King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math-302   Semester-162   QUIZ III

NAME: S.No.   ID:

Maximum Marks: 10   Section:02   Time Allowed: 30 minutes

(1) Express the vector $\mathbf{A} = r^2 \; \hat{\mathbf{a}}_{\mathbf{r}} \; + \; \sin\theta \; \hat{\mathbf{a}}_\phi$ in cartesian coordinates.

(2) Express the vector $\mathbf{B} = r \; \sin\theta \; \hat{\mathbf{a}}_\theta \; + \; \hat{\mathbf{a}}_\phi$ in cylindrical coordinates.