# Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department



#### Benha University Mechanical Department 2<sup>st</sup> year Production Time allowed:15 Minutes

1<sup>st</sup> Quiz

#

**Student Name in Arabic:** 

**Section:** 

# 1) Evaluate the following integrals

$$\int_{0}^{\infty} \frac{e^{-mx}}{\sqrt{x}} dx$$

$$\int\limits_0^\infty \frac{x}{1+x^6}\,dx$$

# 2) Find F(s) of the following functions:

a) 
$$f(t) = e^{-4t} - 5t^4 + \sin 3t \cosh 2t$$
, b)  $f(t) = t \sin 2t \cos 3t$ 

# Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department



#### Benha University Mechanical Department 2<sup>st</sup> year Production Time allowed:15 Minutes

1<sup>st</sup> Quiz

**Student Name in Arabic:** 

**Section:** 

### 1) Evaluate the following integrals

$$\int_{0}^{1} x^{m} (Lnx)^{n} dx$$

$$\int_{0}^{a} y^4 \sqrt{a^2 - y^2} dx$$

# 2) Find F(s) of the following functions:

a) 
$$f(t) = 5t + 4\sin 2t - 2\cosh 3t$$
, b)  $f(t) = te^{-2t} - 4\sin^2 3t$