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Set P

# M.Sc. (Semester - I) (CBCS) Examination Nov/Dec-2018 Applied Geology MINEROLOGY AND OPTICS

			Applied ( MINEROLOGY		
Time:	21/	₂ Hc	ours		Max. Marks: 70
Instru	ucti	ions	s: 1) All questions are compulsory. 2) Figures to the right indicate fu	ll m	arks.
Q.1		Mir a)	ite the sentences by choosing conerals which show isotropic nature Cubic Orthorhombic	are b)	ct answer from given alternatives: 14 crystallized in system. Trigonal Triclinic
	2)	a)	d odd one out Colur Hardness	,	Luster Quartz
	3)	a)	nentine is the luster shown by Topaz Calcite	b)	Diamond Olivine
	4)	a)	dspar group of minerals are classe Nesosilicates Tectosilicates	b)	s Sorosilicates Phyllosilicates
	5)	a)	cke line method is employed for de 2v Extinction	b)	nination of R.I. Pleochroism
	6)	a)	minosilicate group of minerals are Al <sub>2</sub> SiO <sub>5</sub> AlSiO <sub>5</sub>	b)	ing chemical formula Al <sub>3</sub> SiO <sub>5</sub> Al <sub>2</sub> SiO <sub>6</sub>
	7)	a)	ong the following minerals, which i Kaolinite Bentonite	b)	e common mica mineral Montmorillonite Muscovite
	8)	a)	nich of the following is biaxial miner Muscovite Rutile	b)	Quartz Beryl
	9)	a)	ollastonite has a chemical formula CaSiO <sub>3</sub> FeSiO <sub>3</sub>	,	MgSiO <sub>3</sub> MnSiO <sub>3</sub>
	10	a)	kali feldspar has aextin Straight Both of the above	b)	n Oblique None of the above
	11	a)	hich of the following amphibole mir Actinolite Bronzite	b)	l Fayalite Hypersthene
	12	a)	amond primarily occurs in Basalt Pegmatite	,	 Kimberlite Granites

	<ul> <li>13) The hydrous alumino silicates are also called as</li> <li>a) Clays</li> <li>b) Epidotes</li> <li>c) Zeolites</li> <li>d) Gemstones</li> </ul>	
	<ul> <li>14) Which of the following is not a isomorphic series?</li> <li>a) Albite-Anorthite</li> <li>b) Fayalite-Forsterite</li> <li>c) Enstatite – Ferrosilite</li> <li>d) Kyanite – Silimanite</li> </ul>	
Q.2	<ul> <li>A) Answer the following any four:-</li> <li>1. What is plane polarized light?</li> <li>2. Define perthites and antiperthites</li> <li>3. What are base metals?</li> <li>4. What are speneloids?</li> <li>5. What is birefringence?</li> </ul>	08
	B) Write notes on (Any Two):- 1. Occurrences of Epidotes 2. Quartz wedge 3. Nesosilicates	06
Q.3	<ul> <li>A) Answer the following Any Two:-</li> <li>1. Describe high pressure polymorphs of olivines.</li> <li>2. Describe in brief physical properties of auminosilicates.</li> <li>3. Write down the difference between orthopyroxenes and clinopyroxenes.</li> </ul>	80
	<ul><li>B) Answer the following any one :-</li><li>1. Write down chemistry &amp; occurrences of Alkali feldspar group of minerals.</li><li>2. Describe in brief zeolite group of minerals.</li></ul>	06
Q.4	<ul> <li>A) Answer the following Any Two:-</li> <li>1. Describe the concept of light under microscope.</li> <li>2. How to determine the optic sign of uniaxial minerals.</li> <li>3. Chemistry and structure of Garnet group of minerals.</li> </ul>	10
	<ul><li>B) Answer the following any one :-</li><li>1. Physical and optical properties of Biotite &amp; Muscovite minerals.</li><li>2. Describe in brief on gemstones.</li></ul>	04
Q.5	<ul> <li>Answer the following (any two)</li> <li>a) Describe in brief the clay group of minerals.</li> <li>b) Define twinning. Write a short note on twinning in feldspars.</li> <li>c) Describe in brief the Amphibole group of minerals.</li> </ul>	14

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# M.Sc. (Semester - I) (CBCS) Examination Nov/Dec-2018 Applied Geology GEOCHEMISTRY

	GEOCHEMISTRY						
Time	Time: 2½ Hours Max. Marks: 70						
Instr	ucti	<ul><li>ons: 1) All questions are compulsory.</li><li>2) Figures to the right indicate fu</li><li>3) Draw neat and labeled diagram</li></ul>					
Q.1	<b>Re</b> 1)	write the sentences by choosing co have least electro-negativ a) Lithophiles c) Chalcohiles	ity. b)	ct answer from given alternatives:  Siderophiles Atmophile	14		
	2)	The activity of radioisotope changes va) Temperature c) Pressure	vith b)	·			
	3)	A radioactive substance emits a) Alpha Particle c) Beta particle	b)	Gamma Particle All of the above			
<ul> <li>4) The isotope used for dating archeological finding is</li> <li>a) <sup>1</sup>H<sub>1</sub> b) <sup>14</sup>C<sub>6</sub></li> <li>c) <sup>18</sup>O<sub>8</sub> d) <sup>235</sup>U<sub>92</sub></li> <li>5) Which of the following is not a suitable pair?</li> <li>a) K-Rb b) Al-Ga</li> <li>c) Ca-Sr d) Si-Pb</li> </ul>		$^{14}C_{6}$					
		Al-Ga					
	6)	Elements with completely full outermonal Lithophiles c) Chalcohiles	b)	shells are grouped under Siderophiles Atmophiles			
	7)	Siderites are a) Stony Meteorites c) Iron Meteorites	,	Stony-Irons Meteorites Copper Meteorites			
	8)	The upper mantle havinga) Granitic composition c) Ultrabasic composition	 b) d)	Basic composition Felsic composition			
	9)	Chromium is a straggly lithophile elema chalcophilte in some meteorites bed a) Oxygen rich c) Hydrogen deficiency	aus b)				
	10)	Water loving Colloids are called as _ a) Hydrophobic c) Dispersion	b)	Hydrophilic Emulsions			
	11)	The bulk chemical composition of roc a) Decreases c) Remain constant	b)	uring metamorphism Increases Uncertain			

	12) is characterized by preser		
	a) Lithophiles	b) Chalcophiles	
	c) Siderophiles	d) Atmophiles	
	13) Camouflage is a type of ionic-atomic atoms having charge and a) Same, similar	d radius. b) Same, lower	
	c) Same Higher	d) Higher, similar	
	<ul><li>14) The average pH of the Sea water</li><li>a) 4.2</li></ul>	b) 7.0	
	c) 5.5	d) 7.8	
Q.2	<ul> <li>a) Answer the following any four:-</li> <li>1) Define Chondrite</li> <li>2) What is half life time?</li> <li>3) What is chalcophile?</li> <li>4) Define Entropy.</li> <li>5) What is REE?</li> </ul>		80
	<ul><li>b) Answer the following (Any Two)</li><li>1) Inner core</li><li>2) Brief note on Fugacity</li><li>3) Iron meteorites</li></ul>		06
Q.3	<ul> <li>a) Answer the following Any Two:-</li> <li>1) Climate changes during Geologica</li> <li>2) Write a short description on polym</li> <li>3) Types of Isotopes.</li> </ul>		08
	<ul><li>b) Answer the following Any one :-</li><li>1) Products of Chemical Weathering.</li><li>2) Distribution of elements in Metamo</li></ul>		06
Q.4	<ul> <li>a) Answer the following Any Two:-</li> <li>1) Write down quality control on data</li> <li>2) Describe in brief C<sup>14</sup> dating metho</li> <li>3) Gains and losses of ocean.</li> </ul>		10
	<ul><li>b) Answer the following any one :-</li><li>1) Hydrosphere composition</li><li>2) Composition of Sial and Sima.</li></ul>		04
Q.5	<ul> <li>Answer the following. (Any two)</li> <li>a) Discuss K-Ar radiometric dating method</li> <li>b) Physico-chemical factors in sedimental</li> <li>c) Write down different aspects of air point</li> </ul>	ation.	14

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# M.Sc. (Semester - I) (CBCS) Examination Nov/Dec-2018

	Applied Geology				
	SEDIMENTOLOGY AND PALAEONTOLOGY				
Time	: 2½	4 Hours		Max. Marks:	70
Instr	ucti	ions: 1) All questions carry equal mark			
	_	Draw neat and labeled diagrar		·	
Q.1		ewrite the sentences by choosing concentration Choose the wrong answer from the open a) Are compacted b) Form because of deposition of sed c) Are primary rocks d) Contain a matrix	tio	n given below:-	14
	2)	What type of sediment particles have a) Sorted c) Unsorted	b)	n surfaces and rounded corners? Clastic Dissolved	
	3)	What type of bedding has the heavies bottom?  a) Graded c) Clastic	b)	nd coarsest material is on the  Cementation  Metamorphic	
4) Which is a sedimentary rock that forms as a result of precipita seawater?  a) Shale b) Gypsum c) Conglomerate d) Sandstone		Gypsum			
<ul> <li>5) Which sedimentary rock is composed of fragmented skeletons and shells of sea organisms compacted and cemented together? <ul> <li>a) Shale</li> <li>b) Sandstone</li> <li>c) Gypsum</li> <li>d) Limestone</li> </ul> </li> <li>6) A sediment contains particles that range in diameter from 2 to 4 centimeters Which sedimentary rock would be formed when this sediment is compressed and cemented together? <ul> <li>a) Sandstone</li> <li>b) Shale</li> <li>c) Siltstone</li> <li>d) Conglomerate</li> </ul> </li> </ul>			I together? Sandstone		
			when this sediment is compressed		
	7)	A geologist studies sandstone under reparticle are very sharp, angular pieces can be deduced from this observation a) The sand was tumbled vigorously is b) The sand was subjected to very high c) The sand was did not travel very fadisintegrated d) The sand was transported by wind	of? n agh par	quartz and lithic fragments. What stream pressure during diagenesis om where its parent rock	
	8)	Fossils which have limited geological range is known as a) Trace fossils c) Living fossils	b)	ge but have a very wide geographical  Body fossils Index fossils	

	<ul> <li>9) Which of the following is the correct order of the division         <ul> <li>a) Families →Order → Genera → class →Phylum →kingdom</li> <li>b) Genera →Families →Order → class →Phylum →kingdom</li> <li>c) Kingdom → Families → Genera → class →Phylum → Order</li> <li>d) Genera → kingdom →Order → Families → class → Phylum</li> </ul> </li> </ul>	
	10)The study of organic walled microfossils is called as:  a) Micropaleontology b) Palynology c) Ichnology d) Paleontology	
	<ul> <li>11)Which of the following has agglutinated type of shell?</li> <li>a) Conodonts</li> <li>b) Radiolarian</li> <li>c) Foraminifera</li> <li>d) Trilobites</li> </ul>	
	<ul> <li>12) Trilobites with pygidium equal to that of cephalon is called</li> <li>a) Micropygous</li> <li>b) Macropygous</li> <li>c) Either Macropygous or Isopygous</li> <li>d) Isophygous</li> </ul>	
	<ul> <li>13) The first vertebrate reported from which geological age</li> <li>a) Devonian</li> <li>b) Ordovician</li> <li>c) Silurian</li> <li>d) Cambrian</li> </ul>	
	<ul> <li>14) Which one of the following is an upper Gondwana flora?</li> <li>a) Ptillophyllum</li> <li>b) Phyllotheca</li> <li>c) Glossopteris</li> <li>d) Schizoneura</li> </ul>	
Q.2	<ul> <li>A) Answer the following any four:-</li> <li>1. Rocks weathering agents.</li> <li>2. Cross bedding</li> <li>3. Tillite</li> <li>4. Pseudo fossils</li> <li>5. Agnatha fishes</li> </ul>	08
	<ul><li>B) Write notes on. (Any Two)</li><li>1. Define roundness and angularity</li><li>2. Heavy mineral significance</li><li>3. Indian dinosaur</li></ul>	06
Q.3	<ul><li>A) Answer the following Any Two:-</li><li>1. Sedimentary cycle</li><li>2. Application of benthic foraminifera</li><li>3. Lower Gondwana flora</li></ul>	08
	<ul><li>B) Answer the following any one:-</li><li>1. Explain mineralogical and textural classification of sandstone.</li><li>2. Morphology and age of trilobites, explain its significance.</li></ul>	06
Q.4	<ul> <li>A) Answer the following Any Two:-</li> <li>1. Explain marine sedimentary environment.</li> <li>2. Modes of fossil preservations.</li> <li>3. Outline on Siwalik mammals.</li> </ul>	10
	<ul><li>B) Answer the following any one:-</li><li>1. Reynolds number and its application.</li><li>2. Dinosaur fossils? Causes of extinction of dinosaur.</li></ul>	04

#### Q.5 Answer the following. (Any two)

on field?

- a) Define rocks texture. What are different parameter to identify sedimentary rock
- b) Define diagenesis. Explain different process in diagenesis with diagrams.
- c) Write note on Evolution of man.

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# M.Sc. (Semester - I) (CBCS) Examination Nov/Dec-2018

	Applied Geology ECONOMIC GEOLOGY						
Time	Time: 21/2 Hours Max. Marks: 70						
Instr	ucti	ions: 1) All questions are compulsory. 2) Figures to the right indicate ful 3) Draw neat and labeled diagrar					
Q.1		ewrite the sentences by choosing co India's largest aluminum deposits are a) Gondwana Super group c) Lesser Himalayas	ass b)				
	2)	In India, which one of the following ore beach sand? a) Cassiterite c) Ilmenite	b)	nerals is produced mostly from  Hematite  Magnetite			
	3)	Rampura-Agucha in Rajasthan is know a) Gold c) Zinc	b)	or the ore deposit of Tungsten Iron			
	4)	Which one of the following economic roof magmatic deposit?  a) Chromite c) Cu-Ni sulphide	b)	eral does not belong to the category  Titaniferous magmatic  Magnesite			
	5)	Porphyry copper deposits are formed forming process?  a) Magmatic c) Sedimentary	b)	which one of the following ore  Magmatic hydrothermal  Metamorphic			
	6)	characterized by the clay hydrated aluminum silicate) and quart a) Advanced argillic alteration c) Prophilitic alteration	z. b)	ickite, kaolinite and pyrophylite (all Argillic alteration Potassic alteration			
7) Which one of the following metals occurs as native metal, oxide and sulphid in the earth's crust?  a) Iron b) Copper c) Uranium d) Gold		Copper					
	8)	Identify the odd pair of minerals amon a) Goethite – siderite c) Pyrite – pyrrhotite	b)	ne following: Pyrite – marcasite Hematite – magnetite			
	9)	In which one of the following lists, mir temperature of crystallization  a) Galena – gibbsite – chromite  c) Gibbsite – chromite – galena	b)	als are arrange in order of increasing  Gibbsite – galena - chromite  Galena – chromite - gibbsite			
	10	<ul><li>)Economic deposit of primary Uranium</li><li>a) Gabbro</li><li>c) Sandstone</li></ul>	b)	nost likely to be found in Rhyolite Peridotite			

	a) Secondary b) Primary c) Pseudosecodary d) Exsolut	,
	<ul> <li>12) Metasomatic replacement deposits are character</li> <li>a) Preservation of rock structure</li> <li>b) Presence of pseudo morphs of replacing mine</li> <li>c) Absence of Crusification</li> <li>d) All of the above</li> </ul>	•
	,	deposits by considering the anganese nodules ate nodules
	<ul><li>14) Which one of the following is a sulphide ore mine</li><li>a) Scheelite</li><li>b) Siderite</li><li>c) Sphelerite</li><li>d) Celestit</li></ul>	
Q.2	<ul> <li>a) Answer the following any four:-</li> <li>1) Tenor of ore</li> <li>2) Optical properties of chalcopyrite</li> <li>3) Ladder vein deposit</li> <li>4) Definition of Fluid inclusion</li> <li>5) Prophylitic alteration</li> </ul>	08
	<ul> <li>b) Write notes on. (Any Two)</li> <li>1) Eolian placer formation</li> <li>2) Paragenesis</li> <li>3) Use of microhardness tester in ore mineral ide</li> </ul>	ntification.
Q.3	<ul> <li>a) Answer the following Any Two:-</li> <li>1) Gravity concentration method</li> <li>2) Skarn deposit</li> <li>3) Mineralization association with convergent pla</li> </ul>	<b>08</b> te margin
	<ul><li>b) Answer the following any one :-</li><li>1) Opening in rocks</li><li>2) XRD studies in determinative mineralogy</li></ul>	06
Q.4	<ul> <li>a) Answer the following Any Two:-</li> <li>1) National Mineral Policy</li> <li>2) Magma &amp; magmatic fluid</li> <li>3) Stratigraphy and depositional environment of I</li> </ul>	10 Malajkhand copper deposit
	<ul><li>b) Answer the following any one :-</li><li>1) Early magmatic deposit</li><li>2) Banded Iron Formation</li></ul>	04
Q.5	<ul> <li>Answer the following. (Any two)</li> <li>a) Discuss in detail texture of ore deposit and associated</li> <li>b) Write a full note on optical properties of ore miner</li> <li>c) Write down procedure for preparation of polished</li> </ul>	als.

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# M.Sc. (Semester - II) (CBCS) Examination Nov/Dec-2018 Applied Geology IGNEOUS AND METAMORPHIC PETROLOGY

		IGNEOUS AND METAM	
Time	: 2½	2 Hours	Max. Marks: 70
Instr	ucti	ions: 1) Answer any five questions. 2) All questions carry equal mark 3) Question No. 1 is compulsory. 4) Answer any two questions from No. 5, 6, & 7. 5) Draw neat and labeled diagrar	m Q. No. 2, 3, & 4 and two questions from Q.
Q.1		write the sentences by choosing co The characteristic mineral assemblage a) Garnet-feldspar c) Plagioclase-clinopyroxene	b) Biotite
	2)	Any reversal of metamorphism which grade is  a) Retrograde metamorphism  c) Dynamothermal metamorphism	produces rocks of a lower metamorphic b) Progressive metamorphism d) Thermal metamorphism
	3)	The distinctive rock assemblage contarocks often capped by layers of deep a) Calc-alkaline c) Granulites	aining ultramafic, gabbroic and basaltic sea sediments are termed as  b) Hornfels d) Ophiolites
	4)	Ophitic texture is commonly exhibited a) Andesite c) Dolerite	by b) Trachyte d) Lamprophyre
	5)	Liquid immiscibility is explained as the a) Carbonatite c) Lamprophyre	process of formation of b) Phonolite d) Kimberlite
	6)	The Norms or CIPW classification is e a) Mineralogical c) Genetic	ssentially a classification. b) Chemical d) Textural
	7)	The process of production of different magma.  a) Partial melting c) Magma differentiation	magma and rocks from a single parent  b) Magma variation d) Magma mixing
	8)	Which of the following lists is arranged metamorphic rocks?  a) gneiss, slate, schist, phyllite c) slate, gneiss, phyllite, schist	, , , , , , , , , , , , , , , , , , , ,
	9)	IUGS has recommended a classificati (TAS) for a) Volcanic rock c) Hypabyssal rocks	on scheme called Total Alkaline Silica b) Plutonic rocks d) Mafic rocks

	10) Harzburgite is type of ign		
	,	o) Ultramafic rocks d) Lamprophyre	
	11) The repetition of metamorphic event is	, , ,	
		o) Polymetamorphism	
	,	d) None	
	12) Greenschists are metamorphic rocks of	of igneous composition.	
	,	o) Basic	
	,	d) Ultrabasic	
	13) Mylonites are product of which metamo	•	
	,	o) Contact d) None	
	14) The charnockite found south India are	characteristic rocks of	
	,	o) Hornfels	
	, ,	d) None	
Q.2	Discuss the blue schist facies giving ACF or plate tectonic.	diagram and state its significance in	14
Q.3	Describe mineralogy and origin of Kimberli distribution in India.	tes. Add an account on their	14
Q.4	Discuss the metamorphism and magmatism boundary.	m associated with divergent plate	14
Q.5	Explain the following:-		14
	a) Retrograde metamorphism		
	b) Chemical classification of Igneous rock	S	
Q.6	Write short note on the following:-	<b>1</b>	14
	<ul><li>a) Congruent and incongruent phase syst</li><li>b) Barrovian grade of metamorphism.</li></ul>	tem	
0.7	,		14
Q.7	Discuss in short the following:- a) S-type and I-type granite		14
	b) Peridotites		

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# M.Sc. (Semester - II) (CBCS) Examination Nov/Dec-2018 Applied Geology INDIAN STRATIGRAPHY

		INDIAN STRA	TIGRAPHY
Time	: 2½	ź Hours	Max. Marks: 70
Instr	ucti	ions: 1) All questions carry equal marks 2) Question 1 is compulosry. 3) Answer any two essay question 4) Answer any two short note ques 5) Draw neat and labeled diagram	s from Q. 2, 3, 4. stions from Q. 5, 6, 7.
Q.1		The Triassic and Jurassic rocks of the composed of facies.  a) Greenschist facies	b) Carbonate facies
	2)	<ul> <li>c) Granulite facies</li> <li>In the Spiti-Kinnaur sub-basin of Himals overlain by athick succession of shale's as</li> <li>a) Muth quartzite</li> <li>c) Fenestella shales</li> </ul>	·
	3)	In Son-Mahanadi area, the Barakar Forby a) Talchir formation c) Barren measures	,
	4)	Rise of Himalaya took place in a) Triassic c) Tertiary	period. b) Late cretaceous d) Recent
	5)	<ul><li>Which formation of Saucer group is mo</li><li>a) Sitasaong formation</li><li>c) Lohangi formation</li></ul>	re important for manganese ore:- b) Mansar formation d) All the above
	6)	<ul><li>End of the Archaean is marked by</li><li>a) Sedimentation</li><li>c) Folding and faulting</li></ul>	b) Burst of the granitic intrusion d) All the above
	7)	The preservation of detrital pyrite and use the base of Late Archaean Bababudan a) Their deposition in stable platformal atmosphere b) Their deposition in unstable platefor c) Their deposition take place under cl d) All the above	schist belt is evidence for and/or shelf regime under anoxic  m under anoxic atmosphere
	8)	Gaj series is mainly composed of a) Sandstone c) Granite	b) Limestone and shale d) Marble

	<ul> <li>a) Late Archaean to middle Proterozoic</li> <li>b) Early Archaean to Early Proterozoic</li> <li>c) Archaean to Late Proterozoic</li> <li>d) Late Proterozoic to Cambrian</li> </ul>	inging in age from
	10) The regional strike of Dharwar group of rocks a) N-S b) NW c) E-W d) NN	
		abgarh scist abgarh limestone
	,	s deposit. amond the above
	,	dovician age evonian
	,	 uth quartzite ) series
Q.2	Give an account on Marine Mesozoic formations of	of Extra peninsula of India. 14
Q.3	Discuss in detail Structure, Stratigraphy & Tectoni Supergroup.	ic evolution of Arvalli 14
Q.4	Write in detail Precambrian-Cambrian boundary p	problems of India. 14
Q.5	<ul><li>Write short note on:</li><li>a) Cuddapah Supergroup</li><li>b) Indravati Basin</li></ul>	14
Q.6	<ul><li>Discuss in brief of the following:</li><li>a) Sausar group</li><li>b) Deccan volcanic province</li></ul>	14
Q.7	<ul><li>Write short note on:</li><li>a) Saline series</li><li>b) Peninsular Gneissic complex</li></ul>	14

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## M.Sc. (Semester - II) (CBCS) Examination Nov/Dec-2018

		Applied ( HYDROG	<b>-</b>
Time	: 2½	≨ Hours	Max. Marks: 70
Instr	ucti	ions: 1) Answer any five questions. 2) All questions carry equal mark 3) Question No. 1 is compulsory 4) Answer any two questions fro 5) Answer any two questions Q.I 6) Draw neat and labeled diagra	m Q.No.2, 3 & 4 No.5, 6 & 7.
Q.1			orrect answer from given alternatives: 14 I coinciding with the hydrostatic pressure fer is known as b) Pheatic surface d) Free surface
	2)	Which of the following has highest span a) Lime stone c) Clay	ecific yield b) Sand tone d) Gravel
	3)	<ul><li>A well through which water is added t</li><li>a) Discharge well</li><li>c) Qantas</li></ul>	o an aquifer is called b) Pumping well d) Recharging well
	4)	to the length	nal to head loss and directly proportional half to head loss ad inversely proportional the path all to head; loss and area of flow and
	5)	Zone of saturation is also known as a) Vadose zone c) Phreatic zone	<ul><li>b) Capillary zone</li><li>d) Aeration zone</li></ul>
	6)	<ul><li>What is formed when water is remove</li><li>a) Cone of depression</li><li>c) Zone of aeration</li></ul>	ed from a well? b) Cone of discharge d) Zone of saturation
	7)	Which one of these is NOT a source of certain quantity of water on a regional a) Aquifer c) Aquiclude	of sufficient water supply but can transmit scale due to leakage b) Aquitard d) Aquifuge
	8)	Dimension of hydraulic conductivity is a) LT <sup>-2</sup> c) ML <sup>-3</sup>	b) L <sup>3</sup> T <sup>-1</sup> d) LT <sup>-1</sup>

9) The relation between fresh and saline	water given by Ghyben- Herzberg is	
a) Z = hf c) Hf = 40 + z	<ul><li>b) Z = 40hf</li><li>d) Hf/Z = 40</li></ul>	
<ul><li>10) Organic matter load in water is determanted BOD</li><li>c) Ph</li></ul>	mined by value. b) COD d) Eh	
<ul><li>11) At all points on the watertable the pre</li><li>a) Hydrostatic</li><li>b) Atmospheric</li><li>c) Combination of hydrostatic and atr</li><li>d) Capillary</li></ul>		
<ul> <li>12) Porosity is</li> <li>a) Equal to the specific retention</li> <li>b) Equal to the specific yield</li> <li>c) Equal to the sum of the specific red</li> <li>d) Less than the specific yield</li> </ul>	tention and specific yield	
<ul> <li>13) Insulated streams are those streams</li> <li>a) Contribute water to the groundwater</li> <li>b) Gain water from the groundwater s</li> <li>c) Neither loss water nor gain water f</li> <li>d) None of these</li> </ul>	er sources	
<ul> <li>14) In which configuration the spacing be</li> <li>a) Wenner</li> <li>b) Schulumberger</li> <li>c) Both Wenner and Schulumberger</li> <li>d) None of these</li> </ul>	tween electrode is kept equal	
Define the hydraulic conductivity. Explain hydraulic conductivity	the methods of determination of	14
Discuss the sea water intrusion in coasta relation.	I aquifers. Give Ghyben-Herzberg	14
Give a detailed account of groundwater p	rovinces in India.	14
<ul><li>Write short answer on</li><li>a) Type of aquifer</li><li>b) Specify yield and specific retention</li></ul>		14
<ul><li>Explain in short:-</li><li>a) Surface investigation techniques for g</li><li>b) Hydrological cycle</li></ul>	roundwater exploration.	14
<ul><li>Write note on :-</li><li>a) Types of well.</li><li>b) Types of openings in the rocks.</li></ul>		14

Q.2

Q.3

Q.4

Q.5

Q.6

**Q.7** 

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### M.Sc. (Semester - III) (CBCS) Examination Nov/Dec-2018

		Applied Geo MINERAL EXPLO		
Time	: 2½	ź Hours		Max. Marks: 70
Instr	ucti	ions: 1) All questions are compulsory. 2) Figures to the right indicate full ma 3) Draw neat and labeled diagrams v		
Q.1		ewrite the sentences by choosing corre Productive plutons for gold deposit in Indi a) Kimberlite c) Green schist	a aı b)	
	2)	The pathfinder element "No" is useful in lo a) Au deposits c) Porphyry Cu deposit	b)	ing Tin deposits None
	3)	"Galmi flora" is a good universal indicator a) Base metals c) Mica	b)	Tungsten All of the above
	4)	What would be the value of E in the equa suitable method of exploration is not emp a) One c) Three	loye b)	<u> </u>
	5)	The best productive rock in exploration of a) Anorthosite c) $\propto$ – Granite	b)	ssiterite deposit is Ultramafics None
	6)	Hydromorphic anomalies are noticed for t and the best example is for a) Base metal c) Cassiterite	b)	element that are soluble in water  Gold  None
	7)	During a reconnaissance survey we determant a) Sample density b) Element to be analyzed c) Draw attention to local areas of interest d) All of the above		ie
	8)	Drilling is employed for  a) Determining the stratigraphy or rock so b) Locating and evaluating substances of c) Obtaining data for correlating d) All of the above		
	9)	Natural gamma ray log exhibits a high res a) Shale c) Dolomite	b)	nse from Lime stone Sandstone
	10	<ul> <li>Self potential and induced potential surve</li> <li>a) Electromagnetic method</li> <li>c) Magnetic method</li> </ul>	b)	locate ore bodies of Seismic method Radiometric method

	<ul> <li>11) The average gravitational force of the ea</li> <li>a) 98 cm/sec<sup>2</sup></li> <li>c) 9800 cm/sec<sup>2</sup></li> </ul>	arth is b) 980 cm/sec <sup>2</sup> d) 980 cm/sec	
	<ul><li>12) The unit to express magnetic field streng</li><li>a) Oaster</li><li>c) Weber</li></ul>	gth is b) Tesla d) Maxwell	
	<ul><li>13) The P-wave velocities are highest in</li><li>a) Air</li><li>c) Sand</li></ul>	b) Water d) Granite	
	<ul><li>14) The position of electrode is changed with</li><li>a) Magnetic survey</li><li>c) Radioactive surveys</li></ul>	n respect to a fixed central point in b) Resistivity survey d) None of the above	
Q.2	<ul> <li>A) Answer the following any four:-</li> <li>1. Snell's law equation</li> <li>2. Define acceleration of Gravity</li> <li>3. Economic financial returns in explorate</li> <li>4. Primary geochemical dispersion patter</li> <li>5. Scale of prospecting</li> </ul>		08
	<ul><li>B) Write notes on (Any Two):-</li><li>1. Schlumberger equation</li><li>2. Geological criteria for Indian Gold dep</li><li>3. Calibration of Gravimeter</li></ul>	oosits	06
Q.3	<ul> <li>A) Answer the following Any Two:-</li> <li>1. Magnetic field and relationship between 2. Geochemical signature of porphyry conditions.</li> <li>3. Define background, Threshold and Arreshold and Arreshold.</li> </ul>	opper deposits	08
	<ul><li>B) Answer the following any one :-</li><li>1. Difference between Schlumberger an</li><li>2. Types of secondary geochemical disp</li></ul>		06
Q.4	<ul> <li>A) Answer the following Any Two:-</li> <li>1. Use of <sup>14</sup>C dating</li> <li>2. Seismic reflection surveys and its app</li> <li>3. Types of sampling</li> </ul>	lications	10
	<ul><li>B) Answer the following any one :-</li><li>1. Equation of Bouguer correction</li><li>2. Geobotanical surveys</li></ul>		04
Q.5	<ul> <li>Answer the following (any two)</li> <li>a) Choice and sequence of exploration</li> <li>b) Gravity surveys</li> <li>c) Explain correction in magnetic surveys</li> </ul>		14

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# M.Sc. (Semester - III) (CBCS) Examination Nov/Dec-2018

			Applied GEOTECTONIC AND PH			
Time	: 2½	ź Ηα	ours		Max. Marks: 70	)
Instr	ucti	ions	s: 1) All questions are compulsory 2) Draw neat and labeled diagra		vherever necessary.	
Q.1		Be a)	te the sentences by choosing coniction is associated with Subduction slab Mid oceanic ridge	b)	ct answer from given alternatives: 14  Transform fault Mountains	ŀ
	2)	a)	e fastest spreading divergent plate Central-Indian ridge Mid-atlantic ridge	b)		
	3)	a) b) c)	·	n e	es to accommodate the spreading ach side of the ridge slowly move apart s recorded in rocks that formed at the	
	4)	the a)	ctonic plates are not very thick corey are only made up of rocks that a Ocean crust Lithosphere	re p b)	red to the radius of the Earth because part of the: Continental crust Asthenosphere	
	5)		e average slope of continental she 1° 4°		2° 15°	
	6)	a)	lat topped seamount rising more to Guyot Submarine fan	b)	1 km above the seafloor is known as: An atoll Continental rise	
	7)	a)	nat happens to the ocean as depth Temperature decreases Pressure increases	b)		
	8)	a)	ermohaline circulation is results is Density Salinity	b)	to the difference in  Temperature  All the above	
	9)	the a)	e to landforms and the Earth's rote world's oceans called: Currents Gyres	b)	n, ocean currents form huge circles in Tides Coriolis Effect	
	10	່dເ a)	ne deflection of ocean current in th ue to Thermohaline circulation El Nino effect	b)	orthern and southern hemispheres is  Coriolis effect  Monsoon effect	

	11) The oceans contain approximately% of all the Earth's water.	
	a) 71% b) 3% c) 97% d) 3.5%	
	<ul> <li>12) When the sun, moon and earth are all aligned, a is formed.</li> <li>a) Spring tide</li> <li>b) Neap tide</li> <li>c) Longshore current</li> <li>d) Low tidal range</li> </ul>	
	<ul> <li>13) Slow-moving cold ocean currents may rise to the surface. This of cold water carries food particles to the surface, resulting in areas of good fishing.</li> <li>a) Upwelling</li> <li>b) Crest</li> <li>c) Tide</li> <li>d) Trough</li> </ul>	
	14) Desalination is a process where:	
Q.2	<ul> <li>A) Answer the following any four:-</li> <li>1. Divergent type plate boundary</li> <li>2. Subduction zone</li> <li>3. Oceanic trench</li> <li>4. Calcareous ooze</li> <li>5. Cold ocean currents.</li> </ul>	80
	<ul> <li>B) Write notes on (Any Two):-</li> <li>1. Tectonic division of Himalaya</li> <li>2. Estuarine circulation</li> <li>3. Difference between Volcanic dome and guyots</li> </ul>	06
Q.3	<ul> <li>A) Answer the following Any Two:-</li> <li>1. Tectonic evolution of ocean basin</li> <li>2. Ophiolite complex</li> <li>3. Terrigenous sediments</li> </ul>	08
	<ul> <li>B) Answer the following any one:-</li> <li>1. What is Coriolis Effect? Explain with neat sketch diagram three cell model of global wind circulation.</li> <li>2. Classification and nomenclature of estuaries.</li> </ul>	06
Q.4	<ul> <li>A) Answer the following Any Two:-</li> <li>1. Ocean margin and its significance.</li> <li>2. Sea level changes and its causes</li> <li>3. Note on Himalaya Orogeny</li> </ul>	10
	<ul><li>B) Answer the following any one :-</li><li>1. Indian Ocean ridges</li><li>2. Thermocline and Halocline</li></ul>	04
Q.5	<ul> <li>Answer the following. (Any two)</li> <li>a) Explain openings and closing of ocean gateways during cenozoic time.</li> <li>b) Discuss different type of sources of oceanic sediments and their controlling factor.</li> </ul>	14
	c) Difference between warm water and cold water current. Brief note on Indian Ocean Currents.	

Seat No. S	et	P

## M.Sc. (Semester - III) (CBCS) Examination Nov/Dec-2018

		Applied Geology ENGINEERING GEOLOGY AND MINING GEOLOGY
Time	: 2½	4 Hours Max. Marks: 70
Instr	ucti	ions: 1) All questions are compulsory. 2) Figures to the right indicate full marks.
Q.1		Tensile stress is  a) Stress caused by varying loads b) Stress due to any force c) Stress due to change in length d) Ratio of increase or decrease in length of the unloaded piece under tensile force
	2)	Idduki dam is an example of  a) Gravity dam b) Arch dam c) Earth dam d) Buttress dam
	3)	When the aggregate is sieved through sieve, the aggregate passed through it called as fine aggregates.  a) 4.45 mm  b) 4.49 mm  c) 4.75 mm  d) 5.0 mm
	4)	Intensity of earthquake is measured in  a) Richter scale b) MSK scale c) both of above d) None of the above
	5)	If the moisture condition of an aggregate is greater than its absorption potential is called as  a) Oven-dry  b) Air-dry c) Saturated surface dry  d) Damp or wet
	6)	Two methods used in mining are  a) Surface mining and subsurface mining b) Surface mining and open cast mining c) Underground mining and Underwater mining d) None of the above
	7)	If the RQD value of the rock becomes less than 25% then it is called as a) Very good rock b) Poor rock c) Excellent rock d) Very poor rock
	8)	Which of the following type of rocks has the highest compressive strength a) Diorite b) Shale c) Gneiss d) marble
	9)	The very slow down slope movement of a dry soil is called as  a) Solifluction b) Slide c) Creep d) Earthflow
	10	<ul> <li>Quarries are generally</li> <li>a) Open pits</li> <li>b) Surface coal mine</li> <li>c) Underground mines</li> <li>d) Explosive mines</li> </ul>

	used for mining is  a) Open pit mining	b) Quarries	
	c) Surface mining	d) Subsurface mining	
	<ul><li>12) Types of surface mining include</li><li>a) Open pits only</li><li>c) Surface coat mines</li></ul>	b) Quarries only d) All of the above	
	<ul><li>13) A retaining wall supporting the ends supporting the approach embankment</li><li>a) Piers</li><li>c) Abutments</li></ul>		
	14) In case of interlinking of rivers the H links.	limalayan component consist of	
	a) 14 c) 13	b) 16 d) 10	
Q.2	<ul> <li>a) Answer the following any four:-</li> <li>1) Define aggregates.</li> <li>2) What are mining hazards?</li> <li>3) Define solifluction.</li> <li>4) Define modulus of deformation</li> <li>5) Define arc dam.</li> </ul>		80
	<ul><li>b) Write notes on. (Any Two)</li><li>1) Classification of aggregate deper</li><li>2) Draw a neat diagram and explair</li><li>3) Mine gases</li></ul>		06
Q.3	<ul> <li>a) Answer the following Any Two:-</li> <li>1) RQD</li> <li>2) Describe the seismic zones of Inc.</li> <li>3) Open pit mining</li> </ul>	dia	80
	<ul><li>b) Answer the following Any One:-</li><li>1) Restoration of mine</li><li>2) Describe in brief ocean bottom m</li></ul>	ining	06
Q.4	, , , , , , , , , , , , , , , , , , , ,	n the mining methods for placer deposits. gical considerations for site selection of eration for earthquakes?	10
	<ul><li>b) Answer the following any one:-</li><li>1) What is rock discontinuity? Expla</li><li>2) Describe the comparison between</li></ul>	in it in brief. n natural sand and manufactured sand.	04
Q.5	<ul> <li>Answer the following. (Any two)</li> <li>a) Describe the engineering properties</li> <li>b) Define mass movements. Describe v</li> <li>c) Define drilling. Explain the type of dr</li> </ul>	various types of mass movements.	14

Seat No.	Set	Р

# M.Sc. (Semester - IV) (New) (CBCS) Examination Nov/Dec-2018 Applied Geology ENVIRONMENTAL GEOLOGY AND DISASTER MANAGEMENT

	E	ENVIRONMENTAL GEOLÖGY AI	ND DISASTER MANAGEMENT
Time:	21/2	∕₂ Hours	Max. Marks: 70
Instru	ıcti	ions: 1) Answer any five questions. 2) All questions carry equal marks 3) Question No. 1 is compulsory. 4) Answer any 2 questions from 0 5) Draw neat and labeled diagram	Q.No.2, 3 & 4 and 2 questions Q.No.5, 6 & 7.
Q.1		ewrite the sentences by choosing co What are the technologies involved in a a) Satellites to provide warning of tsur b) Coastal tidal gauges c) Tsunami detectors linked to land by d) All of the above	na-migenic earthquakes
	2)	, , ,	ng is called b) Permanent hardness d) None of these
	3)	<ul> <li>Urbanization usually results in an increa</li> <li>a) Less water is able to runoff in strea</li> <li>b) Less water is able to infiltrate into the rapidly into streams</li> <li>c) More water is used by humans and</li> <li>d) Rainfall is greater in urban areas the</li> </ul>	ms he ground, so instead is discharged then discharged to streams
	4)	, •	ction as b) Transverse waves d) Typanic waves
	5)	, .	
	6)		b) Earthquakes d) All of the above
	7)	Which of the following activities is covered during or after a disaster?  a) Reconstruction and Rehabilitation b) Mitigation c) Emergency response d) All of the above	ered by Disaster Management before,
	8)	Which of the following are the methods a) Open dumping methods and composition Sanitation	•

c) Recyclingd) Reusing

	,	b) Nala bunding	
	,	d) Check dam	
	,	b) Dengue d) All of the above	
		fied as b) Compostable d) Combustible	
	,	er-borne disease in India? b) Arsenic d) Alkalinity	
	,	om b) Carbon oxide d) Chlorine	
	,	hquakes along b) Transform margin d) None of the above	
Q.2	What is drought? Explain its types, causes for drought prone area	s and suggest the mitigation measures	14
Q.3	What the different types of air pollutants? cause global warming,	Explain how does green house effect	14
Q.4	Explain the solid waste management. Give disposal.	e an outline of the modes of solid waste	14
Q.5	<ul><li>Explain the following:-</li><li>a) Cyclone and its types.</li><li>b) Role of remote sensing and GIS in disa</li></ul>	aster management	14
Q.6	<ul><li>Describe in brief the following:-</li><li>a) Volcanic hazards</li><li>b) Biological water pollutants</li></ul>		14
Q.7	<ul><li>Write short note on the following:-</li><li>a) Killari earthquake</li><li>b) Types of landslide</li></ul>		14

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## M.Sc. (Semester - IV) (New) (CBCS) Examination Nov/Dec-2018 Applied Geology REMOTE SENSING AND GIS

		Applied REMOTE SEN		
Time	e: 2½	2 Hours		Max. Marks: 70
Insti	ucti	ions: 1) All questions carry equal mark 2) Question 1 is compulsory. 3) Answer any two essay question 4) Answer any two short notes q 5) Draw neat and labeled diagra	ons ues	tions from 5, 6, 7.
Q.1		ewrite the sentences by choosing confidence of FCC stands for  a) Falles Colour Composite c) Few Colour Complex	b)	•
	2)	<ul><li>in form vector data General</li><li>a) Point</li><li>c) Polygon</li></ul>	b)	e. Line All of the above
	3)	Which of the following satellite series of a) Land sat c) IRS	b)	cerned India? Spot JRS
	4)	<ul><li>G.P.S. provides data of</li><li>a) Latitude</li><li>c) Height</li></ul>	,	Longitude All of the above
	5)	Remote sensing system which use the a) Passive sensor c) Both a & b	b)	Active sensors  None of the above
	6)	Ratio between map distance and grown a) Map scale c) Resample	und b)	
	7)	The word RADAR is an acronym for _ a) Radio Detection and Rays c) Radio Device and Range	b)	Reflection Detection and Range Radio Detection and Ranging
	8)	DIP is known as a) Digital Image Process c) Digital Image Product		Dot Image Process All of the above
	9)	Altitude of geostationary satellite is _ a) 20000 Km c) 900 Km	b)	36000 Km 700 Km
	10	<ul> <li>DBMS stands for</li> <li>a) Data building management system</li> <li>b) Distribution building management</li> <li>c) Database management system</li> <li>d) Distribution building manipulation</li> </ul>	t sys	

	11) wavelength can penet	rate clouds.	
	a) Optical	b) Thermal	
	c) Microwave	d) All the above	
	12) is the worlds first Com a) EO-I c) Orb View-2	mercial high resolution imaging satellite. b) IKONOS d) Quick bird	
	<ul><li>13) is the computer system of manipulating and display spatial and</li><li>a) Remote sensing</li><li>c) GIS</li></ul>		
	<ul><li>14) LISS-I is of spatial resolution</li><li>a) 10 m</li><li>c) 70</li></ul>	b) 90 d) 72.5 m	
Q.2	Describe the components of GIS.		14
Q.3	Explain in detail Electromagnetic Radiati	on.	14
Q.4	What is aerial photography? Describe va	rious types of aerial photographs.	14
Q.5	Write note on the following:- a) DEM b) Vector data set		14
Q.6	<ul><li>Describe in brief the following:-</li><li>a) Resolution</li><li>b) Along track scanning</li></ul>		14
Q.7	<ul><li>Write short note on the following:-</li><li>a) Advantages of GPS</li><li>b) Geoprocessing</li></ul>		14

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## M.Sc. (Semester - IV) (New) (CBCS) Examination Nov/Dec-2018

		Applied G FUEL GEO		
Time	: 2½	∕₂ Hours		Max. Marks: 70
Instr	uct	ions: 1) All questions carry equal marks 2) Question 1 is compulsory. 3) Answer any two essay question 4) Answer any two short note que 5) Draw neat labeled diagrams where	ns fro	s from 5, 6, 7.
Q.1		arks the correct objective.  Plant materials, vegetation and waste t	from	14 living things are regarded as
		a) Fossil fuel c) Bio mass	,	Coal Crude
	2)	When wind blows across seas and oce a) Whirling c) Surfs	b)	there are seen Snails Waves
	3)	Trapped heat inside of earth is known a a) Thermal energy c) Heat energy	b)	Geothermal energy Volcano
	4)	Burning of fossil fuels are leading towa a) Pollution c) Both a & b	b)	Global warming None of above
	5)	Energy resources which will not run ou a) Renewable c) Generating	b)	ong term are called  Non-renewable  Producing
	6)	Coal seam formed by in situ origin are a) The presence of coal bed b) The presence of coal beds of wide c) The presence of coal beds of unifor d) The presence of partings in the coal	aeria rm thi	l extent ickness and wide aerial extent
	7)	Uranium deposit are found ina) Epicontinental environment c) Costal environmental	b)	Marine environment All of the above
	8)	Smarskite is an ore mineral of a) Thorium c) Cobalt	b)	Uranium Osmium
	9)	Cambay shale, the oil producing horizonal age.  a) Eocene c) Oligocene	b)	the Gandhar on land field is of  Miocene Pleistocene
	10	<ul> <li>In India, the main coal forming epoch a) Permian</li> <li>Tertiary</li> </ul>	b)	Carboniferous Cretaceous

	,	the following mineral is found in monazite sand	
	a) Uranium c) Thorium	b) Potassium d) Sodium	
	,	,	
	12) Match the following and choose		
	<ul><li>a. Bombay high</li><li>b. Cambay basin</li><li>c. Assam shelf</li></ul>	Structure  1. Double plunging anticline 2. Elongated structure dome. 3. Folded asymmetrical anticline 4. Anticline b) a-2 b-3 c-4 d-1 d) a-3 b-4 c-2 d-1	
	<ul><li>13) Radioactive waste is generally</li><li>a) Ammonia to neutralize it</li><li>c) Storage until it gets harmle</li></ul>	b) Bacteria to consume it	
	<ul><li>14) Radiations of radioactive was stored in</li><li>a) Isolated tanks</li><li>c) Reservoirs</li></ul>	te remain for thousands of years, so they are b) Wells d) Ditches	
Q.2	What is trap rock? Explain various	s types of trap.	14
Q.3	How coal is formed? Explain in de	etail petrographic classification of coal.	14
Q.4	Give an account on distribution of	Atomic mineral in India and its uses.	14
Q.5	Discuss the following question <ul><li>a) Salt dome</li><li>b) Explain shale and oil gas hydra</li></ul>		14
Q.6	<ul><li>Write short notes on.</li><li>a) Migration of oil</li><li>b) Brief introduction to radioactive</li></ul>	e surveys.	14
Q.7	<ul><li>Write short notes on.</li><li>a) Types of fuels</li><li>b) Non-conservation energy reso</li></ul>		14

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# M.Sc. (Semester - IV) (Old) (CBCS) Examination Nov/Dec-2018

		Applied (	Geology
		<b>ENVIRONMENTAL GEOLOGY</b>	& DISASTER MANAGEMENT
Time	: 2½	½ Hours	Max. Marks: 70
Instr	ucti	ions: 1) Answer any five questions. 2) All questions carry equal mark 3) Question No. 1 is compulsory. 4) Answer any 2 questions from 5) Draw neat and labeled diagran	Q.No.2, 3 & 4 and 2 questions Q.No.5, 6 & 7.
Q.1		ewrite the sentences by choosing co What are the technologies involved in a) Satellites to provide warning of tsu b) Coastal tidal gauges c) Tsunami detectors linked to land b d) All of the above	na-migenic earthquakes
	2)	Hardness that can be removed by boi a) Temporary hardness c) Both a and b	ling is called b) Permanent hardness d) None of these
	3)	<ul> <li>Urbanization usually results in an increa</li> <li>a) Less water is able to runoff in strea</li> <li>b) Less water is able to infiltrate into rapidly into streams</li> <li>c) More water is used by humans and</li> <li>d) Rainfall is greater in urban areas to</li> </ul>	the ground, so instead is discharged d then discharged to streams
	4)	Vibrations radiate from focus in all dire a) Longitudinal waves c) Seismic waves	ection as b) Transverse waves d) Typanic waves
	5)	Which of the following is a powerful impeople who suffer from respiratory disa. Sulphur dioxide c) Carbon dioxide	ritant which can aggravate symptoms of orders? b) Carbon monoxide d) Oxides of nitrogen
	6)	Tsunamis are generated by? a) Landslides under water c) Volcanic Eruptions	<ul><li>b) Earthquakes</li><li>d) All of the above</li></ul>
	7)	Which of the following activities is coviduring or after a disaster?  a) Reconstruction and Rehabilitation b) Mitigation c) Emergency response d) All of the above	ered by Disaster Management before,
	8)	Which of the following are the method a) Open dumping methods and comp b) Sanitation c) Recycling d) Reusing	•

	a) Percolation tank b) Nala bunding c) Drip irrigation d) Check dam	
	<ul> <li>10) Which of the following disease increase due to green house effects?</li> <li>a) Malaria</li> <li>b) Dengue</li> <li>c) Yellow fever</li> <li>d) All of the above</li> </ul>	
	<ul> <li>11) The solid waste from hospital is classified as</li> <li>a) Hazardous</li> <li>b) Compostable</li> <li>c) Non hazardous</li> <li>d) Combustible</li> </ul>	
	<ul> <li>12) Which of the following not causes water-borne disease in India?</li> <li>a) Nitrate</li> <li>b) Arsenic</li> <li>c) Fluoride</li> <li>d) Alkalinity</li> </ul>	
	<ul> <li>13) Taj Mahal is threatened by pollutant from</li> <li>a) Nitric oxide</li> <li>b) Carbon oxide</li> <li>c) Sulphur oxide</li> <li>d) Chlorine</li> </ul>	
	<ul> <li>14) Major tsunamis are generated by earthquakes along</li> <li>a) Divergent margins</li> <li>b) Transform margin</li> <li>c) Convergent margins</li> <li>d) None of the above</li> </ul>	
Q.2	What is drought? Explain its types, causes and suggest the mitigation measures for drought prone area	s <b>14</b>
Q.3	What the different types of air pollutants? Explain how does green house effect cause global warming,	14
Q.4	Explain the solid waste management. Give an outline of the modes of solid was disposal.	te <b>14</b>
Q.5	<ul><li>Explain the following:-</li><li>a) Cyclone and its types.</li><li>b) Role of remote sensing and GIS in disaster management</li></ul>	14
Q.6	Describe in brief the following:- a) Volcanic hazards b) Biological water pollutants	14
Q.7	<ul><li>Write short note on the following:-</li><li>a) Killari earthquake</li><li>b) Types of landslide</li></ul>	14

Seat No. Set P		_	
	Seat No.	Set	P

## M.Sc. (Semester - IV) (Old) (CBCS) Examination Nov/Dec-2018 Applied Geology REMOTE SENSING AND GIS

		SING AND GIS
Time	e: 2½ Hours	Max. Marks: 70
Instr	ructions: 1) All questions carry equal mar 2) Question 1 is compulsory. 3) Answer any two essay quest 4) Answer any two short notes of 5) Draw neat and labeled diagra	ions from 2, 3, 4. questions from 5, 6, 7.
Q.1	Rewrite the sentences by choosing c  1) FCC stands for  a) Falles Colour Composite c) Few Colour Complex	
	<ul><li>2) in form vector data Ger</li><li>a) Point</li><li>c) Polygon</li></ul>	nerate. b) Line d) All of the above
	<ul><li>3) Which of the following satellite series</li><li>a) Land sat</li><li>c) IRS</li></ul>	concerned India? b) Spot d) JRS
	4) G.P.S. provides data of  a) Latitude c) Height	b) Longitude d) All of the above
	5) Remote sensing system which use the	ne naturally available energy are called as
	a) Passive sensor c) Both a & b	<ul><li>b) Active sensors</li><li>d) None of the above</li></ul>
	<ul><li>6) Ratio between map distance and gro</li><li>a) Map scale</li><li>c) Resample</li></ul>	ound distance b) Projection d) Datum
	<ul><li>7) The word RADAR is an acronym for</li><li>a) Radio Detection and Rays</li><li>c) Radio Device and Range</li></ul>	b) Reflection Detection and Range d) Radio Detection and Ranging
	8) DIP is known as  a) Digital Image Process  c) Digital Image Product	<ul><li>b) Dot Image Process</li><li>d) All of the above</li></ul>
	<ul><li>9) Altitude of geostationary satellite is _</li><li>a) 20000 Km</li><li>c) 900 Km</li></ul>	b) 36000 Km d) 700 Km
	<ul> <li>10) DBMS stands for</li> <li>a) Data building management system</li> <li>b) Distribution building management</li> <li>c) Database management system</li> <li>d) Distribution building manipulation</li> </ul>	nt system

1	wavelength can penetrate clouds.
	Optical b) Thermal
	d) All the above
1	is the worlds first Commercial high resolution imaging satellite.  b) IKONOS  orb View-2  d) Quick bird
1	is the computer system of capturing, storing, analyzing, pulating and display spatial and spatial data.  Remote sensing b) GPS  GIS d) Both a & b
1	6-I is of spatial resolution 0 m b) 90 0 d) 72.5 m
<b>Q.2</b> [	the components of GIS.
<b>Q.3</b> E	n detail Electromagnetic Radiation.
<b>Q.4</b> \	aerial photography? Describe various types of aerial photographs. 14
a	or data set
á	e in brief the following:- lution g track scanning
a	nort note on the following:- ntages of GPS processing
k	processing

Seat No.	Set	Р
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## M.Sc. (Semester - IV) (Old) (CBCS) Examination Nov/Dec-2018

		Applied RESEARCH N		<u> </u>
Time	: 2½	∕₂ Hours		Max. Marks: 70
Instr	ucti	ions: 1) Answer any five questions. 2) Question No. 1 is compulso 3) Answer any two questions for the second secon	om C	5, 6 & 7.
Q.1		The bibliography of a research report a) Lists all the books published on b) Includes summaries of reference c) Lends credibility to the report and Is always written in the format process.	rt the to e liste d ser	d in it ves as a guide for further research
	2)	Identify the pair that appear in the real Mainframe and Desktop  c) Desktop and laptop	b)	e chronological order of development. Tablet and laptop Laptop and tablet
	3)	International Standard Serial Numbe a) ISBN c) p ISSN	b)	ans ISSN e ISSN
	4)	High level programming language cusing which of the following:- a) Oracle c) Mat lab	b)	converted to machine language  Compiler Assembler
	5)	What is a research design?  a) A way of conducting research th b) The choice between using qualit c) The study in which you present the d) A framework for every stage of the	ative esea	and quantitative methods rch findings
	6)	Which one of the following is a rese a) Graph c) Questionnaire	b)	cool Illustration Diagram
	7)	Which of the following software's is data a) Quark Express c) Quant Chrome	b)	to process and analyse quantitative  SPSS  SSQN
	8)	Use of ICT in research area) e-Book c) e-Submission	,	 e-Reviews All of the above

	<ul><li>a) Scopus provide search interfaces by</li><li>a) Article title</li><li>c) Author name</li></ul>	b) Abstract d) All of the above	
	<ul><li>10) Identify the matching pairs:-</li><li>a) AVI – Statistical information</li><li>c) JPEG – Photo/ Picture</li></ul>	<ul><li>b) XLS – PowerPoint presentation</li><li>d) DOC – Excel Sheet</li></ul>	
	<ul><li>11) Research is classified on the basis of a) Purpose</li><li>c) Methodology</li></ul>	f and methods. b) Intent d) Techniques	
	<ul><li>12) The proportions of related items are</li><li>a) Line graph</li><li>c) Dot plot</li></ul>	best shown by a b) Pie chart d) Histogram	
	<ul> <li>13) Arrange the following units of comput magnitude.</li> <li>Byte, gigabyte, bit, megabyte, terabyte, gigabyte, megabyte, byte, b) Gigabyte, terabyte, megabyte, bit, c) Gigabyte, megabyte, terabyte, terabyte, byte, bit, byte, terabyte, megabyte, gigabyte, gigabyte, megabyte, byte, displayed, megabyte, gigabyte, megabyte, gigabyte, megabyte, gigabyte, megabyte, byte, displayed, megabyte, gigabyte, megabyte, byte, displayed, megabyte, gigabyte, megabyte, byte, displayed, megabyte, gigabyte, megabyte, megabyte, gigabyte, gigabyte, megabyte, gigabyte, gigabyte, gigabyte, gi</li></ul>	yte te, bit byte e, bit	
	<ul><li>14)Example for fact finding study is</li><li>a) Pure Research</li><li>c) Action Research</li></ul>	b) Survey d) Long term Research	
Q.2	What is impact factor? How is impact fac	tor and immedician index is calculated	14
Q.3	Explain the sampling method. Which sampopulation has several groups and a resis in the sample		14
Q.4	What is search engine? Explain the sign	ficance of search engine in research.	14
Q.5	<ul><li>Write briefly the following:-</li><li>a) Advantages and disadvantages of se</li><li>b) ISSN</li></ul>	condary data.	14
Q.6	<ul><li>Discuss the following:-</li><li>a) Objectives of research</li><li>b) Purpose and process of literature</li></ul>		14
Q.7	<ul><li>Write short note on the following:-</li><li>a) Difference between questionnaire and</li><li>b) Results and discussion</li></ul>	d scheduled.	14