Faculty of Engineering (Shoubra) Engineering Mathematics and Physics Department



Benha University
Mechanical Department
2st year Production
Time allowed:15 Minutes

1st Quiz

#

Student Name in Arabic:

Section

1) Evaluate the following integrals

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

$$\int_{0}^{\infty} \frac{x}{1+x^6} dx$$

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

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

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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) $f(t) = te^{-2t} - 4\sin^2 3t$