

BE Semester- IV (Civil) Question Bank

(Engineering Geology & Geo-Informatics (New))

All questions carry equal marks(10 marks)

Q.1	Discuss the application of "Engineering Geology" in civil engineering projects.
Q.2	Explain in detail role of temperature in mechanical weathering of rocks and define terms erosion and denudation.
Q.3	What is mechanical weathering of rocks? Explain in detail role of water in mechanical weathering of rocks.
Q.4	Define the term weathering and explain how mechanical and chemical weathering of rocks makes them unsafe for civil construction.
Q.5	Explain the terms weathering erosion and denudation. Describe in brief the depositional features produced by geological work of river.
Q.6	Give an account of geological work of wind and explain erosional features produced by wind erosion.
Q.7	Describe erosion and deposition in mature stage of a river and explain origin of ox-bow lakes.
Q.8	Explain with neat diagram various features of glacial deposition and describe their engineering significance.
Q.9	What are various structures of sedimentary rocks? Describe any two in detail.
Q.10	What is stratification? Explain with neat figure dip, strike and unconformity along with their subtypes.
Q.11	Define terms bedding, outcrop, dip and strike with neat diagrams. Also explain types of dip.
Q.12	Explain different parts of a fold. Also discuss engineering consideration of folding.
Q.13	Define fold axis and axial plane with neat diagram. Classify folds based on position of axial plane.
Q.14	What is fault? Classify faults on the basis of relative movement of different blocks.
Q.15	What is fault? Explain different fault types with the help of neat diagrams.
Q.16	What are various physical properties useful to identify a mineral in hand specimen? Describe any three in detail.
Q.17	Describe Moh's scale of hardness for minerals and cleavage properties to identify a mineral in hand specimen.
Q.18	Describe tabular classification of igneous rocks based on depth of formation and silica saturation.
Q.19	What is texture? Describe in brief the texture and structure of igneous rocks.
Q.20	Describe agents of metamorphism and explain rock cleavage and foliation.
Q.21	Describe classification of sedimentary rocks based on mode of transport and grain size.
Q.22	Describe core and mantle of the earth with neat diagram.
Q.23	Draw a neat sketch showing the interior of the earth and explain Crust and Mantle of the earth.
Q.24	What are essential components of a remote sensing system? Explain

	through a neat sketch.
Q.25	Define GIS and describe its components. Also describe application of GIS in civil engineering.
Q.26	Define map. What are map layers in GIS?
Q.27	What are the advantages of using vector data model compare to raster data model in GIS.
Q.28	Describe components of GIS and differentiate between topographic and thematic map.
Q.29	Compare vector data model and raster data model.
Q.30	What do you mean by remote sensing? Explain basic concepts and principles of remote sensing.
Q.31	Describe active and passive remote sensing. And explain difference between two.
Q.32	Describe divisions of electromagnetic spectrum and explain suitability of infrared and radar waves for remote sensing.
Q.33	What do you understand by electromagnetic spectrum? Enlist various regions with their wavelength.
Q.34	Explain interaction of EM energy with the features on the surface of the earth.
Q.35	Describe in detail absorption and scattering of electromagnetic energy in the atmosphere.
Q.36	Describe interaction of electromagnetic energy with the atmosphere and explain what the atmospheric windows are?
Q.37	Explain in detail different resolutions with their significance.
Q.38	Describe in detail interaction of electromagnetic energy with the target and explain what spectral signature is and how it is useful in remote sensing?
Q.39	What are microwaves? Describe advantages of microwave remote sensing.
Q.40	Explain in detail What a digital image is? Describe multi-spectral and hyper-spectral remote sensing.