Name:_____, **Team:**_____

1. Geophysics is only applicable when:
   (a) Geochemical analysis and targeted drilling do not yield positive results
   (b) There is a sufficient contrast in physical properties between the target and the host
   (c) The Earth is sufficiently conductive
   (d) The topography of the Earth is sufficiently flat

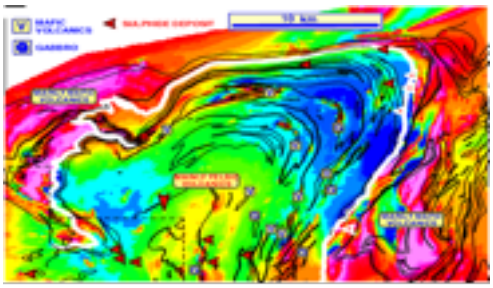
2. Here are 7 useful quantities:
   - porosity
   - clay content
   - electrical resistivity A
   - dielectric permittivity A
   - grain size distribution
   - p-wave velocity A
   - chargeability A

   How many are physical properties, to which geophysical surveys respond directly?
   (a) 2
   (b) 3
   (c) 4
   (d) 5

3. The s-wave velocity is does **not** depend on:
   (a) Density
   (b) The bulk modulus
   (c) The shear modulus

4. Consider the 7-step framework. In which step would we perform a 'geophysical inversion'?
   (a) data
   (b) processing
   (c) interpretation
   (d) synthesis

5. Which of the following options best describes the map of the geophysical data shown below:



Total Magnetic Field Map of Bathurst Mining Camp

   (a) Mathematical estimation of a physical property distribution.
   (b) Contour map of a field site
   (c) A geologically interpretable map of a geophysical response.
   (d) An image of faults and other structures

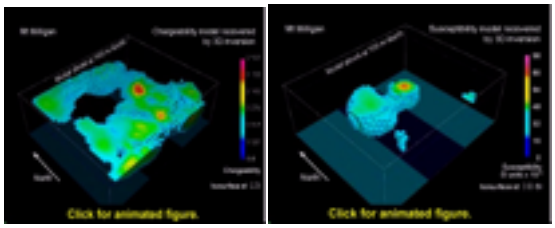
6. Is geophysical inversion always required before the interpretation step?
   (a) Yes
   (b) No

7. On which platform can a geophysical survey be carried out?
   (a) In boreholes
   (b) On land
   (c) By helicopter
   (d) All of them

8. Sulfide minerals are generally:
   (a) Less resistive than other rocks
   (b) Less chargeable than other rocks
   (c) Less dense than other rocks
   (d) All of the above

9. Geophysical methods can be classified into two broad categories: Active and passive. Active methods use a source to generate a response in the underground while Passive methods use naturally occurring phenomenon. Using your current knowledge, choose the correct answer:
   (a) Magnetics, EM and GPR methods are active methods. Gravity and DC Resistivity are passive methods
   (b) Magnetics and gravity are passive methods. EM, DC resistivity and GPR are active methods
   (c) Magnetics and DC resistivity are passive methods. Gravity, EM and GPR are active methods
   (d) Magnetics and gravity are active methods. EM, DC resistivity and GPR are passive methods

10. In "Seeing Underground," two 3D models were shown as part of the mineral exploration example. These models are shown below.



The **most** useful contribution to understanding about the ore body came from
   (a) Correlating the distribution of both physical properties.
   (b) Using the magnetic susceptibility model to estimate the chargeability model.
   (c) A chargeability model derived from electrical measurements.
   (d) A magnetic susceptibility model derived from magnetic data.