Answer three questions only from the following:

Question (1):

(A)- Define the followings:-
(i)- The spheroid and the geoid.
(ii)- Gravity units.
(iii)- Density.
(iv)- The relative measurement of g.

(B)- Is the gravitational potential satisfied La Place equation or No?

Question (2):

Using initial formula for gravimetric interpretation, Drive the equation for the second vertical derivative of gravitational potential in 3-D?

Question (3):

Write on a direct and inverse problem for a horizontal cylinder and illustrate your answer?

Question (4):
(A)- Drive the depth to the bottom of a horizontal cylinder body using a horizontal gradient of gravity attraction equation (sketch your answer)?

(B)- Drive the depth to the centre of a sphere using a second vertical derivative of gravity effect equation (sketch your answer)?

Best wishes and good luck.

Dr. Khalid S. Essa