

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

EndTerm Examination (Special), Jan.-Feb.2016

B. Tech in Civil Engineering, Semester III

Roll No.....

CE304: ENGINEERING GEOLOGY

Time: 3 hours

Max. Marks: 100

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

Q.1A	Objective type multiple choice questions (10 questions @ 1 mark)	10
i.	Hardness of Minerals defined by a Scale known as: (a) Mohs' scale (b) Richter's Scale (c) Geological Scale (d) None of these	
ii.	Gold is : (a) Highly valuable mineral (b) Rare mineral (c) Common and important mineral (d) none of these	
iii.	Overtured folds are : (a) convex downwards (b) convex upwards (c) Both limbs essentially dip in same general direction (d) Dip unequally on either side of Axial plane	
iv.	Typical character associated with metamorphic rocks are: (a) Plastic Deformation (b) Recrystallization of mineral constituents (c) Development of features like cleavage, foliation, etc. (d) b and c are correct (e) All are correct	
v.	In stratified rocks the "Strike joints " are the joints in which : (a) the joint sets strike parallel to the dip direction of the rocks (b) the joint sets where the strike of joints is at any angle between the dip and the strike of the layer (c) the joint sets strike parallel to the strike of the rocks (d) none of above	
vi.	The most dominant component of Earth Crust is : (a) Alumina (b) Iron Oxide (c) Silica (d) Lime	

vii.	The name of feature produced by river in the region composed of alternating beds of soft and hard rocks is known as: (a) Pedestal Rock (b) Stream Terraces (c) Oasis/Slack (d) Escarpment	
viii.	The hydraulic Conductivity in Aquifers expressed as: (a) meters/Day (b) meters/second (c) Both (d) none	
ix.	The water derived from precipitation (rain and snow) is : (a) Juvenile water (b) Connate water (c) Meteoric water (d) none of above	
x.	Wind-blown Deposits of silt and clay grade particles are known as: (a) Crescentic dunes (b) Yardangs (c) Loess (d) Scree Deposits	
Q.2	Short answer type questions (4 questions @ 2.5 marks)	10
i.	Define the following terms: a. Scree deposit and Talus slope b. Eluvium and Deluvium	
ii.	Write a brief note on the following: a. Dunes b. Potholes	
Q.3A	Describe any two "optical properties" of minerals in detail.	05
Q.3B	Explain the property of minerals in detail that describes the behavior of mineral under deformation?	05
Q.4A	Explain the dominant process of chemical weathering for the following types of rocks: (a) Iron containing rocks (b) Silicate bearing rocks	
Q.4B	Explain at least three principal processes due to which joints may be caused in different rocks.	05
Q.5A	Broadly classify the rocks that have formed from an originally hot molten material through the process of cooling and crystallization.	05
Q.5B	Explain the modes of formation of minerals in nature.	05

Q.6A	If you call a substance mineral than what are the basic properties that should be associated with it?	05
Q.6B	Write the some peculiar phenomenon associated with color of minerals.	05
OR		
Q.6B	Write the Scope of Engineering Geology in planning of an engineering project.	05
Q.7A	How winds are born? Explain at least three methods by which wind performs the work of erosion.	05
Q.7B	What are the Aeolian deposits? Explain in detail with example.	05
OR		
Q.7B	Write brief note on the following : (a) Mural Joints (b) Sheet Joints	05
Q.8A	Explain the important terms related to the various aspects of movement of water in rock mass that may be composed of gravels, limestones or sandstones.	10
Q.9A	Describe the various methods of river erosion.	10
Q.9B	Define chemical weathering. Describe the main processes of chemical weathering in detail.	10
OR		
Q.9B	Describe the structural features of rocks that are responsible for failure in earth crust.	10