Unit-2 Assignment

1) Evaluate the following infix expression using stack
   a.   5/(5*(2+1))*2-10

2) Evaluate the following prefix expression using stack
   a)   + 5 * 4 6
   b)   -*+4325
   c)   -,*,+,2,2,3,10
   d)   *, + ,6, 9, -, 3 ,1

3) Evaluate the following postfix expression using stack
   a)   4 5 + 7 2 - *
   b)   4 2 3 5 1 - + * +
   c)   100, 200, +, 2, / ,5, *, 7 ,+
   d)   2 3 1 * + 9 –

Expression Conversion:

1) Convert the following infix **expression** into Prefix expression.
   a)   a + b / c – d

   b)   A*B+C/D

   c)   (a+b)*(c+d)

   d)   a/b-(c+d)-e

   e)   k + l - m * n + (o^p) * w/u/v * t + q

   f)   (A+B)+C-(D-E)^F

   g)   (A+B^C)*D+E^5

   h)   ((a/b)+c)-(d+(e*f))

   i)   ((a/b)+c)-(d+(e*f))

   j)   (A+B^C)*D+E^5 into prefix.

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k)

Infix Expression	Prefix Expression
A + B * C + D	+ + A * B C D
(A + B) * (C + D)	* + A B + C D
A * B + C * D	+ * A B * C D
A + B + C + D	+ + + A B C D

2. Covert the following Infix expression into Postfix expression using Stack

Assignment:

Infix Expression	Postfix Expression
A + B * C + D	A B C * + D +
(A + B) * (C + D)	A B + C D + *
A * B + C * D	A B * C D * +
A + B + C + D	A B + C + D +

1) A+(B*C-(D/E^F)*G)*H

2) Infix expression : (3^2*5)/(3*2-3)+5

3) A + B * C + D
4) ((A + B) – C * (D / E)) + F

5) x^y/(5*z)+2

6) A + ((B + C) + (D + E) * F) / G)
7) K + L - M*N + (O^P) * W/U/V * T + Q

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3. Convert following Prefix expression **in**to Infix expression

Prefix Expression	Infix Expression
+ + A * B C D	A + B * C + D
* + A B + C D	(A + B) * (C + D)
+ * A B * C D	A * B + C * D
+ + + A B C D	A + B + C + D

4. Convert the following prefix expression to postfix expression

Prefix Expression	Postfix Expression
+ + A * B C D	A B C * + D +
* + A B + C D	A B + C D + *
+ * A B * C D	A B * C D * +
+ + + A B C D	A B + C + D +

5. Convert the following Postfix expression in to Infix expression

Postfix Expression	Infix Expression
A B C * + D +	A + B * C + D
A B + C D + *	(A + B) * (C + D)
A B * C D * +	A * B + C * D
A B + C + D +	A + B + C + D

6. Convert following Postfix expression **in**to Prefix expression

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Postfix Expression	Prefix Expression
A B C * + D +	+ + A * B C D
A B + C D + *	* + A B + C D
A B * C D * +	+ * A B * C D
A B + C + D +	+ + + A B C D