| King Saud University | Department of Mathematics | Math-254 |
| :--- | :--- | :--- |
| Third Semester | First Short Exam | 1444 AH |
| Time Allowed: $\mathbf{3 5}$ Mins. $\quad$ Group No. | Max Marks=10 |  |

Name of the Student: ID. No.

## Questions:

(1) Use Newton's method to find second approximation to the 3rd root of 29 , taking an initial approximation $x_{0}=3$. Compute the absolute error. Use 5 d.p. accuracy.
(2) Use Secant method to find the second approximation of the intersection point $(x, y)$ of the graphs $y_{1}=-\sqrt{x}$ and $y_{2}=\ln x$, when $x_{0}=0.1$ and $x_{1}=1$. Use 4 d.p. accuracy.
(3) Use the best method to find the second approximation $x_{2}$ to the multiple root of the nonlinear equation $f(x)=1-\cos x=0$, using $x_{0}=0.2$. Work with 5 d.p. accuracy.
—— Good Luck -
Start your solutions from here ....

