

Assignment 2

1. Write production and semantic rules for producing and analyzing statements like :

```
int * ip , i , j , *ip1;
```

```
float * fp , f;
```

2. Explain various parameter passing methods.
3. Draw syntax tree and DAG for following statement. Write three address codes from both.

$$a = (a + b * c) ^ (b * c) + b * c ^ a ;$$

4. Explain activation record. How is task divided between calling & called program for stack updating?
5. Explain peephole optimization
6. Discuss various code optimization techniques
7. Draw syntax tree and DAG for the statement

$$a = (a * b + c) ^ (b + c) * b + c.$$
 Write three address codes from both.

8. Explain any three code optimization techniques with example

Translate the expression $-(a*b)+(c*d)+(a*b*c)$ into

- a. Quadruples
 - b. Triples
 - c. Indirect triples
9. Explain various dynamic storage allocation techniques.
 10. Discuss synthesized and inherited attributes using a suitable grammar.
 11. What is intermediate code? What is its importance?

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