Faculty of Engineering (Shoubra)
Engineering Mathematics and Physics Department


Benha University Mechanical Department
$1^{\text {st }}$ year Production Time allowed: 15 Minutes

$$
3^{\text {rd }}
$$

1- Find interval of convergence for the following series:

$$
\frac{1}{1.6} x^{2}+\frac{2}{6(20)} x^{4}+\frac{6}{20(252)} x^{6}+\ldots
$$

2- Test the series $\sum_{n=1}^{\infty} \frac{\cos (n \pi)}{n^{3 / 4}}$

3- Expand using Taylor the function $f(x, y)=(x+y) \sin x y$ about $(1,0)$

