1.	When it is subjected to local or regional loads the lithosphere responds by the process known as :						
	A) Rifting		B)	Subdu	ction		
	C) Obduction	l	D)	Flexu	re		
2.	Who coined the te	erms 'uniform	nitarians' and	'catast	rophists'?		
	A) Charles DaC) William W		B) D)		es Lyell m Smeeth		
	C) William W	newen	D)	vv 1111a	III SIIICCUI		
3.	If CL and VL repr sinuosity of the ch		-	ind vall	ey length of a	stream,	then the
	A) $CL + VL$	-	CL x VL	C)	CL / VL	D)	VL – CL
1	Which of the falls	wing marks	the forthest a	duanaa	of a glassier?		
4.	Which of the folloA)Ground me	-	B)		l moraine		
	C) Medial mo	oraine	D)	Termi	nal moraine		
5.	Which of the follo	wing gives th	he correct sec	quence	in the electrom	agnetic	spectrum?
	A) Gamma ra	ys – X rays –	Ultraviolet -	– Infrare	ed – Radio wa	ves	1
					es - Gamma ra ma rays – X ra		
	· · · · · · · · · · · · · · · · · · ·				– Radio wave	•	
6.	Which of the follo	wing equipm	nent helps a g	eologis	t to locate him	self in t	he field?
	A) GIS		GPS 1 C	C)	GSI	D)	SEM
7.	The terms raster a	nd vector are	associated w	vith:			
	A) GIS		GPS	C)	GSI	D)	SEM
8.	Which of the follo	wing is not a	spatial data?)			
0.	A) Location	-	Speed	C)	Shape	D)	Size
9.	A plane dips 40° t	owards N 45	° W. Its anna	rent dir	towards N10	W will	he around:
).	A) 25°		5°	C)	60°	D)	75°
10.	In which of the fo	llowing folds	the avial su	rface is	inclined and t	he hinge	line
10.	plunges down the	-			inclined and t	ne minge	
	A) Recumber		B)		ed fold		
	C) Sheath fol	u	D)	Drag f	010		

11.	, , , , , , , , , , , , , , , , , , , ,	osed fold'? Vergence Inter-limb angle
12.		cure? Graded bedding Pillow lavas
13.	, , , , , , , , , , , , , , , , , , , ,	which one of the following? Eroded dome River piracy
14.	Which of these denotes a low-angle reverse faA)DragB)Lag	ault? C) Thrust D) Rift
15.	 Which of the following is not a lineation? A) A sillimanite needle lying normal to the B) Rounded crystals of garnet seen arrange C) Pseudotachylite D) Slickenside 	
16.		s are located? Destructive plate margins Transform faults
17.	 Which of the following is an active continenta A) Western continental margin of India B) Eastern continental margin of India C) Western continental margin of South A D) Eastern continental margin of South A 	America
18.	 Where is the LVZ (Low Velocity Zone) locate A) Between upper crust and lower crust B) Just below the lithosphere C) Coinciding the Moho D) Along the mantle-core boundary 	ed?
19.	 Continental rift zones represent: A) Dormant destructive plate margin B) Incipient constructive plate margin C) A continental suture D) Scars of previous continental drift 	

20.	What is the normal range of velocity of lithospheric plate motion?A)2-12 cm/yearB)10-40 cm/yearC)40-80 cm/yearD)0.2 - 2.0 m /year
21.	The San Andreas fault is a kind of:A)Normal faultB)Reverse faultC)Strike faultD)Transform fault
22.	The boundary between Cenozoic and Mesozoic is aroundA)50 MaB)65 MaC)80 MaD)95Ma
23.	The term Mississippian corresponds to:A)Lower CarboniferousB)Upper CarboniferousC)Lower PermianD)Upper Permian
24.	 Which of the following is the most distinct component of a Greenstone belt? A) Fuchsite quartzite B) At least one green or greenish looking mineral or stone C) Metamorphosed mafic or ultramafic rocks D) Pillow lavas
25.	Which of the following is an example of a mobile belt?A)Closepet GraniteB)Java Sumatra arcC)Western GhatsD)Eastern Ghats
26.	 Which stratigraphic principle states that 'the individual beds are of the same age along an outcrop'? A) Order of superposition B) Cross-cutting relationship C) Original lateral continuity D) Faunal succession
27.	 Which of the following is based on radiometric data? A) Magnetostratigraphy B) Lithostratigraphy C) Chronostratigraphy D) Biostratigraphy
28.	Which of the following is the oldest?A)CenomanianB)MaestrichianC)TuronianD)Burdigalian
29.	 Which of the following is the correct arrangement in terms of geologic age? A) Chengannur granite- Rajmahal traps - Deccan traps- Barren Island volcanics B) Chengannur granite- Deccan traps- Barren Island volcanics- Rajmahal traps C) Chengannur granite- Deccan traps- Rajmahal traps - Barren Island volcanics D) Barren Island volcanics-Deccan traps-Chengannur granite- Rajmahal traps

30.	 A) Haimantas –Talchirs-Umia B) Talchirs –Haimantas – Um C) Haimantas –Talchirs - Um 	h of the following is the correct arrangement in terms of geologic age ? Haimantas –Talchirs-Umia beds – Siwaliks - Karewas Talchirs –Haimantas – Umia beds - Siwaliks - Karewas Haimantas –Talchirs - Umia beds – Karewas - Siwaliks Haimantas –Umia beds - Talchirs – Siwaliks - Karewas				
31.	Which of the following has a basal of A) Wynad Group	conglon B)	nerate? Workalai Beds			
	C) Vengad Group	D)	Quilon Beds			
32.	Which of the following is not a gran	itoid pl	luton?			
	A) Peralimala	B)	Ambalavayal			
	C) Angadimogar	D)	Perinthatta			
33.	Which is the principal heavy minera	l minec	from the Chavara coastal area?			
	A) Monazite	B)	Ilmenite			
	C) Rutile	D)	Garnet			
34.	Which is the major ore mineral in th	e iron o				
	A) Magnetite	B)	Haematite			
	C) Limonite	D)	Laterite			
35.	The Semri series can be considered					
	A) Lower Vindhyans	B)	Upper Vindhyans			
	C) Lower Delhis	D)	Upper Delhis			
36.	During which period the graptolites		-			
	A) Cambrian	B)	Ordovician			
	C) Silurian	D)	Carboniferous			
37.	Ammonoids became extinct at the en		т. ·			
	A) Tertiary	B)	Triassic			
	C) Cretaceous	D)	Carboniferous			
38.	The arrangement in which teeth are					
	A) Isodont	B)	Desmodont			
	C) Dysodont	D)	Schizodont			
39.	Which of the following is a bivalve?	?				
	A) Nautilus B) Lima		C) Nucula D) Trigonia			
40.	To which phylum gastropods belong	g to?				
	A) Protozoa	B)	Coelentera			
	C) Mollusca	D)	Arthropoda			
		,	-			

41. To which phylum, the Class 'Crustacea' belongs to:

- A) Protozoa B) Coelentera
- C) Mollusca D) Arthropoda

42. What is the geological range of dinosaurs?

- A) Triassic to Cretaceous B) Jurassic to Paleocene
- C) Carboniferous to Eocene D) Lower to Upper Jurassic

43. Which of the fossil is linked closely to human evolution?

- A) Sivatherium B) Brahmatherium
- C) Australopithecus D) Eohippus

44. Approximately how many years ago did the homo sapiens appear on the Earth?

- A) One lakh B) Two lakh
- C) Three lakh D) Four lakh

45. Where will be the position of the face 001 on a Tetragonal crystal stereogram?

- A) At the centre of the stereogram
- B) At the primitive circle
- C) Mid-point between the centre and primitive circle along the E-W diagonal
- D) Mid-point between the centre and primitive circle along the N-S diagonal

46. Which crystal system is not having any open crystal form?

- A) Triclinic B) Trigonal
- C) Monoclinic D) Isometric

47. The basic difference between graphite and diamond lies in:

- A) Chemistry B) Density
- C) Crystal structure D) Colour

48. To which crystal system the point group with symbol 2/m 2/m 2/m belongs to?

- A) Isometric B) Tetragonal
- C) Hexagonal D) Orthorhombic

49. Which is the correct sequence of forms arranged in the increasing number of faces?

- A) Tetrahedron cube octahedron hexagonal dipyramid
- B) Cube octahedron tetrahedron hexagonal dipyramid
- C) Cube tetrahedron octahedron hexagonal dipyramid
- D) Tetrahedron cube hexagonal dipyramid octahedron

50. If a mineral has three values of refractive indices, in which system it crystallizes:

- A) Isometric B) Tetragonal
- C) Hexagonal D) Orthorhombic

51. Which of the following minerals is isotropic under the petrological microscope?

Pyrope

- Augite B)
- C) Fayalite D) Cordierite

52. Which is the correct sequence of minerals arranged according to increasing relief?

- A) quartz orthoclase apatite zircon
- B) orthoclase quartz apatite zircon
- C) quartz apatite orthoclase zircon
- $D) \qquad quartz-orthoclase-zircon-apatite$

53. Which of the following does not show pleochroic haloes?

- A) Tourmaline B) Chlorite
- C) Cordierite D) Quartz

54. What is the shape of the indicatrix of a uniaxial positive mineral?

- A) Prolate ellipsoid B) Oblate ellipsoid
- C) Triaxial ellipsoid D) Sphere
- 55. Which of the following is a tectosilicate?
 - A) Tourmaline B) Spodumene
 - C) Leucite D) Kaolinite

56. Which of the following technique / data is not used in mineralogical research?

- A) Raman spectra
- B) IR Spectra

A)

- C) Diffrerential thermal analysis
- D) Ground Penetrating Radar
- 57. Which of the following is not the correct pair of mineral species and corresponding mineral family?

A)	Sanidine : Feldspar	B)	Diops	ide : Pyroxene
(\mathbf{n})		D)	7 .	11.4 3.4

C) Cordierite : Amphibole D) Zinnawaldite : Mica

58.What is the specific gravity of native gold?A)4B)8C)18D)24

59. Which of the following is not a phosphate mineral?A) Pyromorphite B) Monazite C) Apatite D) Periclase

60. Who established the reaction series?

- A)Swamy and SaxenaB)Turner and VerhoojenC)D)D)D)
- C) Bowen D) Miyashiro

61. In which crystal system the olivines crystallize?

- A) Tetragonal B) Orthorhombic
- C) Monoclinic D) Triclinic

62.	Which A) C)	of the followi Chlorite Clinozoisite	ng is no	t a pleo	chroic r B) D)	nineral' Augite Piemo	e		
63.	Which A) C)	of the followi Quartz and C Sanidine and	ristobali	ite	morpho B) D)	Diamo	? ond and Graphi e and Dolomite		
64.	Which A) C)	is the most co Stony-iron mo Achondrites		• •	meteorit B) D)		neteorites Irites		
65.	What i A)	is the range of 47-61	atomic 1 B)	numbers 57-71	s of the	rare ea C)	rth element ser 67-81	ies? D)	77-91
66.	Which A)	of the followi ${}^{14}C/{}^{12}C$	ng isoto B)	13 C/ 12 C/ $^$	os is an i C	indicato C)	or of paleoclima ${}^{13}C/{}^{14}C$	ate? D)	¹⁴ C/ ¹³ C
67.	Which A)	of the followi Oxygen	ng is a s B)	sideroph Coppe		nent? C)	Nickel	D)	Potassium
68.	Which A) C)	of the followi Oxygen Carbon	ng subs	titutes f	or Silico B) D)	on in m Alumi Magne		es?	
69.	Which A)	of the followi Entropy	ng is a 1 B)	neasure Enthal		rgy in a C)	system? Eh	D)	рН
70.	Which A)	of the followi Dyke	ng is a c B)	liscorda Sill	int intru	sion? C)	Phacolith	D)	Laccolith
71.	Which A)	texture is asso Symplectite	bciated v B)	with kor Spinif		C)	Corona	D)	Orbicular
72.	Granit A) C)	e and granodio Silica content Kind of felds	ţ		erms of: B) D)		content size		
73.	A plut A)	onic rock with Dunite	6% oliv B)		% labra rophyre		nd 2% ilmenite Anorthosite	e can be D)	e named as: Diorite
74.	What A)	is the average s 30	silica co B)	ntent of 40	gabbro	0? C)	60	D)	50

75.		ne volcanic equivalent of di achyte	orite? B)	Granophyre
	/	acite	D)	Andesite
76.	Which of	the following magmatic set	ries is ty	ypical of island-arc settings?
		omatiitic	B)	Tholeiitic
	C) Al	lkaline	D)	Calc-alkaline
77.		Europium anomaly is assoc	ciated w	vith:
		able isotopes	B)	Rare earth elements
	C) Ge	eochemical exploration	D)	Radioactivity
78.	Which is Series?	the first mafic mineral to cr	rysatlliz	e from a magma as per the Bowen's
	A) Ol	livine	B)	Pyroxene
	C) Ho	ornblende	D)	Ca-rich plagioclase
79.	Which of	the following rocks occur a	as diatre	eme?
	A) Ko	omatiite	B)	Kimberlite
	C) Do	olerite	D)	Diorite
80.		the following is not a heav	y miner	
	A) Ilr	nenite	B)	Monazite
	C) Ga	arnet	D)	Magnesite
81.	What is fl	-		
	,	ossil	B)	Igneous rock
	C) M	etamorphic rock	D)	Sedimentary rock
82.		the following is a carbonac		
	/	mestone	B)	Peat
	C) Ai	rkose	D)	Siltstone
83.		the following is made up o		1
	,	rkose	B)	Breccia
	C) Co	onglomerate	D)	Dolostone
84.		the following pair of miner		
	,	lbite-Anorthite	B)	Fosterite- Fayalite
	C) Ai	northite-Diopside	D)	Diopside – Hedenbergite
85.		the following is an ultrama		
	/	iorite	B)	Basalt
	C) Du	unite	D)	Keratophyre

00.	miner	als?					
	A)	Porphyritic	B)	Poikilitic			
	C)	Corona) D)	Sub-ophitic			
87.	What	is the precusor for khom	dalites?				
07.	A)	Charnockites	B)	Mafic volcanics			
	C)	Carbonate rocks	D)	Pelitic rocks			
	0)	Carbonate rocks	D)	i chtic rocks			
88.		h of the following is a h					
	A)	Andalusite	B)	Sillimanite			
	C)	Kyanite	D)	Prehnite			
89.	Matcl	n the economic deposits	in <i>Group I</i> wi	th their Indian occurrences in Group II.			
		Group I	Grou	p II			
		P .Coal		nigundala			
		Q. Copper	2. Sal				
		R.Magnesite	3.Rar	niganj			
		S. Ilmenite	4.Ma	navalkurichi			
	A)	P-1, Q-2,R-3, S-4	B)	P-2, Q-3, R-4, S-1			
	C)	P-1, Q-4, R-2, S-3	D)	P-3, Q-1, R-2, S-4			
00	What	is the term proture of fe	rmation of m	anothermal type of hydrothermal deposite?			
90.		0-100 °C	rmation of me B)	esothermal type of hydrothermal deposits? 100-200 °C			
	A) C)	200-300 °C	Б) D)	300-400 °C			
	C)	200-300 C	D)	300-400 C			
91.	The chromite deposits of Odisha are found in:						
	A)	Byrapur B)	Sukinda	C) Sithampundi D) Ratnagiri			
92.	Whic	h of the following is not	used in steel	industry?			
	A)	Coal	B)	Manganese ore			
	Ć)	Limestone	D)	Magnesite			
93.	Whield	h of the following is use	d as the source	a of phosphoto in fartilizar industry?			
93.		Dolomite		ce of phosphate in fertilizer industry? Fluorite			
	A)		B)				
	C)	Apatite	D)	Corundum			
94.	The p	lacer deposits that occur	r along hill slo	opes are called:			
	A)	Alluvial	B)	Beach			
	C)	Eluvial	D)	Glacial			
95.	Whiel	h of the following is not	an ore of ma	nganese?			
	A)	Bornite	B)	Manganite			
	C)	Magnesite	D)	Pyrolusite			
	- /	0	=)	5			

Which of the following textures indicates the simultaneous crystallization of two

86.

96.	Which of the following is an ore of iron?A)MagnesiteB)C)ManganiteD)	Malachite Magnetite
97.	The sulphide ore of mercury is:A)GalenaB)C)CinnabarD)	Sphalerite Hg Amalgum
98.	Which economic mineral is seen along NilaA)GoldB)C)LateriteD)	ambur, Wynad and Attappadi areas? Platinum Ilmenite
99.	Which gemstone is occurring along SoutherA)DiamondB)C)CorundumD)	ern Kerala? Graphite Chrysoberyl
100.	Which of the following is not a bauxitic mitA)GibbsiteB)C)CryoliteD)	ineral? Boehmite Diaspore
101.	During which geologic time most of the baA)ArchaeanB)C)PaleozoicD)	nded iron formations originated? Proterozoic Mesozoic
102.	Gas hydrates can be considered as:A)Fossil fuelB)C)Fluid inclusionD)	Magmatic deposit Supergene deposit
103.	Which of the following is not a type of oilA)AnticlineB)C)UnconformityD)	trap? Salt dome Mesa
104.	Which geophysical technique is used to proA)SeismicB)C)ResistivityD)	ospect for a concealed iron ore deposit? Gravity Radioactivity
105.	Which geophysical method is widely usedA)SeismicB)C)ResistivityD)	in oil exploration? Gravity Radioactivity
106.	Which of the following exhibits phosphoreA)GarnetB)C)PyriteD)	scence? Beryl Scheelite

107.	If gold nuggets occur in quartz vein A) Gold C) Hornblende	s in am B) D)	phibolites, which is the gangue mineral? Quartz Plagioclase
108.	Gossans are made up essentially of:A) SulphidesC) Hydrated iron oxides	B) D)	Primary ores Hydrated sulphides
109.	Which geophysical method is widelA) SeismicC) Resistivity	ly used B) D)	in groundwater exploration? Gravity Radioactivity
110.	Which cations are responsible for hA) Ca & MgC) Na & Mg	ardness B) D)	of water? Na & Ca Ca & K
111.	With which type of aquifer artesianA) ConfinedC) Semi-confined	wells a B) D)	re associated? Unconfined Phreatic
112.	Which of these is associated with SA) Darcy's lawC) Reynolds number	Sea wat B) D)	er incursion? Piper diagram Ghyben – Herzberg relation
113.	Lower than normal content of fluorA) Dental cavitiesC) Skeletal flurosis	ide in d B) D)	rinking water leads to: Dental flurosis All of the above
114.	 The presence of water in rocks will: A) Increase the tensile strength B) Increase the compressive str C) Decrease the tensile strength D) Has no effect on the strength 	ength	
115.	The technique of extracting desired open space is called: A) Tilling C) Setting	ore from B) D)	m an underground mine leaving behind an Grooving Stoping
116.	Which method is used to separate bbeneficiation of beach placers ?A) DensityC) Electrostatic	etween B) D)	rutile and ilmenite during the Magnetic Froth floatation

- 117. Acid drainage is often associated with:
 - A) Volcanic eruption B) Acid rains
 - C) Mining D) Sea-level fall

118. Which Ministry regulates the Coastal Zone in India?

- A) Ministry of Steel and Mines
- B) Ministry of Fisheries
- C) Ministry of Earth sciences
- D) Ministry of Environment, Forest and Wildlife

119. Which is the primary agency for disaster management in India?

- A) NDMA B) GSI
- C) ONGC D) IMD
- 120. The phenomenon of eutrophication of lakes is caused by:
 - A) Excessive plant and algal growth
 - B) Decreased plant and algal growth
 - C) Drying up of lakes
 - D) Flooding of lakes.

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