	Utech
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Invigilator's Signature :	•••••

# CS/B.TECH(CT)/SEM-3/CT-302/2010-11 2010-11 GEOLOGY

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

#### **GROUP - A**

# ( Multiple Choice Type Questions )

					1	0 × 1 =	= 10
_	_	 	_	 _			

i) In the Moh's scale of hardness, which mineral has the hardness of 8?

Choose the correct alternatives for any ten of the following:

a) Quartz

1.

b) Topaz

c) Apatite

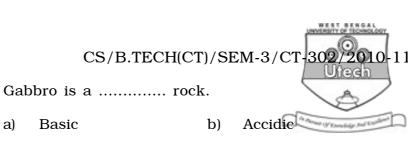
- d) Orthoclase.
- ii) Which is the densest planet in the solar system?
  - a) Mars

- b) Earth
- c) Jupiter
- d) Saturn.
- iii) Equatorial radius of the earth is
  - a) 6378 km
- b) 6371 km
- c) 6356 km
- d) 6354 km.

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# CS/B.TECH(CT)/SEM-3/CT-302/2010-11

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iv)						
	a)	767°C	b)	867°C		
	c)	967°C	d)	1067°C.		
v)	Mici	co-components of coal	are	referred to as		
	a)	stones	b)	minerals		
	c)	bitumens	d)	macerals.		
vi)	The most important Kyanite deposit in India is at					
	a)	Lohardaga	b)	Lapsaburu		
	c)	Khetri	d)	Chikmagalur.		
vii)	Biot	ite is known as a				
	a)	Black mica	b)	White mica		
	c)	Brown mica	d)	Blue mica.		
viii)	Wha	at is the pure variety of	of talo	e known as ?		
	a)	Soapstone	b)	Brunnerite		
	c)	Tremolite	d)	Steatite.		
ix)	Dole	erite is a Ro	ck.			
	a)	Plutonic	b)	Hypabyssal		
	c)	Volcanic	d)	Extrusive.		
x)	A large body of plutonic rock is called a					
	a)	Lopolith	b)	Laccolith		
	c)	Phacolith	d)	Batholith.		



- Ultrabasic c)
- d) Intermediate.
- Conglomerate represents a ..... variety of sedimentary rock.
  - Arenaceous a)

xi)

a)

- b) Calcareous
- c) Ferruginous
- d) Rudaceous.
- xiii) Which discontinuity separates the mantle from the core of the Earth?
  - Moho a)

Gutenberg b)

- c) Repetti
- Conrad. d)

#### GROUP - B

#### (Short Answer Type Questions)

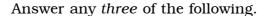
Answer any three of the following.  $3 \times 5 = 15$ ( Give illustrative sketches too, wherever possible )

- 2. Describe the Bode's Law and its implications on the origin of the solar system and the earth.
- 3. Distinguish between dykes and sills.
- 4. Write a short note on earthquake waves.
- 5. Describe the process of separating talc from its impurities.
- Why is K-feldspar preferred in ceramic bodies, while 6. Na-feldspar in glazes?

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#### **GROUP - C**

## (Long Answer Type Questions)





- 7. What is Geology? What are the main branches of Geology? Briefly describe the subject-matter of these different branches. 2 + 4 + 9
- 8. What are the different constituents of coal? Give the most commonly accepted classification of coals explaining the basis for such classification. Describe the origin of coal.

5 + 5 + 5

- 9. Briefly describe the various physical properties of minerals which are used in their identification in hand specimens.
- 10. Describe the composition, varieties, characteristics, origin and mode of occurrence of magnesite.
- 11. Classify silicate minerals explaining the fundamental characteristics of each class and citing examples.

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