



PART – A

1. Fill one appropriate article in the following:

It was _____ honour for people to be the part of the freedom Movement.

- A) an B) on C) the D) a

2. A Compound word is

- A) two words joined together B) two words separate from each other
C) two words contrary in meaning D) two words similar in meaning

3. A symbol is

- A) an object that stands for other than itself
B) that stands for itself
C) that stands for nothing
D) that stands for everything

4. Choose correct expression from the following

- A) My mother was very young when my father marry her
B) My mother was very young when my father married her
C) My mother was very young when my father did marry her
D) My mother was very young when my father got married her

5. Which of the given spellings is correct ?

- A) Mississippi B) Misissippi
C) Missisippi D) Mississipi

6. What is meant by 'to do away' ?

- A) to send away B) to abolish
C) to cut off D) to make up

7. The play Tuglaq was written by

- A) Mahesh Dattani B) Anita Desai
C) Chaman Nahal D) Girish Karnad

8. The heroine in R.K. Narayan's Guide is a

- A) Musician B) Painter C) Dancer D) Teacher

9. Who authored the novel A Salt Doll ?

- A) A.K. Ramanujan B) Kamala Das
C) Molly Ramanujan D) Nayantara Sehgal



10. The epical poem Savitri was written by
A) Gorakshnath
B) Dayanand Saraswati
C) Aurobindo Ghosh
D) Swami Vivekananda
11. The playground of baseball is known as
A) court
B) diamond
C) ring
D) pitch
12. The Indian to beat the computers in mathematical wizardry is
A) Ramanujam
B) Ran Panigrahi
C) Raja Ramanna
D) Shakunthala Devi
13. Which of the following temple was built by the Cholas ?
A) Shore Temple, Mahabalipuram
B) Brihadeeswara Temple, Tanjavur
C) Sun Temple, Konark
D) Meenakshi Temple, Madurai
14. The Export Import (EXIM) Bank was set up in
A) 1980
B) 1982
C) 1981
D) 1989
15. The Chairman of Bank Board Bureau is
A) Shri Vinod Dua
B) Shri Vinod Khanna
C) Shri Vinod Rai
D) Shri Vinod Shastri
16. If a,b,c are integers; $a^2 + b^2 = 45$ and $b^2 + c^2 = 40$, then the values of a,b and c respectively are
A) 2,6,3
B) 3,6,2
C) 5,4,3
D) None of these
17. A student secures 90%, 60% and 54% marks in test papers with 100,150 and 200 respectively as maximum marks. The percentage of his aggregate is
A) 64
B) 68
C) 70
D) 72
18. A sum was put at simple interest at a certain rate for 3 years. Had it been put at 2% higher rate, it would have fetched Rs. 360 more. Find the sum.
A) Rs. 8,000
B) Rs. 7,000
C) Rs. 6,000
D) Rs. 5,000



35. What is the name of the raised area formed adjacent to stream channel due to frequent flooding and overbank deposition ?
A) Crevasse B) Point bar C) Levee D) Oxbow Lake
36. Stream which flows in the opposite direction to the original consequent streams are described as
A) Obsequent B) Subsequent C) Insequent D) Resequent
37. Which process of chemical weathering causes rusting of iron ?
A) Oxidation B) Carbonation C) Hydration D) Dissilication
38. The average gravitational force of the earth is
A) 980 m/s^2 B) 980 cm/s^2 C) 9800 cm/s^2 D) 980 cm/s
39. The oldest minerals found on the surface of the Earth are crystals of
A) Calcite B) Quartz C) Tourmaline D) Zircon
40. The difference between the equatorial and polar diameters of the Earth is
A) 21 km B) 43 km C) 56 km D) 28 km
41. The “ring of fire” refers to the location of earthquakes and volcanoes ?
A) Along the rim of Pacific Ocean
B) On the Hawaiian Islands
C) Along the mid-North Atlantic seafloor
D) Surrounding the Indian Ocean
42. Nazca Plate lies
A) West of South America B) East of South America
C) East of North America D) West of North America
43. The San Andreas Fault is an example of a _____ fault.
A) Normal B) Reverse
C) Right-lateral strike slip D) Thrust
44. When two continental plates collide they form
A) Island series B) Island arcs
C) Mountain Chain D) both A and B
45. The amplitude of seismic waves in an earthquake of magnitude 2 on the Richter scale is larger than that of an earthquake of magnitude 1 by
A) 100 times B) 10 times C) 2 times D) 50 times



46. Which of the following is a strike-slip fault ?
- A) Normal fault B) Reverse fault
C) Thrust fault D) Transform fault
47. Gutenberg Discontinuity in the interior of the Earth occurs at the depth of
- A) 35 km B) 800 km C) 2900 km D) 5200 km
48. The strata dip in one direction at uniform angle, the fold is called
- A) Anticlinal fan fold B) Homoclinal fold
C) Isoclinal fold D) Inverted fold
49. The joints developed in igneous rocks during cooling and compaction of the magma mass are called
- A) Master Joints B) Primary Joints
C) Conjugate Joints D) Both (A) and (B)
50. The joints whose strikes are parallel to the dip of the bedding plane are called
- A) Bedding Joints B) Dip Joints
C) Strike joints D) Both (B) and (C)
51. Which of the following is an ore mineral of uranium ?
- A) Sphalerite B) Pitchblende C) Cassiterite D) Wolframite
52. The Monazite sands of Kerala are rich in
- A) Uranium B) Thorium C) Platinum D) Gold
53. Khetri mines famous for
- A) Diamond B) Copper C) Iron D) Bauxite
54. Ruby and sapphire are gems names for the mineral
- A) Corundum B) Beryl C) Garnet D) Topaz
55. Which one of the following minerals cannot be used as an abrasive ?
- A) Garnet B) Quartz C) Corundum D) Gypsum
56. The source/carrier rock for diamonds is called
- A) Granite B) Kimberlite C) Kaesurtite D) Rhyolite
57. Which state in India is the largest producer of Bauxite ?
- A) Jharkhand B) Madhya Pradesh
C) Maharashtra D) Odisha



58. Permeability is
- A) Percentage of pore space in the rock
 - B) Ability of a solid to allow fluids to pass through
 - C) Process by which plants release water vapor to the atmosphere
 - D) Amount of water vapor in the air relative to the maximum amount of water vapor the air can hold
59. Hard water contains large amounts of
- A) Lead
 - B) Sodium
 - C) Calcium
 - D) Silicon
60. The reservoir rock for petroleum in Bombay High is
- A) Feldspathic sandstone
 - B) Greywacke
 - C) Limestone
 - D) Orthoquartzite
61. Which of the following rocks can form good aquifers ?
- A) Sandstone and highly jointed granite
 - B) Sandstone and massive granite
 - C) Sandstone and shale
 - D) Shale and massive granite
62. In hydrological context, geological unit that can neither store nor transmit water is called
- A) aquifer
 - B) aquitard
 - C) aquiclude
 - D) aquifuge
63. Which of the following is a fresh water lake ?
- A) Wuler
 - B) Chilka
 - C) Pulicat
 - D) Sambher
64. Greenhouse effect will lead to
- A) An increase in Oxygen Production
 - B) An increase in the temperature
 - C) Decrease in atmospheric pressure
 - D) Greater rainfall
65. Layer of atmosphere in which Ozone layer lies is
- A) Troposphere
 - B) Stratosphere
 - C) Mesosphere
 - D) Exosphere
66. One which is not considered as naturally occurring greenhouse gas is
- A) Carbon dioxide
 - B) Methane
 - C) Nitrous oxide
 - D) Ethane
67. Annual ozone hole is located on continent
- A) Antarctica
 - B) South America
 - C) North America
 - D) Africa



68. Which of the following is a fresh water fossil ?
A) Physa B) Cerethium C) Nucula D) Ammonite
69. The most favorable environment for the preservation of fossils is
A) Terrestrial B) Lacustrine C) Fluvial D) Marine
70. Fossil fecal pellets of ancient animals are described as
A) Gastroliths B) Coproliths C) Beekiterings D) Pseudo-fossils
71. The final extinction of Trilobite was in
A) Permian period B) Carboniferous period
C) Devonian period D) Triassic period
72. The first fundamental generalization of stratigraphy is
A) Order of superposition B) Principle of uniformitarianism
C) Law of Faunal succession D) Stratigraphic analysis
73. Which of the following is the oldest formation ?
A) Kasauli formation B) Subathu formation
C) Dagshai formation D) Pinjor formation
74. Eparchean unconformity separates geological units of
A) Early Archaean from Late Archaean
B) Archaean from Proterozoic
C) Proterozoic from Palaeozoic
D) Archaean from Phanerozoic
75. When did the supercontinent Pangaea begin to break up ?
A) Cenozoic B) Mesozoic C) Palaeozoic D) Proterozoic
76. Absolute ages of rocks can be determined by
A) correlating fossils B) radiometric dating
C) principles of stratigraphy D) correlating lithology
77. The Devonian marker horizon in the Himalayas is known as
A) Lipak Formation B) Muth Quartzite
C) Po Formation D) Syringothyris Limestone
78. Which one of the following is a Lower Gondwana flora?
A) Gangamopteris B) Ptilophyllum
C) Otozamites D) Nilssonia



79. Select the correct stratigraphic sequence of the Vindhyan Supergroup
- A) Semri – Kaimur – Rewa – Bhandar
 - B) Rewa – Bhandar – Kaimur – Semri
 - C) Semri – Rewa – Kaimur – Bhandar
 - D) Semri – Bhandar – Rewa – Kaimur
80. Which one of the following assemblages is characteristic of the eclogite facies ?
- A) Hornblende + Plagioclase + Staurolite
 - B) Orthopyroxene + Clinopyroxene + Plagioclase (no Staurolite, no Muscovite)
 - C) Omphacite + garnet (no plagioclase)
 - D) Actinolite + chlorite + epidote + albite
81. Relationship between the grain size measurement in ϕ (phi) scale and d(in mm) scale is
- A) ϕ (phi) = $-\log_2 d$
 - B) ϕ (phi) = $-\log_{10} d$
 - C) ϕ (phi) = $\log_{10} d$
 - D) ϕ (phi) = $-1 \ln d$
82. Which of the following sedimentary structures is erosional in nature?
- A) Cross stratification
 - B) Flute casts
 - C) Graded bedding
 - D) Ripple Marks
83. The pressure-temperature ranges of the metamorphic facies
W: Granulite, X: Zeolite, Y: Amphibolite, Z: Greenschist
Increase in the order
- A) X<Y<Z<W
 - B) X<W<Y<Z
 - C) X<Z<Y<W
 - D) X<Y<W<Z
84. Which of the following sedimentary rocks is/are formed by chemical precipitation ?
W: Limestone, X: Chert, Y: Sandstone, Z: Shale
- A) W only
 - B) both W and X
 - C) both W and Y
 - D) both X and Z
85. The basaltic lava flow having ropy and wavy surface is known as
- A) aa
 - B) pahoehoe
 - C) tuff
 - D) volcanic breccia
86. Exsolution texture results from
- A) eutectic crystallization
 - B) phase separation in the solid state
 - C) crystallization following phase separation
 - D) replacement



87. Match the following:

Group I (Silicate Structure)	Group II (Mineral)
W. Nesosilicate	1. Muscovite
X. Cyclosilicate	2. Quartz
Y. Phyllosilicate	3. Forsterite
Z. Tectosilicate	4. Beryl

A) W – 1, X – 2, Y – 3, Z – 4
B) W – 4, X – 3, Y – 2, Z – 1
C) W – 3, X – 4, Y – 1, Z – 2
D) W – 2, X – 1, Y – 4, Z – 3

88. Optic axis is defined as the direction or directions along which

- A) there is a double refraction
- B) there is no double refraction
- C) the ordinary ray travels
- D) the extra ordinary ray travels

89. Which of the following mineral groups does not belong to nesosilicate ?

- A) Olivine group
- B) Garnet group
- C) Epidote group
- D) Zircon group

90. Quartz can be optically distinguished from nepheline based on

- A) relief
- B) optic sign
- C) birefringence
- D) extinction angle

91. Light that travels through an isotropic material is always

- A) split into 2 rays
- B) polarized
- C) doubly refracted
- D) none of the above

92. Which of the following statements about feldspar is false ?

- A) Feldspar is the most abundant mineral in the Earth's crust.
- B) Feldspar is a sheet silicate.
- C) Feldspar is harder than calcite
- D) Feldspar is softer than corundum

93. Optically biaxial minerals does not crystallize in

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



94. Which of the following is NOT true of a single silica tetrahedron?
- A) the atoms of the tetrahedron are strongly bonded together
 - B) it has a net negative charge
 - C) it has four silicon atoms
 - D) it has four oxygen atom
95. The plane by which twinned crystals are united is called the
- A) mirror plane
 - B) glide plane
 - C) twin plane
 - D) composition plane
96. Group I contains some minerals and Group II gives a list of crystal systems. Find the correct match.
- | Group I | Group II |
|-----------------------|-----------------------|
| W. Gypsum | 1. Hexagonal |
| X. Beryl | 2. Triclinic |
| Y. Galena | 3. Monoclinic |
| Z. Axinite | 4. Isometric |
| A) W-3, X-2, Y-4, Z-1 | B) W-1, X-3, Y-4, Z-2 |
| C) W-2, X-1, Y-4, Z-3 | D) W-3, X-1, Y-4, Z-2 |
97. If a crystal face has Weiss parameters of $1a, 2b, 1/2c$, its Miller indices will be
- A) (124)
 - B) (214)
 - C) (421)
 - D) (412)
98. The highest symmetry elements of any crystal system is shown by
- A) hemihedral form
 - B) holohedral form
 - C) tetratohedral form
 - D) hemimorphic form
99. Which of the following crystal faces always meet only one crystallographic axis and remains parallel to other two/three ?
- A) Pinacoid face
 - B) Prism face
 - C) Pyramid face
 - D) Pedion
100. Dihexagonal-dipyramid composed of _____ faces.
- A) 8 faces
 - B) 16 faces
 - C) 12 faces
 - D) 24 faces
-



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