

Quaid-i-Azam University
Department of Earth Sciences

Sample Paper for Ph.D admission Test

- 1) In geological studies, arkose contains which of the following minerals
(a) Aragonite (b) Quartz (c) Feldspar (d) Calcite

- 2) The ease with which waters moves through porous material such as rock or sediment is known as -----
(a) Porosity (b) Aquifer factor (c) Permeability (d) Seepage

- 3) An unconformity between older metamorphic rocks and younger sedimentary rocks is known as -----unconformity
(a) Disconformity (b) Non-conformity (c) Para-conformity (d) Buttress

- 4) To measure lateral and vertical changes, electrical resistivity -----
is used.
(a) Imaging (b) Sounding (c) Profiling (d) All of these

- 5) The process in which the higher frequency components are 'folded back' into the Nyquist interval is known as
(a) Anti-aliasing effect (b) Random noise (c) Aliasing effect (d) Convolution

- 6) Acquisition of information about an object or phenomenon without making physical contact with the object is
(a) X-rays (b) Photons (c) Remote sensing (d) Satellite imagery

- 7) Universal Transverse Mercator (UTM) Projection divides the Earth into equal latitude zones of
(a) 6 degrees width (b) 8 degrees width (c) 10 degrees width (d) 12 degrees width

- 8) If the velocity values measured in different directions (horizontal and vertical) are not same then this phenomenon is known as
(a) Tuning Effect (b) Anisotropy (c) Velocity dispersion (d) Change in lithology

9) What is 4D seismic data?

(a) 2 or more 3D seismic surveys taken at different times, where elapsed time is the fourth dimension. (b) When you look at seismic data wearing special 4D glasses. (c) There is no such thing as 4D. (d) Two sets of 2D seismic data stacked on top of one another

10) When subsurface zones are systematically investigated by transmitting very large numbers of seismic rays through them, the method is known as

(a) Seismic amplitude analysis (b) Seismic tomography (c) Seismic anisotropy
(d) Seismic refraction