

University of Mumbai

Examination 2020

Program: Civil Engineering

Curriculum Scheme: Rev2019

Examination: Third Semester III

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

Time: 2-hour

Max. Marks: 80

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Q1)	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	Asbestos is showing which type of luster?
Option A:	Vitreous
Option B:	Metallic
Option C:	non-metallic
Option D:	Silky
2.	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
3.	Which among the following is a product of Mechanical Weathering?
Option A:	Limonite
Option B:	Laterite
Option C:	Bauxite
Option D:	Scree Deposits
4.	What do the normal faults cause to the crust of the Earth?
Option A:	Shortening of crest
Option B:	Cracking of crest
Option C:	Extension in the crust
Option D:	Strengthening of crust
5.	What is the correct sequence of rocks arranged in increasing grade of metamorphism?
Option A:	Shale-Gneiss-Schist-Slate
Option B:	Shale-Slate-Schist-Gneiss
Option C:	Slate-Shale-Schist-Gneiss
Option D:	Gneiss-Schist-Slate-Shale
6.	The discontinuity which marks the lower boundary of the crust is _____
Option A:	Crust-Mantle discontinuity
Option B:	SIMA layer
Option C:	SIAL layer

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Option D:	Mohorovicic discontinuity
7.	Identify the part labelled as "A" in the below diagram
Option A:	Weathered rock
Option B:	Parent rock
Option C:	Rolled down rock
Option D:	Powdered rock
Q8.	Which one of the following is an acidic Igneous rock ?
Option A:	Gabbro
Option B:	Basalt
Option C:	Granite
Option D:	Diorite
Q9.	Which of the following is also an overturned fold?
Option A:	Isoclinal fold
Option B:	Symmetrical fold
Option C:	Asymmetrical fold
Option D:	Recumbent fold
Q10.	Volcanic islands arcs are associated with _____
Option A:	Transform plate boundaries
Option B:	Divergent plate boundaries
Option C:	Ocean-ocean convergent plate boundaries
Option D:	Ocean continent convergent plate boundaries
Q11.	What is the specialty of the Artesian Water?
Option A:	Has a characteristic color
Option B:	Has a characteristic odor
Option C:	Requires no pumping
Option D:	Requires special type of pumping
Q12.	Dynamothermal Metamorphism is associated with?
Option A:	Transform Plate boundaries
Option B:	Divergent Plate boundaries
Option C:	Convergent Plate boundaries

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Option D:	No relation of metamorphism with plate boundaries
Q13.	Folded rocks are often best storehouses of which of water?
Option A:	Juvenile water
Option B:	Magmatic water
Option C:	Artesian water
Option D:	Connate water
Q14.	A downward movement of wet soil along the slope under the influence of gravity is known as?
Option A:	Ceep
Option B:	Debri flow
Option C:	Lahar
Option D:	Solifluction
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.	The statement that “ In an undisturbed sedimentary sequence, the layer which is on the top is the youngest ” is explained by which of the law of stratigraphy-
Option A:	Law of Uniformitarianism
Option B:	Law of faunal succession
Option C:	Law of cross cutting relationship
Option D:	Law of order of superposition
Q17.	Foliation is a primary structure of which type of rock?
Option A:	Igneous rock
Option B:	Sedimentary rock
Option C:	Metamorphic rock
Option D:	Not associated with any rock
18.	The maximum angle of inclination of a layer of a rock with the horizontal is _____
Option A:	Dip
Option B:	Heave angle
Option C:	Strike
Option D:	Depth
19	Which of the following rock forming minerals is more resistant to weathering compared to Hornblende?

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Option A:	Augite																																																															
Option B:	Biotite																																																															
Option C:	Olivine																																																															
Option D:	Calcite																																																															
20.	The top of the body of the groundwater separated from the main water table beneath it by a zone that is not saturated is known as-																																																															
Option A:	Water table																																																															
Option B:	Unconfined aquifer																																																															
Option C:	Perched Water table																																																															
Option D:	RMR																																																															
Q2)	Solve any Four 5marks each																																																															
A	What are the preventive measures can be taken to prevent occurrence of Landslide?																																																															
B	Explain the merits and demerits of the following condition at a dam site- i. Dam on horizontal strata ii. Dam on strata dipping downstream side																																																															
C	Explain briefly the construction & working of seismograph																																																															
D	Explain the water bearing properties of rocks?																																																															
E	What is confined aquifer? What are the requirements for the formation of confined aquifer?																																																															
F	Differentiate between central eruption and fissure eruption with examples																																																															
Q3)	Solve any Four 5marks each																																																															
A	A coal seam is exposed on a horizontal ground. If it is 30° towards West. Its width of outcrop on a level ground is 360 m. What is its true thickness and vertical thickness?																																																															
B	Calculate the RQD from the given data and evaluate the rock on the basis of obtained result. Total run 2m.																																																															
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C	Describe any two structures of sedimentary rocks.
D	Explain Rock Quality Designation & Core recovery
E	Explain Convergent Plate Boundaries and features associated with them
F	Explain the merits and demerits of the following condition of tunneling- Tunnel axis parallel to the dip of the strata