A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 53102

B.E./B.Tech. DEGREE EXAMINATION, NOV 2018

Third Semester

Civil Engineering

15UCE302 -ENGINEERING GEOLOGY AND CONSTRUCTION MATERIALS

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Kankar is a variety of CO1- R

   (a) Sandstone (b) Limestone (c) Shale (d) Coal

2. Shine of a mineral is referred to as its CO1-R

   (a) Lustre (b) Fracture (c) Plane of symmetry (d) Streak

3. Folds whose limbs are horizontal are known as CO2-R

   (a) Recumbent folds (b) Massively thrusted folds

   (c) Horizontal layers (d) Overturned folds

4. The full form of GIS is CO2- R

   (a) Graphical information system (b) Geographical information system

   (c) Geographical information source (d) Graphical information source

5. Crushing strength of a good building stone should be more than CO3- R

   (a) 50 MPa (b) 100 MPa (c) 150 MPa (d) 200 MPa

6. Which of the following pairs gives a correct combination of the useful and harmful constituents respectively of a good brick earth? CO3-U

   (a) Lime stone and alumina (b) Alumina and iron

   (c) Silica and alkalies (d) Alkalies and magnesium

7. The main constituents of cement which is responsible for initial setting of cement is CO4-R

(a) Dicalcium silicate (b) Tricalcium Silicate

(c) Tricalcium aluminate (d) All

8. In a mortar, the binding material is CO4- R

(a) Cement (b) Sand (c) Surkhi (d) Gypsum

9. A well-seasoned timber may contain moisture up to CO5- R

(a) 4 to 5% (b)7 to 8% (c) 8 to 10% (d) 10 to 12%

10. The steel used for rails under heavy traffic and on sharp curves, is CO5-R

(a) Nickel steel (b) Chrome steel

(c) Manganese steel (d) Vanadium steel

PART – B (5 x 2= 10Marks)

11. Mention the applications of geology in civil engineering. CO1-U

12. State the importance of aquifer in civil engineering. CO2-U

13. List the characteristics to be considered in selection of stones. CO3-U

14. Define hydration of cement. CO4-U

15. Write the Advantages of using veneer. CO5-U

PART – C (5 x 16= 80Marks)

16. (a) Give a detailed account of the quartz and feldspar group of minerals. CO1- U (16)

Or

(b) Describe the mineral composition, texture, origin, occurrence, engineering properties and uses of Sandstone, Limestone, Laterite, and Shale. CO1- U (16)

17. (a) Define fault and explain the types of fault in detail. CO2- U (16)

Or

(b) Explain in detail about the geological factors affecting Civil Engineering constructions. CO2- U (16)

18. (a) List the classification of bricks and Explain the manufacturing process of clay bricks. CO3- U (16)

Or

	(b)	Explain the types of brick masonry with neat sketches.	CO3 U	(16)
19.	(a)	Describe the dry and wet process of manufacture of cement with flow diagram.	CO4- U	(16)

Or

	(b)	(i) Explain the any four tests to be conducted on aggregates	CO4- U	(10)
		(ii) Classify the different types of mortar and list the types of tests available for mortar.	CO4- U	(6)
20.	(a)	Explain the process of natural seasoning & mention its advantages and disadvantages.	CO5- U	(16)

Or

	(b)	Classify steel and explain its manufacturing process.	CO5- U	(16)