Course Code:20CE0113 **R20**

SIDDHARTH GROUP OF INSTITUTIONS::PUTTUR
(AUTONOMOUS)
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code Engineering Geology (20CE0113) **Course & Branch**: B.Tech - CE

Year & Sem: II-B.Tech& II-Sem **Regulation:** R20

UNIT –I
INTRODUTION

1.	**a**	Define geology and explain different branches of geology?	**[L1][CO1]**	**[06M]**
	b	Explain the scope and importance of geology in civil engineering works.	**[L2][CO1]**	**[06M]**
2.	**a**	Explain the brief study of case histories of failure of some civil engineering constructionsdue to some geological drawbacks?	**[L2][CO1]**	**[06M]**
	b	Explain the role of importance of geology in civil engineering.	**[L2][CO1]**	**[06M]**
3.	**a**	Importance of physical geology?	**[L2][CO1]**	**[06M]**
	b	Importance of structural geology and petrology?	**[L2][CO1]**	**[06M]**
4.	**a**	Explain the role of importance of geology in civil engineering	**[L2][CO1]**	**[06M]**
	b	Describe chemical weathering in detail.	**[L1][CO1]**	**[06M]**
5.	**a**	Write down the importance if weathering.	**[L1][CO1]**	**[06M]**
	b	Explain the biological factors in the process of weathering.	**[L2][CO1]**	**[06M]**
6.	**a**	What is weathering? Enumerate the various mechanisms of rock weathering?	**[L1][CO1]**	**[06M]**
	b	Distinguish between weathering and erosion.	**[L2][CO1]**	**[06M]**
7.	**a**	Discuss the application of engineering geology in civil engineering projects.	**[L2][CO1]**	**[06M]**
	b	Explain how mechanical and chemical weathering of rocks makes them unsafe forcivil engineering construction.	**[L2][CO1]**	**[06M]**
8.	**a**	Exaplain the types of weathering?	**[L2][CO1]**	**[06M]**
	b	Explain the physical factors in the process of weathering.	**[L2][CO1]**	**[06M]**
9.	**a**	Write down the factors affecting weathering?	**[L1][CO1]**	**[06M]**
	b	Describe chemical weathering in detail.	**[L2][CO1]**	**[06M]**
10.	**a**	Explain the process of weathering of common rock like Granite?	**[L2][CO1]**	**[06M]**
	b	How is Geology related to Engineering? Discuss the scope of application of geological knowledge in the planning work?	**[L2][CO1]**	**[06M]**

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UNIT –II
MINERALOGY

1.	**a**	Define mineral and explain the various physical properties of minerals?	**[L1][CO2]**	**[06M]**
	b	Write physical properties of Garnet and Hematite minerals.	**[L1][CO2]**	**[06M]**
2.	**a**	Write short notes on the following i)Form ii)Luster	**[L1][CO2]**	**[06M]**
	b	Write short notes on the following i)Define Hardness ,ii)Fracture, iii) Specific gravity.	**[L1][CO2]**	**[06M]**
3.	**a**	Discuss any four important properties which are useful for the identification of minerals?	**[L2][CO2]**	**[06M]**
	b	Advantages of study of minerals by physical properties.	**[L2][CO2]**	**[06M]**
4.	**a**	Discuss briefly the physical properties of Quartz and talc	**[L2][CO2]**	**[06M]**
	b	Explain different methods of study of minerals	**[L2][CO2]**	**[06M]**
5.	**a**	Write a note on different physical properties of minerals and state how these areuseful in the accurate identification of the mineral species.	**[L1][CO2]**	**[06M]**
	b	Identifying the physical properties of Talc.	**[L2][CO2]**	**[06M]**
6.	**a**	Write short notes on the following i)Form ii) Luster	**[L1][CO2]**	**[06M]**
	b	Write short notes on the following i) Define Cleavage , ii) Fracture, iii) Degree of transparency.	**[L1][CO2]**	**[06M]**
7.	**a**	Write physical properties of Olivine and Hornblende minerals.	**[L1][CO2]**	**[06M]**
	b	Write physical properties of Calcite and Kyanite minerals.	**[L1][CO2]**	**[06M]**
8.	**a**	Identifying the physical properties of Flint.	**[L2][CO2]**	**[06M]**
	b	Write physical properties of Magnesite and Graphite minerals.	**[L2][CO2]**	**[06M]**
9.	**a**	Identifying the physical properties of Asbestos.	**[L1][CO2]**	**[06M]**
	b	Write physical properties of Galena and Kyanite Gypsum.	**[L2][CO2]**	**[06M]**
10.	**a**	Write about feldspar group.	**[L2][CO2]**	**[06M]**
	b	Differentiate between Muscovite and Biotite Mica.	**[L2][CO2]**	**[06M]**

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UNIT –III
PETROLOGY

1.	**a**	Define term "rock" Describe the classification of rocks .	**[L1][CO3]**	**[06M]**
	b	Describe the following rocks? i)Granite ii) Pegmatite.	**[L2][CO3]**	**[06M]**
2.	**a**	Write short notes on Structures of igneous rocks	**[L1][CO3]**	**[06M]**
	b	Explain Structures of metamorphic rocks	**[L2][CO3]**	**[06M]**
3.	**a**	Describe the columnar flow and sheet structures of igneous rocks.	**[L2][CO3]**	**[06M]**
	b	Write detailed note on rock cycle.	**[L1][CO3]**	**[06M]**
4.	**a**	Describe the origin, texture, structure and occurrence of sandstone, basalt.	**[L2][CO3]**	**[06M]**
	b	Write an essay on engineering properties distribution and uses of granite.	**[L2][CO3]**	**[06M]**
5.	**a**	Write the parent rock,composition and uses of the following rocks: i)Quartzite ii)Slate	**[L1][CO3]**	**[06M]**
	b	Write the parent rock,composition and uses of the following rocks: i)Gneiss ii)Marble	**[L2][CO3]**	**[06M]**
6.	**a**	Describe the various types of structures associated with igneous rocks.	**[L2][CO4]**	**[06M]**
	b	Write the Structures of metamorphic rocks.	**[L1][CO4]**	**[06M]**
7.	**a**	Explain the structures and textures of sedimentary rocks?	**[L2][CO4]**	**[06M]**
	b	What are the classification of igneous rocks?	**[L1][CO4]**	**[06M]**
8.	**a**	Explain the concept on Textures of igneous rocks and metamorphic rocks.	**[L2][CO4]**	**[06M]**
	b	Analyze the composition, texture, characteristics, occurrence and uses of laterite,slate, and quartzite.	**[L2][CO4]**	**[06M]**
9.	**a**	Explain in detail the following:Forms of igneous rocks.	**[L2][CO4]**	**[06M]**
	b	Explain in detail the following: Classification of igneous rocks.	**[L2][CO4]**	**[06M]**
10.	**a**	Explain the important textures and structure of rocks. Also distinguish between the following:Schist and Lime stone.	**[L2][CO4]**	**[06M]**
	b	Explain the important textures and structure of rocks. Also distinguish between the following: Laterite and Shale.	**[L2][CO4]**	**[06M]**

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UNIT –IV
STRUCTURAL GEOLOGY, GEOPHYSICAL STUDIES

1.	**a**	Explain the different types of folds with the help of neat sketches?	**[L2][CO5]**	**[08M]**
	b	Importance of folds in civil engineering point of view.	**[L1][CO5]**	**[04M]**
2.	**a**	Classify and describe the different types of faults?	**[L2][CO5]**	**[08M]**
	b	Importance of faults in civil engineering point of view.	**[L1][CO5]**	**[04M]**
3.	**a**	What are joints? Discuss the varies types of joints.	**[L1][CO5]**	**[08M]**
	b	Importance of joints in civil engineering point of view.	**[L1][CO5]**	**[04M]**
4.	**a**	Differentiate between true dip and apparent dip of rock formation.	**[L2][CO5]**	**[08M]**
	b	Explain the terms strike and dip.	**[L2][CO5]**	**[04M]**
5.	**a**	What is an Unconformity? Describe different types of unconformities.	**[L1][CO5]**	**[08M]**
	b	Write a note on the Importance of unconformity.	**[L1][CO5]**	**[04M]**
6.	**a**	Write short note on following: i) Fold and ii) Fault	**[L1][CO5]**	**[06M]**
	b	Write short note on following: i) Joints and ii) Unconformities	**[L1][CO5]**	**[06M]**
7.	**a**	Explain in detail about resistivity methods.	**[L2][CO5]**	**[08M]**
	b	Write a note on resistivity method applications.	**[L1][CO5]**	**[04M]**
8.	**a**	Describe different geophysical methods in terms of principal, parameters, methods,equipment.	**[L2][CO5]**	**[08M]**
	b	Applications of Gravity methods, Magnetic methods?	**[L2][CO5]**	**[04M]**
9.	**a**	Discuss in detail about the electrical method of investigations for ground water exploration.	**[L2][CO5]**	**[08M]**
	b	Write the applications of electrical method.	**[L1][CO5]**	**[04M]**
10.	**a**	Explain in detail about Magnetic methods.	**[L2][CO5]**	**[08M]**
	b	Write a note on Magnetic method applications.	**[L1][CO5]**	**[04M]**

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UNIT –V

GROUNDWATER, EARTHQUAKES, LANDSLIDES, DAMS,RESERVOIRS, TUNNELS

1.	**a**	Define ground water. What are types of ground water?	**[L1][CO6]**	**[06M]**
	b	Which occur in the zone of aerationand saturation?	**[L1][CO6]**	**[06M]**
2.	**a**	Explain various investigation uses in groundwater exploration.	**[L2][CO6]**	**[06M]**
	b	Write down the geological control of ground water movement.	**[L1][CO6]**	**[06M]**
3.	**a**	What is meant by earthquake. Describe the various effects of earthquakes.	**[L1][CO6]**	**[06M]**
	b	What are the precautionary measures taken in the construction of buildings inearthquake prone zones.	**[L1][CO6]**	**[06M]**
4.	**a**	Describe the causes of earthquakes.	**[L1][CO6]**	**[06M]**
	b	What is reservoir .List out the factors contributing to the success of a reservoir?	**[L1][CO6]**	**[06M]**
5.	**a**	What are landslides? And explain the causes and effects of landslides.	**[L1][CO6]**	**[06M]**
	b	Write a note on the preventive Measures tobe taken to prevent the landslides	**[L1][CO6]**	**[06M]**
6.	**a**	What are dams and reservoirs? Explain the purpose of construction of major dam.	**[L1][CO6]**	**[06M]**
	b	Explain the geological structural controls on selection of dam site.	**[L2][CO6]**	**[06M]**
7.	**a**	What are dams.and types of dams.	**[L1][CO6]**	**[06M]**
	b	Explain the Narrow river valley .	**[L2][CO6]**	**[06M]**
8.	**a**	What is a tunnel? Explain thepurpose of tunnelling?	**[L1][CO6]**	**[06M]**
	b	Describe the geological consideration for successful tunneling.	**[L2][CO6]**	**[06M]**
9.	**a**	Write a short note on lining of tunnels.	**[L1][CO6]**	**[06M]**
	b	Write a short note on over break tunnels.	**[L1][CO6]**	**[06M]**
10.	**a**	Describe the effects of tunnelling on the ground.	**[L2][CO6]**	**[06M]**
	b	What is a tunnel? Explain thepurpose of tunnelling?	**[L1][CO6]**	**[06M]**

Prepared by:**A.JYOSHNA,Assistant Professor/CE**