



**Sample Question Paper for Engineering Geology**

**Q1. Solve all questions mandatory**

**02 marks each**

Q 1a Which of the following process is responsible for formation of oasis-  
Option A: Erosion  
Option B: Ablation  
Option C: Deflation  
Option D: Abrasion

Q 1b In the internal structure of earth which layer is in liquid form-  
Option A: Lithosphere  
Option B: Mantle  
Option C: Outer Core  
Option D: Inner Core

Q 1c S wave shadow zone lies between-  
Option A: 125°-143°  
Option B: 103°-103°  
Option C: 123° -123°  
Option D: 143° -143°

Q 1d Which of the following is a depositional landform-  
Option A: U-shaped Valley  
Option B: Moraines  
Option C: V-shaped valley  
Option D: Oasis

Q 1e Which among the following is an organic sedimentary rock-  
Option A: Conglomerate  
Option B: Limestone  
Option C: Shale  
Option D: Coal

Q 1f Which of the following texture of igneous rocks indicate cooling in two stages? -  
Option A: Porphyritic texture  
Option B: Intergrowth texture  
Option C: Equigranular texture  
Option D: Directive texture

Q 1g Concordant crescent shaped bodies of igneous rocks that occupy crests and troughs of folded strata are known as-  
Option A: Phacolith  
Option B: Lopolith  
Option C: Laccolith  
Option D: Batholith

Q 1h Which of the following property of sediment does not decide texture of sedimentary rocks-  
Option A: Angularity  
Option B: Sorting

Option C: Size  
Option D: Composition

Q 1i Contact metamorphism is a type of-  
Option A: Thermal Metamorphism  
Option B: Dynamothermal Metamorphism  
Option C: Cataclastic Metamorphism  
Option D: Dynamic Metamorphism

Q 1j Attitude of a strata is defined by-  
Option A: Dip  
Option B: Strike  
Option C: Dip and Strike  
Option D: Rake

Q 1k The vertical component of displacement of hanging wall and foot wall along fault plane is known as-  
Option A: Throw  
Option B: Heave  
Option C: Rake  
Option D: Net slip

Q 1l Presence of which of the following structures represent that the compressional tectonic forces are active in the area-  
Option A: Strike-slip fault  
Option B: Horst and Graben  
Option C: Reverse Fault  
Option D: Normal fault

Q 1m A fold with horizontal axial plane which represents severe degree of folding is known as-  
Option A: Isoclinal fold  
Option B: Box fold  
Option C: Overtured fold  
Option D: Recumbent fold

Q 1n Which law states that the present is the key to the past-  
Option A: Law of Uniformitarianism  
Option B: Law of Faunal succession  
Option C: Law of Original horizontality  
Option D: Law of order of superposition

Q 1o Which condition is the most favourable at the site of the dam and reservoir-  
Option A: Presence of clay beds within sedimentary rocks  
Option B: Beds dipping steeply in the downstream direction  
Option C: Beds dipping gently in downstream direction  
Option D: Beds dipping in upstream direction

Q 1o Which of the geophysical investigation method is most suitable to locate groundwater-  
Option A: Seismic method  
Option B: Electric resistivity method  
Option C: Gravity method  
Option D: Electromagnetic method

Q 1p Calculate the core recovery when the total core obtained after drilling is 165 cm and total run is 2m-  
Option A: 84%  
Option B: 82.5%  
Option C: 83%

Option D: 82%

Q 1q Which among the following rock may be dangerous at the foundation of a dam-

Option A: Compact granite

Option B: Quartzite

Option C: Compact Basalt

Option D: Conglomerate

Q 1r Which among the following is the safest alignment of the tunnel-

Option A: Tunnel axis parallel to strike of strata

Option B: Tunnel axis parallel to dip of strata

Option C: Tunnel axis parallel to fault plane

Option D: Tunnel axis perpendicular to fold axis

Q 1s Which of the following rock has highest permeability-

Option A: Granite

Option B: Shale

Option C: Poorly cemented sandstone

Option D: Vesicular basalt

**Q2. Answer any 4 among the following with neat diagram.**

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2a. Parts of gravity dam.

2b. Angular unconformity.

2c. Horst and graben.

2d. Crag and tail.

2e. Perched water table

**Q3. Answer any 2 among the following.**

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3a. Explain different types of structures found in metamorphic rocks.

3b. Explain theory of plate tectonics with suitable diagram.

3c. On a horizontal tunnel a bed of sandstone is dipping southwards. If the width of outcrop is 240 m and the vertical thickness is 200 m then determine the true thickness and amount of inclination of the sandstone bed.