

University of Mumbai

Examination 2020

Program: Civil Engineering

Curriculum Scheme: Rev2016

Examination: Third Semester III

Course Code: CE-C-304 and Course Name: Engineering Geology

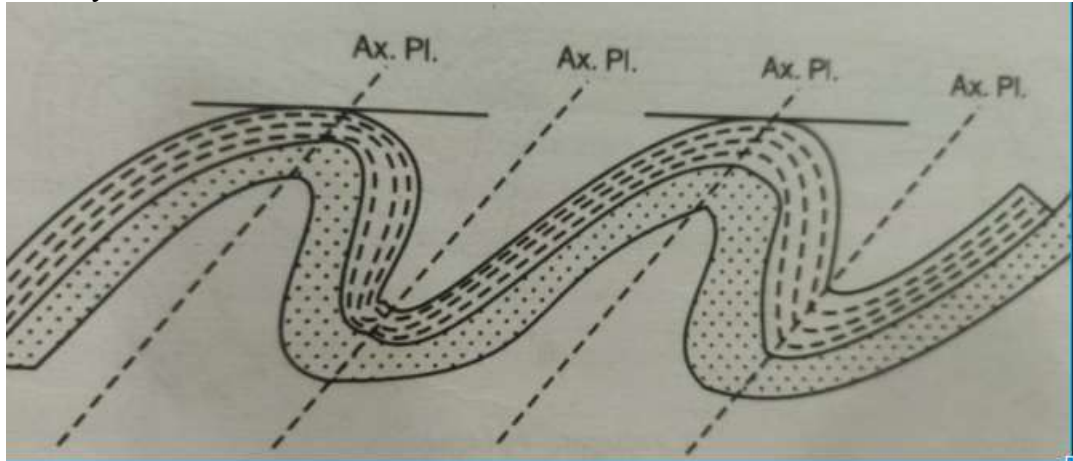
Time: 1-hour

Max. Marks: 50

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

Q1.	Identify the mineral. i) usually white, green or colorless II) pearly luster iii) softest mineral iv) used a filler & brightening agent, whitener in paint.
Option A:	Gypsum
Option B:	Asbestos
Option C:	Mica
Option D:	Talc
Q2.	Identify a rock. i) Extrusive igneous rock, rich in iron & magnesium, Color- Grey to black in color, Streak- white to grey, Fracture- Conchoidal, Used for Construction work.
Option A:	Sandstone
Option B:	Shale
Option C:	Basalt
Option D:	Granite
Q3.	Volcanoes are generally found where
Option A:	Intraplate pull apart or are coming together
Option B:	Tectonic plates pull apart or are coming together
Option C:	Earth's crust pulls apart or are coming together
Option D:	None of these pull apart or are coming together
Q4.	Which of the following is a concordant intrusive rock?
Option A:	dike
Option B:	sill
Option C:	stock
Option D:	batholith
Q5.	The presence of phenocrysts in an igneous rock indicate:
Option A:	a lava cooling on the surface of the Earth
Option B:	violent, explosive volcanic eruption
Option C:	a magma cooling slowing in the subsurface
Option D:	two phases of cooling, one fast and one slow
Q6.	The Mohorovicic discontinuity separates the _____ from the _____.
Option A:	Mantle & Core
Option B:	Core & Crust
Option C:	Mantle & Crust
Option D:	Outer Core & Inner Core

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Q7.	Identify the Structural feature below: 
Option A:	Recumbent fold
Option B:	Axial Planes
Option C:	Isoclinal Fold
Option D:	Parallel planes
Q8.	Which wave of the earthquake produces rolling effect along the surface?
Option A:	P wave
Option B:	S wave
Option C:	L wave
Option D:	I wave
Q9.	What are the two conditions believed to be required for the formation of igneous rocks?
Option A:	Low temperature & molten state
Option B:	Molten state & moderate temperature
Option C:	Molten state & very high temperature
Option D:	Crystallized state & moderate temperature
Q10.	At convergent plate boundaries where oceanic and continental crust meet _____
Option A:	No associated volcanism occurs
Option B:	oceanic crust is subducted
Option C:	oceanic crust is created
Option D:	continental crust is subducted
Q11.	Which aquifer is called water table aquifer?
Option A:	Unconfined aquifer
Option B:	Confined aquifer
Option C:	Ground aquifer
Option D:	Connate aquifer
Q12.	The rock which is well polished by wind abrasion is called _____
Option A:	Yardangs
Option B:	Pedestal rock
Option C:	Ventifacts

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Option D:	Desert pavements																																																
Q13.	The most unfavorable strike direction is when the beds?																																																
Option A:	Strike parallel to axis of dam and the dip is upstream																																																
Option B:	Strike parallel to axis of dam and the dip is downstream																																																
Option C:	Strike normal to axis of dam and the dip is downstream																																																
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Q14.	When is the strength of sound rock always greater?																																																
Option A:	When stresses are normal to bedding planes																																																
Option B:	When stresses are parallel to bedding planes.																																																
Option C:	When stresses are inclined at 45° to bedding planes																																																
Option D:	When stresses are inclined at 60° to bedding planes																																																
Q15.	The type of fault which appears in such a way that the central wedge appears raised high up with respect to the sides is																																																
Option A:	Graben																																																
Option B:	Horst																																																
Option C:	Nappe																																																
Option D:	Thrust																																																
Q16.	At a dam site, a bed of sandstone is exposed on horizontal ground. If it is 25 degree towards East. Its width of outcrop on a level ground is 240m, what is its vertical thickness. (Attach complete solution):																																																
Option A:	101.9 m																																																
Option B:	99.9 m																																																
Option C:	111.9 m																																																
Option D:	121.9m																																																
Q17.	Calculate Core Recovery and RQD of the given data. Run of drill is 2m.																																																
	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 33%;">No of Samples</th> <th style="width: 33%;">Length of samples (cm)</th> <th style="width: 33%;">Nature of joints in lower end sample</th> </tr> </thead> <tbody> <tr><td>1</td><td>20</td><td>N</td></tr> <tr><td>2</td><td>15</td><td>N</td></tr> <tr><td>3</td><td>10</td><td>N</td></tr> <tr><td>4</td><td>7</td><td>M</td></tr> <tr><td>5</td><td>2</td><td>M</td></tr> <tr><td>6</td><td>9</td><td>N</td></tr> <tr><td>7</td><td>12</td><td>N</td></tr> <tr><td>8</td><td>3</td><td>N</td></tr> <tr><td>9</td><td>11</td><td>N</td></tr> <tr><td>10</td><td>12</td><td>N</td></tr> <tr><td>11</td><td>6</td><td>M</td></tr> <tr><td>12</td><td>7</td><td>M</td></tr> <tr><td>13</td><td>20</td><td>N</td></tr> <tr><td>14</td><td>30</td><td>N</td></tr> <tr><td>15</td><td>10</td><td>N</td></tr> </tbody> </table>	No of Samples	Length of samples (cm)	Nature of joints in lower end sample	1	20	N	2	15	N	3	10	N	4	7	M	5	2	M	6	9	N	7	12	N	8	3	N	9	11	N	10	12	N	11	6	M	12	7	M	13	20	N	14	30	N	15	10	N
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Option A:	CR-87% and RQD-79%																																																
Option B:	CR-85% and RQD-80%																																																

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Option C:	CR-89% and RQD-75%
Option D:	CR-90% and RQD-78%
Q18.	Excessive pumping in relation to recharge can cause _____
Option A:	a cone of depression
Option B:	Sinking table
Option C:	Groundwater recharge
Option D:	Nappe
Q19.	Which among the following has S-shaped outline
Option A:	Crescentic dune
Option B:	Barchans
Option C:	Transverse dunes
Option D:	Sigmoidal dunes
Q20.	Identify the mineral. i) usually blue in color and occurs in form of long, bladed crystal II) Hardness- 4.5 to 5 iii) Streak- White iv) specific gravity- 3.5 to 3.7 _____
Option A:	Kyanite
Option B:	Granite
Option C:	Galena
Option D:	Asbestos
Q21.	What lies directly beneath the lithosphere and is around 200 km thick?
Option A:	Athenosphere
Option B:	Mohoviricic Discontinuity
Option C:	Lithosphere
Option D:	Crust
Q22.	The point of the earth's surface directly above the point where an earthquake occurs is called the:
Option A:	Focus
Option B:	Epicenter
Option C:	Fracture
Option D:	Fault
Q23.	What is the grain size of volcanic rock
Option A:	Very coarse
Option B:	Coarse
Option C:	Intermediate
Option D:	Very fine
Q24.	Which of the following sequences correctly lists the different arrivals from first to last?
Option A:	P waves ... S waves Surface waves
Option B:	Surface waves ... P waves S waves
Option C:	P waves ... Surface waves ... S waves
Option D:	S waves ... P waves Surface waves

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Q25.	Solifluction is relevant to
Option A:	Landslides
Option B:	Earthquake
Option C:	Volcano
Option D:	Seismograph