Program: Civil Engineering

Curriculum Scheme: Rev2016

Examination: Second Year Semester III

Course Code: CEC304 and Course Name: ENGINEERING GEOLOGY

Time: 1 hour Max. Marks: 50

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**0912\_R16\_Civil\_III\_CEC304\_SAMPLE QP**

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For the students: - All the Questions are compulsory and carry equal marks.

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| Q1. | The heat that caused melting in the Earth's early history was supplied from which of the following events or causes? |
| Option A: | volcanic activity and radioactivity |
| Option B: | solar heating and volcanic activity |
| Option C: | a large impact event and radioactivity |
| Option D: | a large impact event and solar heating |
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| Q2. | How thick is the crust of the Earth? |
| Option A: | about 4 miles |
| Option B: | about 4 km |
| Option C: | about 40 km |
| Option D: | about 400 km |
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| Q3. | The layer that separates crust from core is the? |
| Option A: | magma layer |
| Option B: | lithosphere |
| Option C: | mantle |
| Option D: | continent |
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| Q4. | What is the speed attained by the P-waves in the C-layer under the Continental crust? |
| Option A: | 6 to 7.6 km/sec |
| Option B: | 3 to 4 km/sec |
| Option C: | 5 to 6.3 km/sec |
| Option D: | 1.8 to 2.5 km/sec |
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| Q5. | The branch of geology which deals with occurrence, origin and history of rocks is known as? |
| Option A: | hydrogeology |
| Option B: | pedology |
| Option C: | geomorphology |
| Option D: | petrology |
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| Q6. | Earthquakes originating due to volcanic eruptions or landslides are called \_\_\_\_\_\_\_\_\_\_ |
| Option A: | Tectonic earthquakes |
| Option B: | Shallow earthquakes |
| Option C: | Class-A earthquakes |
| Option D: | Non-tectonic earthquakes |
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| Q7. | The rate of cooling of a magma or lava is reflected by the \_\_\_\_\_\_\_\_ of the rock. |
| Option A: | mineralogy |
| Option B: | texture |
| Option C: | color |
| Option D: | density |
|  |  |
| Q8. | The temperature (at least a minimum estimate) from which the melt cooled is reflected by the \_\_\_\_\_\_\_\_\_ of the rock. |
| Option A: | mineralogy |
| Option B: | texture |
| Option C: | color |
| Option D: | density |
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| Q9. | The last mineral (assuming that the composition is appropriate) to crystallize from a magma is: |
| Option A: | plagioclase |
| Option B: | olivine |
| Option C: | quartz |
| Option D: | pyroxene |
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| Q10. | The coarse grained equivalent of a basalt is a: |
| Option A: | rhyolite |
| Option B: | gabbro |
| Option C: | andesite |
| Option D: | basalt |
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| Q11. | Describe the plate tectonic settings where you would expect to find basaltic rocks: |
| Option A: | subduction zone |
| Option B: | continent/continent collision |
| Option C: | spreading center |
| Option D: | transform boundary |
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| Q12. | The principal of original horizontality states that |
| Option A: | most rocks in the Earth's crust are layered horizontally |
| Option B: | igneous rocks form essentially horizontal layers |
| Option C: | metamorphic gradients are essentially horizontal before deformation |
| Option D: | sediments are deposited as essentially horizontal layers |
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| Q13. | Which of the following is used by geologists to determine the relative ages in a rock sequence? |
| Option A: | stratigraphy |
| Option B: | fossils |
| Option C: | cross-cutting relationships |
| Option D: | fossils, cross-cutting relationships and stratigraphy |
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| Q14. | The dip of a unit represents the |
| Option A: | direction of intersection of the rock layer an a horizontal surface |
| Option B: | part of the unit which has been eroded |
| Option C: | angle at which the bed inclines from the horizontal |
| Option D: | tilt of the rock unit before deformation |
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| Q15. | The angle at which a sedimentary bed is inclined from the horizontal is called the \_\_\_\_\_ |
| Option A: | anticline |
| Option B: | strike |
| Option C: | syncline |
| Option D: | dip |
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| Q16. | Which of the following is not a tectonic force responsible for folding or faulting rocks? |
| Option A: | compressive force |
| Option B: | tensional force |
| Option C: | shear force |
| Option D: | all of these are tectonic forces |
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| Q17. | Upfolds or arches of layered rock are called |
| Option A: | anticlines |
| Option B: | faults |
| Option C: | synclines |
| Option D: | unconformities |
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| Q18. | Which two measurements describe the orientation of a fault plane at a given location? |
| Option A: | axis and plane |
| Option B: | strike and dip |
| Option C: | lateral and thrust |
| Option D: | trend and plunge |
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| Q19. | The Beas-Sutlej linkage and Pong Dam at Mukheriyan near Jalandhar has been constructed through which of the following river project? |
| Option A: | Bhakra-Nangal Project |
| Option B: | Beas Project |
| Option C: | Chambal Project |
| Option D: | Rihand Dam Project |
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| Q20. | Which of the following river project built across the Mahanadi River? |
| Option A: | Tungabhadra Dam |
| Option B: | Damodat Valley ProjectDam |
| Option C: | Hirakud Dam |
| Option D: | Chamabal Project |
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| Q21. | Which of the following is proved to be useful, ongoing over the site? |
| Option A: | Excavation |
| Option B: | Escarpments |
| Option C: | Flood marks |
| Option D: | All of the mentioned |
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| Q22. | The feature that helps to estimate the relative density of coarse-grained soil is |
| Option A: | Soundings |
| Option B: | Shallow test pits |
| Option C: | Exploratory borings |
| Option D: | Geophysical method |
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| Q23. | Which outline is preferred for weak rocks with unequal lateral pressure |
| Option A: | D-shaped |
| Option B: | Horse-shoe shaped |
| Option C: | Circular |
| Option D: | Rectangular shaped |
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| Q24. | Lithology does not affect which parameter? |
| Option A: | Type of tunnel |
| Option B: | Method of tunnelling |
| Option C: | Strength and extent of lining |
| Option D: | Cost of the project |
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| Q25. | Aquifers are distinguished into how many types on the basis of physical conditions under which water can exist in them? |
| Option A: | 1 |
| Option B: | 2 |
| Option C: | 3 |
| Option D: | 4 |