If $T = 0$, budget constraint

$$C = W(h - L)$$

Slope of budget constraint $= -W$

The budget constraint is FG.

Equilibrium is on $I_1$ at $A$.

With proportional tax,

budget constraint is now

$$C = w(1-t)(h-L), \quad t = \text{proportional tax rate}$$

slope of budget constraint is $-w(1-t)$

The budget constraint is $EG$.

The proportional tax affects the after-tax real wage, so there will be an income and substitution effect.

From the diagram, the new equilibrium will be on a lower indifference curve.

The negative income effect reduces both consumption and leisure, but the substitution effect increases leisure, since the cost of leisure has decreased.

Thus, leisure may increase, decrease, or stay the same.

Either the substitution effect dominates the income effect, the net result is a decrease in $C$ but an increase in $L$; point $B$ on $I_2$ in the diagram.

The substitution effect is movement from $A$ to $D$.

Income effect is movement from $D$ to $B$. 
(2) (question 10, chapter 4 in your textbook)

The firm chooses its labor input, $N^d$, so as to maximize profits. When there is no tax, profits for the firm are given by

$$\pi = zF(K, N^d) - wN^d.$$ 

That is, profits are the difference between revenue and costs. In the figure on the left, the revenue function is $zF(K, N^d)$ and the cost function is the straight line, $wN^d$. The firm maximizes profits by choosing the quantity of labor where the slope of the revenue function equals the slope of the cost function:

$$MP_N = w.$$ 

The firm’s demand for labor curve is the marginal product of labor schedule on the right below. With a tax that is proportional to the firm’s output, the firm’s profits are given by:

$$\pi = zF(K, N^d) - wN^d - tzF(K, N^d)$$

$$= (1-t)zF(K, N^d) - wN^d,$$

where the term $(1-t)zF(K, N^d)$ is the after-tax revenue function, and as before, $wN^d$ is the cost function.

In the left figure below, the tax acts to rotate down the revenue function for the firm and reduces the slope of the revenue function. As before, the firm will maximize profits by choosing the quantity of labor input where the slope of the revenue function is equal to the slope of the cost function, but the slope of the revenue function is $(1-t)MP_N$, so the firm chooses the quantity of labor where

$$(1-t)MP_N = w.$$ 

In the right-hand figure below, the labor demand curve is now $(1-t)MP_N$, and the labor demand curve has shifted down. The tax acts to reduce the after-tax marginal product of labor, and the firm will hire less labor at any given real wage.