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PRESIDENCY UNIVERSITY BENGALURU

SCHOOL OF ENGINEERING END TERM EXAMINATION - JAN 2023

Semester: Semester III - 2021 Date: 13-JAN-2023

Course Name: Sem III - CIV2008 - Engineering Geology

Program: B.Tech. Civil Engineering

Weightage: 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.

PART A

ANSWER ALL THE TEN QUESTIONS

10 X 2 = 20M

1.	What is the grain size of volcanic rocks?	
	a) Very course	(CO2) [Knowledge]
	b) Course	
	c) Very fine	
	d) Intermediate	
2.	What are the two conditions believed to be required for the formation of igneous roca) Low temperature and molten state	cks? (CO2) [Knowledge]
	b) Molten state and very high temperature	(
	c) Only crystallization	
	d) Crystallized state and moderate temperature	
3.	predominantly acts as the agent of chemical erosion of soil.	
	a) Seawave	(CO2) [Knowledge]
	b) Wind	
	c) Underground water	
	d) Glacier	

	ANSWER ALL THE FIVE QUESTIONS 5	X 8 = 40M
	PART B	
	u) iviouciale	
	d) Moderate	
	b) Rapid c) Quick	
	· · · ·	(CO3) [Kilowiedge]
10.	Folding in a rock is a process? a) Very slow	(CO3) [Knowledge]
4.0	d) None of the above	
	c) Machinary	
	b) Computer	
	a) Mobile	(CO3) [Knowledge]
9.	GIS applications are tools.	(000) [[(
	d) Specific yield	
	c) Voids ratio	
	b) Permeability	
	a) Porosity	(CO2) [Knowledge]
8.	What is the volume of voids in a rock mass expressed in percentage of total volume	
	d) All of the above	
	c) Mapping and surveying	
	b) Transportation	
	a) Location tracking	(CO3) [Knowledge]
7.	Which one of the among is correct on GPS applications;	
	d) Unconfirmity	
	c) Joints	
	b) Folds	
	a) Faults	(CO3) [Knowledge]
6.	Bending of rocks is called as	
	d) All of the above	
	c) Metamorphic rocks	
	b) Sedimentary rocks	() [
J .	a) Igneous rocks	(CO3) [Knowledge]
5	Folds occurs in which type of rocks;	
	d) NaAlSi3O8	
	b) CaCO3 c) NaCl	
	a) SiO2	(CO2) [Knowledge]
4.	virilich of the following is representative of the formula for quartz?	(000) [(/n avvda dara]

11. Igneous rock consists of different mineral compositions and textures. Explain the textures and mineral compositions of Igneous rocks?

(CO2) [Comprehension]

12. Most of rural population depends on availability of groundwater and searching for groundwater is an enigma. Groundwater is important over the surface water. Describe the occurrence with neat diagram and importance of groundwater over the surface water?

(CO2) [Comprehension]

13. Hydraulic properties of deeply weathered basement rocks such as weathered sedimentary materials depends on hydraulic properties rocks. Describe the various hydraulic properties of rocks?

(CO3) [Comprehension]

- 14. Data is the heart of the GIS. Describe the data, procdure to be followed for building GIS data base? (CO3) [Comprehension]
- **15.** The Global Positioning System (GPS), originally Navstar GPS, is a satellite-based radionavigation system owned by the United States government and operated by the United States Space Force, subsequently other Coutries also started using for variuos purposes. Describe the Civilian and Military applications uses?

(CO3) [Comprehension]

PART C

ANSWER ALL THE FOUR QUESTIONS

4 X 10 = 40M

16. The epicenter of an earthquake is the point on Earth's surface directly above the earthquake's origin. Explain the determination of the epiceter of an earthquake using time - travel curve?

(CO1) [Application]

- 17. Minerals are essential elements and has many applications? Write any eight uses of minerals? (CO2) [Application]
- 18. This marvelous digital technology is transmitted absolutely free of cost from earth orbiting satellites (certainly a God Send for all of us!) where its signals are beamed directly to low cost receiver hand chipsets. This has made the GPS technology very affordable to all civilian applications. GPS has many applications both military and civilians? Describe the uses of GIS?

(CO3) [Application]

19. Remote sensing is the process of detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation at a distance (typically from satellite or aircraft). Explain the remote sensing process with a diagram?

(CO3) [Application]
