PCET LIBRARY BANGALORE-49

CBCS SCHEME

USN | | | | | | | | | | |

BCV303

Third Semester B.E./B.Tech. Degree Examination, June/July 2026
Engineering Geology

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	With a neat sketch describe the internal structure of the earth based on seismological evidences.	10	L2	CO1
	b.	Explain theory of plate tectonics. Add a note on different types of plate boundaries.	10	L2	CO1
		OR			
Q.2	a.	Explain causes, hazards of landslides and its preventive measures.	08	L1	CO1
	b.	Write short notes on : (i) Causes and effects of earthquake (ii) Seismic proof structures	12	L1	CO1
		Module – 2			
Q.3	a.	Describe important physical properties and engineering uses of following minerals: (i) Quartz (ii) Bauxite (iii) Gypsum	12	L2	CO2
	b.	Define what is Rock? Add a note on classification of sedimentary rock based on grain size of sediments with examples.	08	L2	CO2
		OR			
Q.4	a.	Explain broad classification of igneous rocks giving examples relevant to building material.	08	L2	CO2
	b.	Explain the properties and engineering uses of following rocks : (i) Granite (ii) Sandstone (iii) Marble	12	L2	CO2
		Module – 3			
Q.5	a.	What is Weathering? Describe in detail about physical weathering and chemical weathering.	10	L2	CO3
	b.	With a neat diagram describe different types of soil horizons. Add a note on soil formation.	10	L2	CO3

VTU-25-06-2026 08:49:06am - EP - EP - EP

		OR			
Q.6	**a.**	Define the term Soil. Distinguish between black cotton soil and lateritic soil.	**10**	**L2**	**CO3**
	b.	Describe the classification of soil based on their grain size.	**06**	**L2**	**CO3**
	c.	Explain the effect of weathering on monumental rocks.	**04**	**L2**	**CO3**
		Module – 4			
Q.7	**a.**	A bed of sandstone dips 30° along N 60° W and 38° along S 25° W. Determine true dip and strike. (Geometrical method).	**06**	**L3**	**CO4**
	b.	A coal seam is exposed on a level ground. It dips towards north. Its width of outcrop is 180 m and angle of inclination is 30°. Find its vertical and true thickness. (Scale : 1 cm = 100 m).	**04**	**L3**	**CO4**
	c.	Describe Joints. Add a note on joints how it play crucial role in selection site for reservoir project.	**10**	**L3**	**CO4**
		OR			
Q.8	**a.**	Three bore holes are sunk at SW, SE and NW of a square level ground. The sides of the square level ground are 150 m long and bore holes x, y and z are proposed at a depth of 15 m in x, 45 m in y and 65 m in z respectively. (i) Determine the attitude of coal seam. (ii) Fourth bore hole 'P' is proposed at NE corner of the square land. Calculate at what depth the bore hole 'P' encounters the same coal seam.	**10**	**L3**	**CO4**
	b.	What are Folds? Explain the parts of folds.	**06**	**L3**	**CO4**
	c.	Explain the impact of faults on dam and tunnel project.	**04**	**L3**	**CO4**
		Module – 5			
Q.9	**a.**	With a neat sketch explain different types of aquifers.	**10**	**L3**	**CO5**
	b.	Describe briefly water bearing properties of rocks.	**10**	**L3**	**CO5**
		OR			
Q.10	**a.**	Define Permeability. Describe factors affecting permeability of rocks.	**10**	**L3**	**CO5**
	b.	With a neat diagram explain electric resistivity method for exploration of ground water.	**10**	**L3**	**CO5**

* * * * *

VTU-25-06-2026 08:49:06am - EP - EP - EP