

Test Booklet No. _____

This booklet consists of 100 questions and __ printed pages.

RGUCET/2025/22

Series

A

RGUCET 2025
Common Entrance Test, 2025
MASTER OF SCIENCE IN APPLIED GEOLOGY

Full Marks: 100

Time: 2 Hours

Roll No.

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Day and Date of Examination: _____

Signature of Invigilator(s) _____

Signature of Candidate _____

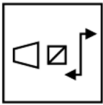
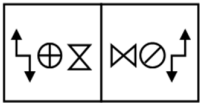
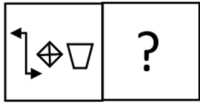
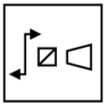
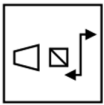
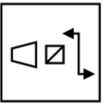
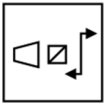
General Instructions:

PLEASE READ ALL THE INSTRUCTIONS CAREFULLY BEFORE MAKING ANY ENTRY.

1. DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO.
2. Candidate must write his/her Roll Number on the space provided.
3. This Test Booklet contains 100 Multiple Choice Questions (MCQs) from the concerned subject. Each question carries 1 mark. There shall be negative marking of 0.25 against each wrong attempt.
4. Please check the Test Booklet to verify that the total pages and total number of questions contained in the test booklet are the same as those printed on the top of the first page. Also check whether the questions are in sequential order or not.
5. Candidates are not permitted to enter into the examination hall after the commencement of the entrance test or leave the examination hall before completion of Examination.
6. Making any identification mark in the OMR Answer Sheet or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.
7. Candidates shall maintain silence inside and outside the examination hall. If candidates are found violating the instructions mentioned herein or announced in the examination hall, they will be summarily disqualified from the entrance test.
8. In case of any dispute, the decision of the Entrance Test Committee shall be final and binding.
9. The OMR Answer Sheet consists of two copies, the Original copy and the Student's copy

1	What is known as the scientific/humanistic study of language?				philology								
	a) philology	b) philanthropist	c) philately	d) pathology	a								
2	Match the synonyms. <table><tr><td>A. acclaim</td><td>i. choose</td></tr><tr><td>B. acrid</td><td>ii. applaud</td></tr><tr><td>C. adapt</td><td>iii. pungent</td></tr><tr><td>D. adopt</td><td>iv. adjust</td></tr></table>				A. acclaim	i. choose	B. acrid	ii. applaud	C. adapt	iii. pungent	D. adopt	iv. adjust	A-ii, B-iii, C-iv, D-i
A. acclaim	i. choose												
B. acrid	ii. applaud												
C. adapt	iii. pungent												
D. adopt	iv. adjust												
	a) A-ii, B-iii, C-i, D-iv	b) A-ii, B-iii, C-iv, D-i	c) A-iii, B-ii, C-iv, D-i	d) A-iii, B-ii, C-i, D-iv	b								
3	Choose the most suitable preposition. I was waiting ____ the bus stop.				at								
	a) in	b) on	c) at	d) by	c								
4	For the following Assertion (A) and Justification (B), choose the correct option. A: The teacher said that he will come tomorrow. B: Since this is indirect speech, the verb in the subordinate clause must be in the future tense.				Both A and B are false								
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	d								
5	The one who cannot die is _____.				immortal								
	a) perpetual	b) immortal	c) stable	d) perennial	b								
6	In which of the following domain, Nobel Prize is not awarded?				History								
	a) Physics	b) Peace	c) Literature	d) History	d								
7	Match the Nobel Prize winners of the year 2024 to their field. <table><tr><td>A. David Baker</td><td>i. Physics</td></tr><tr><td>B. John J. Hopfield</td><td>ii. Medicine</td></tr><tr><td>C. Victor Ambros</td><td>iii. Chemistry</td></tr><tr><td>D. Han Kang</td><td>iv. Literature</td></tr></table>				A. David Baker	i. Physics	B. John J. Hopfield	ii. Medicine	C. Victor Ambros	iii. Chemistry	D. Han Kang	iv. Literature	A-iii, B-i, C-ii, D-iv
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	a) A-iii, B-i, C-ii, D-iv	b) A-iii, B-ii, C-i, D-iv	c) A-i, B-ii, C-iii, D-iv	d) A-iv, B-iii, C-ii, D-i	a								
8	Which of the following are TRUE about The Constitution of India? A. The day when The Constitution of India came into effect is celebrated as Republic Day. B. It contains 23 parts. C. There are no amendments made in The Constitution of India. D. It contains 437 articles.				A and D only								
	a) A and C only	b) A and D only	c) B and C only	d) B and D only	b								

9	What is the largest planet in the Solar System?				Jupiter
	a) Earth	b) Saturn	c) Jupiter	d) Mars	c
10	How many member states do comprise SAARC?				8
	a) 6	b) 7	c) 8	d) 9	c
11	Match the following pairs:				A-iv, B-ii, C-iii, D-i
	A. World Environment Day		i. 22 March		
	B. World Health Day		ii. 7 April		
	C. World Heritage Day		iii. 18 April		
	D. World Water Day		iv. 5 June		
	a) A-i, B-ii, C-iii, D-iv	b) A-ii, B-iv, C-iii, D-i	c) A-ii, B-i, C-iii, D-iv	d) A-iv, B-ii, C-iii, D-i	d
12	Recently India actively participated in the 20 th session of the United Nations Forum on Forests (UNFF). Which of the following statements are true about the functioning of the UNFF?				All are true
	<p>A. Promoting the implementation of internationally agreed goals on forests.</p> <p>B. Strengthening long-term political commitment to sustainable forest management.</p> <p>C. Facilitating the exchange of experiences, best practices, and policy coordination among countries.</p> <p>D. Intergovernmental dialogue and cooperation on forest-related issues engaging governments, international organizations, civil society, and other stakeholders.</p>				
	a) A only	b) A and B only	c) C and D only	d) All are true	d
13	<p>For the following Assertion (A) and Justification (B), choose the correct option.</p> <p>A:Prices of goods are increasing rapidly in India.</p> <p>B:India is facing a huge problem of black money.</p>				Both A and B are true, but B is not the correct explanation
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	b
14	Lunar Polar Exploration Mission (LUPEX), set to launch in 2025 is a joint mission of which two space organizations?				ISRO and JAXA
	a) ISRO and JAXA	b) NASA and ISRO	c) ESA and ISRO	d) ISRO and CNSA	a
15	Who has become the 52 nd Chief Justice of India recently?				Justice Bhushan Ramkrishna Gavai

	a) Justice Sanjiv Khanna	b) Justice Surya Kant	c) Justice Bhushan Ramkrishna Gavai	d) Justice Ujjal Bhuyan	c
16	Match the geometric shapes with the number of faces:				A-iii, B-iv, C-ii, D-i
	A. Dodecahedron	i. 4			
	B. Icosahedron	ii. 8			
	C. Octahedron	iii. 12			
	D. Tetrahedron	iv. 20			
	a) A-i, B-ii, C-iii, D-iv	b) A-ii, B-iv, C-iii, D-i	c) A-iii, B-iv, C-ii, D-i	d) A-iv, B-ii, C-iii, D-i	c
17	Which of the following statements is/are correct for the measure of central tendency: A. Mean = Median = Mode, for all types of distribution. B. Mean = Median = Mode, for normal distribution C. Mean = Median = Mode, for binomial distribution D. Mean > Median > Mode, for binomial distribution				B and C only
	a) A only	b) D only	c) B and C only	d) B and D only	c
18	For the following Assertion (A) and Justification (B), choose the correct option. A: Some animals have thick fur on their skin. B: Fur protect these animals from extreme temperature.				Both A and B are true, and B is the correct explanation
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	a
19	Find the odd number which is different from the others.				15
	a) 11	b) 13	c) 15	d) 17	c
20	Find out which of the figures should be in place of question mark.				
	 				
					
	a)	b)	c)	d)	
21	Gutenberg discontinuity is located between _____ and _____. (Fill in the blanks with the correct option)				mantle, core

	a) crust, mantle	b) mantle, core	c) outer core, inner core	d) lithosphere, asthenosphere	b
22	Match the following types of volcanic features and their examples:				A-i, B-ii, C-iii, D-iv
	A. Shield volcano		i. Hawaii		
	B. Cinder cone		ii. Paricutin		
	C. Composite volcano		iii. Vesuvius		
	D. Caldera		iv. Yellowstone volcano		
	a) A-i, B-ii, C-iii, D-iv	b) A-i, B-ii, C-iii, D-i	c) A-iv, B-iii, C-ii, D-i	d) A-ii, B-iv, C-iii, D-i	a
23	Which of the following statements is/are true about seismic waves? A. P-wave is the fastest seismic wave. B. Both p-wave and s-wave are body waves. C. S-wave can travel through solid and liquid medium. D. Surface waves cannot cause any destruction.				A & B only
	a)A only	b) B only	c) A & B only	d) C & D only	
24	For the following Assertion (A) and Justification (B), choose the correct option. A: Chemical weathering is most vigorous in hot and humid climate. B: Physical weathering enhances chemical weathering.				Both A and B are true, but B is not the correct explanation
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	
25	Who proposed the Nebular Hypothesis about the origin of the earth?				Both Kent and Laplace independently.
	a) Kent alone.	b) Laplace alone.	c) Kent and Laplace together.	d) Both Kent and Laplace independently.	
26	Earth's magnetic field is generated in which of the following layers?				Liquid outer core
	a) Solid crust	b) Semi-solid mantle	c) Liquid outer core	d) Solid inner core	

27	Match the following geomorphic processes and associated landform.				A-iii, B-ii, C-iv, D-i
	A. Fluvial process		i. Tombolo		
	B. Aeolian process		ii. Yardang		
	C. Glacial process		iii. Gorge		
	D. Coastal process		iv. Fjord		
	a) A-i, B-ii, C-iii, D-iv	b) A-iii, B-ii, C-iv, D-i	c) A-iv, B-iii, C-ii, D-i	d) A-ii, B-iv, C-iii, D-i	b
28	Which of the following statement is true for Davis's model of landscape evolution? A. An impulsive tectonic forcing cause uplift at the beginning. B. A steadily increasing rates of deformation cause accelerated uplift. C. Landscape development includes numerous periods of rapid erosion and deposition. D. The landscape is the result of two competing tendencies i.e. tendency towards variability and tendency towards uniformity				A only
	a) A only	b) B only	c) A & B only	d) C & D only	a
29	For the following Assertion (A) and Justification (B), choose the correct option. A: Karst topography usually forms in terrains underlined by limestone. B: Limestone gets dissolved easily by underground water.				Both A and B are true, and B is the correct explanation
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	a
30	Which of the following is not a chemical weathering process?				Salt weathering
	a) Hydration	b) Hydrolysis	c) Chelation	d) Salt weathering	d
31	Which of the following dune type commonly occurs in regions where the prevailing winds are steady, sand is plentiful, and vegetation is sparse or absent?				Transverse dune
	a) Barchan dune	b) Transverse dune	c) Longitudinal dune	d) Parabolic dune	b
32	Which of the following was not part of the Gondwanaland?				Scandinavia
	a) Scandinavia	b) Madagascar	c) Arabian Peninsula	d) Antarctica	a

33	Which of the following is not a cause of plate motion?				Transform fault
	a) Transform fault	b) Slab Pull	c) Mantle convection	d) Ridge push	a
34	Match the stages of 'Wilson Cycle' and their present-day examples:				A-i, B-iv, C-iii, D-ii
	A. Embryonic		i. East African Rift		
	B. Juvenile		ii. Himalaya		
	C. Terminal		iii. Mediterranean Sea		
	D. Suturing		iv. Red Sea		
	a) A-i, B-iv, C-iii, D-ii	b) A-ii, B-i, C- iv, D- iii	c) A-i, B-iv, C-ii, D-iii	d) A-i, B-ii, C-iii, D-iv	b
35	Which of the following statements about plate boundaries is/are true? A. Volcanic arcs are associated with trenches. B. Hot spots are associated with convergent plate boundaries. C. New crust is formed at the divergent plate boundaries. D. Subduction of continental crust is possible only when two continental plates converge.				A and C only
	a) B only	b) C only	c) B and D only	d) A and C only	d
36	For the following Assertion (A) and Justification (B), choose the correct option. A: Global warming is causing sea levels to rise. B: Melting glaciers and ice caps are adding water to the oceans.				Both A and B are true, and B is the correct explanation
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	a
37	Where do you find rocks of ferromagnetic character in the Earth?				Crust
	a) Crust	b) Lower mantle	c) Outer core	d) Inner core	a
38	Mid-latitude deserts are located in which region?				Interiors of continents
	a) Glaciated regions	b) Interiors of continents	c) Western sides of continents	d) Eastern sides of continents	b

39	Match the gases with their most suitable role/damage caused in the earth's atmosphere.				A-iii, B-iv, C-i, D-ii
	A. CH ₄		i. Photosynthesis		
	B. CFCs		ii. Pollutant at ground level		
	C. CO ₂		iii. Greenhouse gas		
	D. O ₃		iv. Ozone layer depletion		
	a) A-i, B-ii, C-iii, D-iv	b) A-iii, B-iv, C-i, D-ii	c) A-iv, B-iii, C-ii, D-i	d) A-ii, B-iv, C-iii, D-i	b
40	As we go away from the epicenter of an earthquake, which of the following statement is true? A. Both intensity and magnitude remain the same. B. Intensity remains the same, but magnitude decreases. C. Magnitude remains the same, but intensity decreases. D. Both intensity and magnitude decrease.				C only.
	a) A only	b) C only	c) A and B	d) A, B and C	
41	For the following Assertion (A) and Justification (B), choose the correct option. A: The Green Revolution was a period of significant advancements in agricultural practices. B: It led to substantial increase in food production particularly in developing countries like India.				Both A and B are true, but B is not the correct explanation
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	
42	What do closely spaced contours represent on a topographic map?				Steep slope
	a) Steep slope	b) Gentle slope	c) Vertical cliff	d) Horizontal surface	
43	Which of the following is a primary structure?				Lamination
	a) Joint	b) Lamination	c) Schistosity	d) Fault	

44	Match the following pairs of fold types and their characteristics:				A-iii, B-iv, C-ii, D-i
	A. Overturned fold		i. Both limbs have the same dip.		
	B. Recumbent fold		ii. Sharp hinge and straight limb		
	C. Chevron fold		iii. One of the limbs is overturned.		
	D. Isoclinal fold		iv. Horizontal axial plane		
	a) A-iii, B-iv, C-ii, D-i	b) A-iii, B-iv, C-i, D-ii	c) A-iv, B-iii, C-ii, D-i	d) A-i, B-iv, C-iii, D-ii	a
45	The attitude of a dipping bed is 050°/30°SE. Which of the following is an apparent dip?				20°→89°
	a) 30°→50°	b) 20°→50°	c) 20°→89°	d) 30°→89°	c
46	In the geological map of an area with uneven topography, straight outcrop pattern indicates which of the following?				Vertical bed
	a) Horizontal bed	b) Vertical bed	c) Gently inclined bed	d) Steeply inclined bed	b
47	Match the following pairs indicating types of unconformities and different sequences involved:				A-iii, B-i, C-iv, D-ii
	A. Angular unconformity		i. Two parallel sedimentary sequences with erosional surface in between.		
	B. Disconformity		ii. Two parallel sedimentary sequences without any erosional surface.		
	C. Nonconformity		iii. One deformed and one undeformed sedimentary sequence.		
	D. Paraconformity		iv. Sedimentary sequence and igneous rocks		
	a) A-i, B-ii, C-iii, D-iv	b) A-iii, B-iv, C-i, D-ii	c) A-iv, B-iii, C-ii, D-i	d) A-iii, B-i, C-iv, D-ii	d
48	Which of the following statements is/are true for porosity of rocks/soil? A. It is the portion of rocks/soil occupied partially by air only. B. It is the portion of rocks/soil occupied partially by water only. C. It is the portion of rock/soil filled partially by air and water. D. It is the portion of rocks/soil not occupied by solid matter.				C and D
	a) A and B	2) B only	3) C and D	4) D only	c

49	For the following Assertion (A) and Justification (B), choose the correct option. A: Aquifer yields significant amount of water to wells and springs. B: Aquifer has both porosity and permeability.				Both A and B are true, and B is the correct explanation								
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	a								
50	What is the porosity of a specimen of rock with total volume of 5 cm ³ and volume of solid equals to 3 cm ³ ?				40%								
	a) 25%	b) 40%	c) 60%	d) 66.67%	b								
51	Match the following: <table border="1"><tr><td>A. Aquifer</td><td>i. Clay</td></tr><tr><td>B. Aquifuge</td><td>ii. Granite</td></tr><tr><td>C. Aquiclude</td><td>iii. Sandy clay</td></tr><tr><td>D. Aquitard</td><td>iv. Sandstone</td></tr></table>				A. Aquifer	i. Clay	B. Aquifuge	ii. Granite	C. Aquiclude	iii. Sandy clay	D. Aquitard	iv. Sandstone	A-iv, B-ii, C-i, D-iii
A. Aquifer	i. Clay												
B. Aquifuge	ii. Granite												
C. Aquiclude	iii. Sandy clay												
D. Aquitard	iv. Sandstone												
	a) A-i, B-iv, C-iii, D-ii	b) A-ii, B-iv, C-iii, D-iv	c) A-iv, B-ii, C-i, D-iii	d) A-iv, B-i, C-ii D-iii	c								
52	Which of the following statements is/are true about water table? A. It is the uppermost part of the zone of saturation. B. It is the uppermost part of the zone of aeration. C. It is the upper most part of the capillary zone. D. It lies between zone of saturation and capillary zone.				A and D only								
	a) A only	b) A and D only	c) B and D only	d) C only	b								
53	For the following Assertion (A) and Justification (B), choose the correct option. A: During a heat dome, clouds do not typically form. B: During a heat dome, warm air is prevented from rising which inhibits condensation.				Both A and B are true, and B is the correct explanation								
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	a								

54	Which one of the following is the most important factor that influences the distribution of temperature on the earth?				Insolation								
	a) Insolation	b) Solar radiation	c) Terrestrial radiation	d) Distance from coast	a								
55	Which layer of the earth's atmosphere contains ozone layer?				Stratosphere								
	a) Troposphere	b) Stratosphere	c) Mesosphere	d) Exosphere	b								
56	In which type of remote sensing, the Sun is primary source of energy?				Passive								
	a) Active	b) Passive	c) Radar	d) Lidar	b								
57	_____ is a square area on a satellite image that is a measure of the sensor's ability to resolve objects of different sizes. (Fill in the blank with appropriate option)				Pixel								
	a) Pixel	b) DN value	c) IFOV	d) Resolution	a								
58	Match the following remote sensing bands with their applications: <table border="1"><tr><td>A. Blue</td><td>i. Vegetation Stress Analysis</td></tr><tr><td>B. Green</td><td>ii. Differentiating soil from vegetation</td></tr><tr><td>C. Red</td><td>iii. Coastal mapping</td></tr><tr><td>D. Thermal</td><td>iv. Vegetation discrimination</td></tr></table>				A. Blue	i. Vegetation Stress Analysis	B. Green	ii. Differentiating soil from vegetation	C. Red	iii. Coastal mapping	D. Thermal	iv. Vegetation discrimination	A-iii, B-iv, C-ii, D-i
A. Blue	i. Vegetation Stress Analysis												
B. Green	ii. Differentiating soil from vegetation												
C. Red	iii. Coastal mapping												
D. Thermal	iv. Vegetation discrimination												
	a) A-i, B-ii, C-iii, D-iv	b) A-iii, B-iv, C-ii, D-i	c) A-ii, B-iv, C-i, D-iii	d) A-iv, B-iii, C-ii, D-i	b								
59	Which of the following statements about the global positioning system (GPS) is/are true? A. The Global Positioning System (GPS) helps identifying the latitudinal and longitudinal location of an object on the Earth. B. GPS is only used to determine the location of stationary object. C. GPS technology is widely used in various vehicles including airplanes and ships. D. A GPS receiver should receive signal from minimum three satellites to determine its location.				A and C only								
	a)A only	b) A and B only	c) A and C only	d) All four	c								
60	Which of the following remote sensing techniques is most appropriate for flood monitoring?				Microwave remote sensing.								
	a) Multispectral remote sensing.	b) Hyperspectral remote sensing.	c) Passive remote sensing.	d) Microwave remote sensing.	d								

61	Crystal form is_____. (Choose the correct option to fill in the blank)				collection of equivalent faces related to symmetry
	a) collection of crystal faces that are parallel to a line	b) collection of equivalent faces related to symmetry	c) collection of opposite faces	d) collection of similar crystal models	b
62	Match the point groups to their crystal systems.				A-i, B-iv, C-ii, D-iii
	A. 2/m2/m2/m		i. Orthorhombic		
	B. 4/m2/m2/m		ii. Monoclinic		
	C. 2/m		iii. Triclinic		
	D. i		iv. Tetragonal		
	a) A-i, B-iv, C-ii, D-iii	(b) A-i, B-ii, C-iii, D-iv	c) A-iii, B-i, C-ii, D-iv	d) A-iv, B-iii, C-ii, D-i	a
63	Which of the following statements about minerals are TRUE ? A. In geological studies, the definition of minerals includes synthetic materials. B. Minerals have ordered arrangement of atoms. C. Minerals always possess perfect geometrical shape. D. Minerals are naturally occurring.				B and D only
	a) B and C only	b) B and D only	c) A, B and C only	d)All are true	
64	How many point groups are present?				32
	a)30	b) 32	c) 34	d)36	b
65	What is the Si:O ratio in sheet silicates?				4:10
	a) 1:2	b) 1:4	c) 4:10	d) 4:11	c
66	Match the minerals and their corresponding crystal systems.				A-iii, B-iv, C-ii, D-i
	A. Quartz		i. Isometric		
	B. Anorthite		ii. Orthorhombic		
	C. Forsterite		iii. Hexagonal		
	D. Almandine		iv. Triclinic		
	a) A-iii, B-iv, C-ii, D-i	b) A-iii, B-iv, C-i, D-ii	c) A-i, B-iv, C-ii, D-iii	d) A-i, B-ii, C-iii, D-iv	a

67	Which of the following statements are TRUE about optical properties?				A and B only
A. Vibration direction of lower polarizer and upper polarizer are perpendicular to one another in petrologic microscope. B. Isotropic minerals appear dark under cross polarized light. C. Biotite is isotropic in general. D. All isotropic minerals have very high relief.					
	a) A and B only	b) A, B and C only	c) A, B and D only	d) C only	a
68	Amethyst is a variety of _____.				quartz
	a) forsterite	b) enstatite	c) quartz	d) albite	c
69	What is the most abundant element in the Earth's crust?				oxygen
	a) oxygen	b) silicon	c) iron	d) hydrogen	a
70	Match the types of bonding to their examples.				A-iv, B-iii, C-i, D-ii
A. Ionic bond		i. Native copper			
B. Covalent bond		ii. Brucite			
C. Metallic bond		iii. Diamond			
D. Van der Waals bond		iv. Halite			
	a) A-i, B-ii, C-iii, D-iv	b) A-ii, B-iii, C-iv, D-i	c) A-iv, B-iii, C-ii, D-i	d) A-iv, B-iii, C-i, D-ii	d
71	Which of the following statements are TRUE?				A and C only
A. Ionic size and charge are the controlling parameters for element substitution. B. Ions with different charge can substitute by simple substitution. C. Ionic substitution produces solid solution in minerals. D. Complete solid solution is seen in all silicate groups of minerals.					
	a) A and C only	b) A and D only	c) B and D only	d) B and C only	a
72	For the following Assertion (A) and Justification (B), choose the correct option.				A is True but B is false
A: As the cation size increases, coordination number also increases. B: Larger cations possess higher valency, thus surrounded by more anions.					
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	c

73	Which of the following element is considered as base metal?				lead								
	a) iron	b) nickel	c) lead	d) gold	c								
74	Which of the following mineral is a polymorph of aluminosilicate?				andalusite								
	a) andalusite	b) labradorite	c) amethyst	d) bauxite	a								
75	For the following Assertion (A) and Justification (B), choose the correct option. A: Current ripple marks are asymmetric waves of more or less uniform wavelength. B: Due to their shape, current ripple marks cannot be used to distinguish top or bottom of a bed.				Both A and B are true, and B is the correct explanation								
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	a								
76	What is the dominant geological agent in aeolian process?				wind								
	a) water	b) wind	c) glacier	d)hydrothermal fluids	b								
77	What are the major minerals in eclogite?				pyroxene and garnet								
	a) olivine and garnet	b) olivine and plagioclase	c) pyroxene and amphibole	d) pyroxene and garnet	d								
78	Match the metamorphic rocks with their corresponding types. <table border="1"><tr><td>A. Skarn</td><td>i. Regional metamorphism</td></tr><tr><td>B. Mylonite</td><td>ii. Thermal metamorphism</td></tr><tr><td>C. Spilite</td><td>iii. Ocean-floor metamorphism</td></tr><tr><td>D. Gneiss</td><td>iv. Fault-zone metamorphism</td></tr></table>				A. Skarn	i. Regional metamorphism	B. Mylonite	ii. Thermal metamorphism	C. Spilite	iii. Ocean-floor metamorphism	D. Gneiss	iv. Fault-zone metamorphism	A-ii, B-iv, C-iii, D-i
A. Skarn	i. Regional metamorphism												
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D. Gneiss	iv. Fault-zone metamorphism												
	a) A-ii, B-iv, C-iii, D-i	b) A-ii, B-iv, C-i, D-iii	c) A-iii, B-iv, C-ii, D-i	d) A-i, B-ii, C-iii, D-iv	a								
79	Which of the following statement(s)is/are true about the temperature as metamorphic agent? A. Temperature is an important agent of metamorphism. B. High density minerals are produced during thermal metamorphism. C. Characteristic foliation is developed in metamorphic rocks. D. Subduction zones experience high temperature metamorphism.				A only								

	a) A only	b) A and B only	c) B and D only	d) B, C and D only	a
80	Concentration of metal in an ore body is known as ____.				ore grade
	a) tonnage	b) ore grade	c) ore shoot	d) gangue	b
81	Which of the following produce Gondwana coal?				Raniganj
	a) Neyveli	b) Raniganj	c) Namchik	d) Varkala	b
82	To which category is the Assam petroliferous basin classified?				Category-I
	a) Category-I	b) Category-II	c) Category-III	d) Category-IV	a
83	Which of the following planet has highest average density?				Earth
	a) Mercury	b) Venus	c) Earth	d) Mars	c
84	For the following Assertion (A) and Justification (B), choose the correct option. A: Seismograph is an instrument that records seismic waves of the earth. B: Seismometer detects and amplifies the ground vibration.				Both A and B are true, but B is not the correct explanation
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	b
85	Vertical excavation in an underground mine is known as ____.				shaft
	a) shaft	b) adit	c) stope	d) bench	a
86	Which one of the following logging tools is used to measure the diameter of a borehole?				Caliper
	a) Sonic	b) Density	c) Neutron	d) Caliper	d
87	Who postulated the <i>Principle of Uniformitarianism</i> ?				James Hutton
	a) James Hutton	b) Nicholas Steno	c) Charles Lyell	d) Einstein	a
88	Match the geologic time with their examples.				A-iv, B-i, C-ii, D-iii
	A. Eon		i. Palaeozoic		
	B. Era		ii. Palaeogene		
	C. Period		iii. Miocene		
	D. Epoch		iv. Proterozoic		

	a) A-i, B-iv, C-iii, D-ii	b) A-i, B-iv, C-ii, D-iii	c) A-iv, B-i, C-ii, D-iii	d) A-iv, B-i, C-iii, D-ii	c								
89	Which of the following statements about the Dharwar Craton is/are TRUE ? A. Gorur Gneiss is the oldest lithotectonic unit. B. Grade of metamorphism increases from south to north. C. Greenstone belt is abundantly present in Eastern Dharwar craton. D. Eastern and Western Dharwar Craton are divided by the east-west trending Chitradurga Shear Zone.				A only								
	a) A only	b) A and B only	c) A and D only	d) A, B and C only	a								
90	For the following Assertion (A) and Justification (B), choose the correct option. A: Amgaon and Sukma Groups are considered to be oldest supracrustal in Bastar craton. B: However, their lithounits are not comparable.				Both A and B are true, but B is not the correct explanation								
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	b								
91	Which craton consist of major chromite deposit of India?				Singhbhum								
	a) Dharwar	b) Bastar	c) Singhbhum	d) Bundelkhand	c								
92	What is the oldest group in Cretaceous succession of Trichinopoly?				Uttatur								
	a) Niniyur	b) Ariyalur	c) Trichinopoly	d) Uttatur	d								
93	Which one of the following is an index fossil?				Paradoxides								
	a) Paradoxides	b) Nautilus	c) Turbo	d) Nautila	a								
94	Match the dentition pattern of Lamellibranch to their examples. <table border="1"><tr><td>A. Taxodont</td><td>i. Pecten</td></tr><tr><td>B. Dysodont</td><td>ii. Arca</td></tr><tr><td>C. Isodont</td><td>iii. Trigonia</td></tr><tr><td>D. Schizodont</td><td>iv. Mytilus</td></tr></table>				A. Taxodont	i. Pecten	B. Dysodont	ii. Arca	C. Isodont	iii. Trigonia	D. Schizodont	iv. Mytilus	A-ii, B-iv, C-i, D-iii
A. Taxodont	i. Pecten												
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	a) A-i, B-iii, C-iv, D-ii	b) A-iv, B-iii, C-i, D-ii	c) A-ii, B-iv, C-i, D-iii	d) A-iii, B-iv, C-i, D-ii	c								

95	Which of the following statements about gastropod shell is/are TRUE ?				D only
A. The coiling pattern is essentially sinistral. B. The term spire represents all the whorls in the shell. C. Spire angle is essentially obtuse. D. Animal lives in last whorl.					
	a) A only	b) A, B and C only	c) A and D only	d) D only	d
96	For the following Assertion (A) and Justification (B), choose the correct option. A: Suture pattern in cephalopods vary within the class. B: Suture pattern is used in biostratigraphy and in evolutionary studies.				Both A and B are true, but B is not the correct explanation
	a) Both A and B are true, and B is the correct explanation	b) Both A and B are true, but B is not the correct explanation	c) A is True but B is false	d) Both A and B are false	
97	Which one of the following is a living fossil?				lamprey
	a) apirifer	b) orthoceras	c) holoctypus	d) lamprey	d
98	The smaller valve of the brachiopod shell is known as _____. (Choose the correct option to fill in the blank)				brachial valve
	a) brachial valve	b) pedicle valve	c) lophophore	d) ventral valve	a
99	What kind of product is dominantly ejected through cinder cones?				pyroclastic material
	a) lava flow	b) gas	c) pyroclastic material	d) lava flow and gas	c
100	Match the rock type with their corresponding major minerals.				A-ii, B-iii, C-iv, D-i
A. Granite		i. Feldspar			
B. Basalt		ii. Feldspar + quartz			
C. Peridotite		iii. Feldspar + pyroxene			
D. Syenite		iv. Olivine + pyroxene			
	a) A-iii, B-ii, C-i, D-iv	b) A-ii, B-iii, C-iv, D-i	c) A-iii, B-ii, C-iv, D-i	d) A-iii, B-ii, C-i, D-iv	b