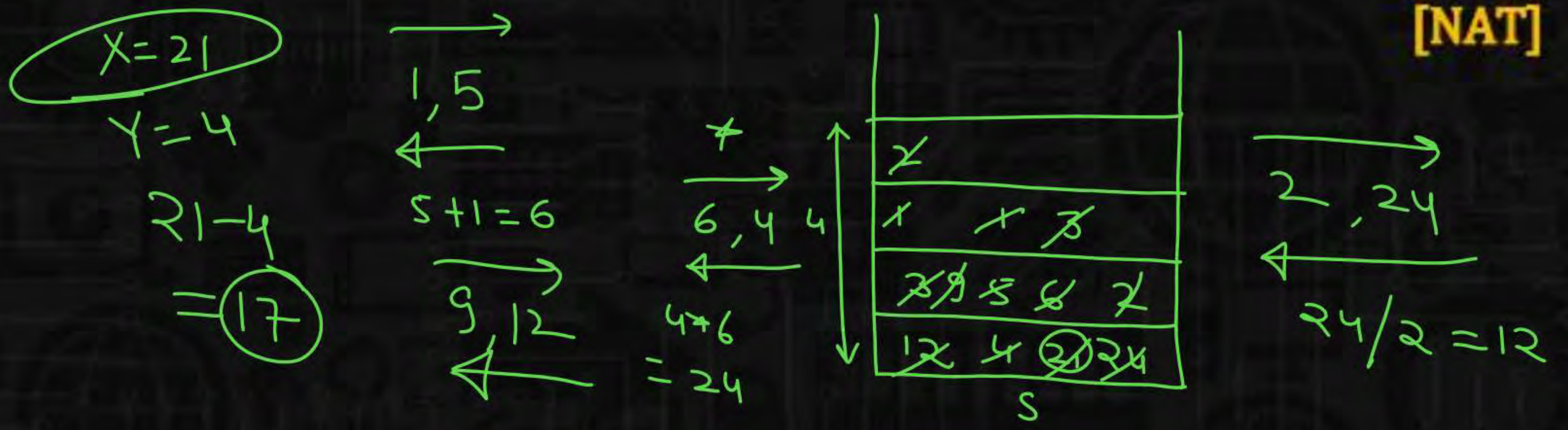
Q.8

Let X be the result when the below postfix expression is evaluated:

X = 4 5 1 + * 2 / 3 1 2 + * + End

Let Y be the maximum size of the operand stack, the value of X-Y is _____

[NAT]




THANK YOU GW
SOLDIERS !