



## PART – A

1. Arrange the given words in alphabetical order and choose the one that comes first.

- A) Qualify                      B) Quarter                      C) Quarrel                      D) Quarry

**Direction Q. 2:** A foreign expression and four English phrases are given. Identify the meaning of the foreign expression from the choices.

2. ex officio

- A) Unofficial    B) By virtue of official  
C) A retired official    D) Make public

**Direction Q. 3:** Identify the meaning of underlined word as used in the sentence, from among four alternatives.

3. As the result came in, all the party workers were in a jubilant mood and began to rejoice.

- A) propagate    B) exclaim  
C) applaud    D) celebrate

**Direction Q. 4:** An idiom and four possible meanings are given, identify the correct meaning of the idiom from among the answer choices.

4. Cut no ice

- A) feel uncomfortable    B) come to nothing  
C) to fail    D) have no influence or effect

**Direction Q. 5:** Fill in the blanks in the given sentence to make it logically and grammatically correct.

5. A lot of people believe that perspiration \_\_\_\_\_ body odour.

- A) promotes                      B) results in                      C) makes                      D) causes

**Direction Q. 6 :** A sentence is written in four different forms. Only one of them is grammatically correct. Choose the correct sentence as your answer.

6. A) This problem affects each and everyone of us.  
B) This problem affects each and every one of us.  
C) This problem affects each one of us.  
D) This problems affects each and everyone of us.



**Direction Q. 7:** Four alternative substitutes are given for the underline portion. Identify the choice that replace the underline part to form a logical and grammatically correct statement.

7. The course is going to start on January 20<sup>th</sup>.

- A) is going to start by
- B) is going to be started on
- C) starts on
- D) starting on

**Direction Q. 8:** A word and four jumbled choices are given. One of the choices, when properly arranged, give the meaning of the word. Identify the correct choice.

8. FANTASTIC

- A) TIAIRLSIC
- B) BDCINREILE
- C) ALCER
- D) YNIMIAGAR

**Direction Q. 9:** From the choices, select the most suitable synonym for the main word.

9. SURROGATE

- A) influence
- B) nourish
- C) substitute
- D) indicate

**Direction Q. 10:** From the choices, select the most suitable antonym for the main word.

10. DOCILE

- A) painful
- B) hesitant
- C) obdurate
- D) silent

**Direction Q. 11:** There is a certain relation between two given words on one side of :: and one word is given on another side of :: while another word is to be found from the given alternatives , having the same relation with this word as the given pair has. Select the best alternative.

11. Gun : Bullet :: Chimney : ?

- A) Ground
- B) House
- C) Roof
- D) Smoke

**Direction Q. 12:** There is a certain relation between two given numbers on one side of :: and one number is given on another side of :: while another number is to be found from the given alternatives , having the same relation with this number as the given pair has. Select the best alternative.

12. 21 : 3 :: 574 : ?

- A) 23
- B) 82
- C) 97
- D) 113



**Direction Q. 13:** In the given question, four words have been given, out of which three are alike in some manner and the fourth one is different. Choose out the odd one.

13. A) Snake                      B) Whale                      C) Crocodile                      D) Lizard

**Direction Q. 14:** In the given question, four numbers are given. Out of these, three are alike in a certain way but the rest one is different. Choose the one which is different from the rest three.

14. A) 51                              B) 144                              C) 64                              D) 121

**Direction Q. 15:** In the given question, a number series is given with one term missing. Choose the correct alternative that will continue the same pattern.

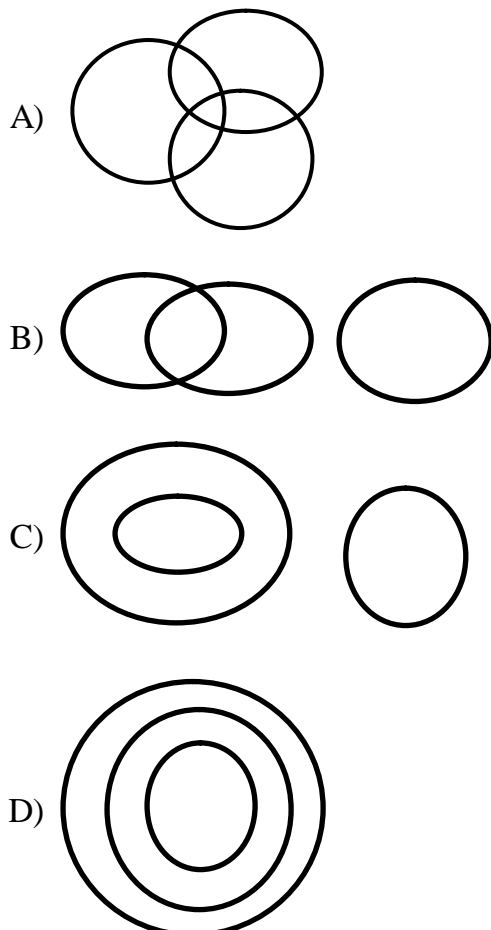
15. 3,9,27,81, (...)

- A) 324                              B) 243                              C) 210                              D) 162

16. If in a certain language, COMPUTER is coded as RFUVQNPC, how is MEDICINE coded in that code ?

- A) EOJDJEFM                      B) EOLDEJFM                      C) MFEJDJOE                      D) MFEDJJOE

17. Which of the following diagrams correctly represents Judge, Thief, Criminal ?





18. A number is doubled and 9 is added. If the resultant is trebled, it becomes 75.  
What is that number ?  
A) 3.5                      B) 6                      C) 8                      D) none of these
19.  $40\% \text{ of } 1640 + ? = 35\% \text{ of } 980 + 150\% \text{ of } 850$   
A) 372                      B) 842                      C) 962                      D) 1052
20. If  $a : b : c = 4 : 1 : 2$  and  $(a + b + c) = 14$ , then the value of  $c$  is  
A) 6                      B) 7                      C) 8                      D) 4
21. In what time, will a train 100 meters long cross an electric pole, if its speed be 144 km/hr ?  
A) 2.5 seconds              B) 4.25 seconds              C) 5 seconds              D) 12.5 seconds
22. Who has clinched the 2017 women's singles India Super Series Badminton Tournament ?  
A) Sung-Ji-Hyuan                      B) P. V. Sindhu  
C) Saina Nehawal                      D) Carolina Marin
23. Which Institute has topped the 2017 National Institutional Ranking Framework (NIRF) ratings for higher standards institutions ?  
A) Indian Institute of Science, Bangalore  
B) Indian Institute of Technology, Chennai  
C) Indian Institute of Technology, Mumbai  
D) Indian Institute of Technology, Kharagpur
24. The National Girl Child Day is observed every year on  
A) 26<sup>th</sup> January  
B) 24<sup>th</sup> January  
C) 22<sup>nd</sup> January  
D) 20<sup>th</sup> January
25. Koteswar Hydro Electric Project is located in  
A) Kerala  
B) Uttar Pradesh  
C) Uttrakhand  
D) Rajasthan



26. Concept of Impact Factor was given by
- A) Jorge Hirsch
  - B) Eugene Garfield
  - C) Henry Maxwell
  - D) None
27. Plagiarism is
- A) using the ideas and words of someone else as my own work
  - B) result of a new experiments
  - C) calculation of the H-index
  - D) conducting filed level experiments
28. Which one is not an example of Applied Research ?
- A) curing a specific disease
  - B) improving agricultural crop production
  - C) determination of boiling point of a liquid
  - D) improving the energy efficiency of cars
29. Bibliography is
- A) A list of chemicals used in research
  - B) A list of references cited in a research paper
  - C) Affiliations of the authors in a research paper
  - D) None of the above
30. H-index can be calculated for
- A) an individual researcher
  - B) a university department
  - C) whole university
  - D) all of the above
31. A researcher reproduces a 50 word passage from a cited work but replaces 10 words from the original passage with synonyms. This is an example of
- A) Secondary data
  - B) H-index
  - C) Paraphrasing
  - D) Impact factor
32. Which of the following is not considered to be an example of scientific misconduct ?
- A) Fabrication of data
  - B) Authorship on a project that you did not work
  - C) Plagiarism
  - D) Publishing a table of data with a typographical error



33. Which one of the following tools is used for quantitative research ?
- A) Open ended questions
  - B) Check list
  - C) Focus depth interviews
  - D) Observations
34. Which of the following is non-parametric test ?
- A) t-test
  - B) ANOVA
  - C) Chi-square test
  - D) All of the above
35. An independent t-test can be used to assess which of the following ?
- A) It assesses goodness of fit
  - B) It assesses relationships between two interval data sets
  - C) It assesses how many factors there are in questionnaire data
  - D) All of the above
36. Class of variable which can accept only values from set of integers is classified as
- A) Discrete random variable
  - B) Continuous random variable
  - C) Posterior random variable
  - D) All of the above
37.  $10^{-12}$  is called as
- A) Mega
  - B) Terra
  - C) Pica
  - D) Giga
38. Chi-square curve ranges from
- A)  $-\infty$  to  $+\infty$
  - B) 0 to  $\infty$
  - C)  $-\infty$  to 0
  - D) 0 to 1
39. The straight line graph of the linear equation  $Y = a + bX$ , slope will be upward if:
- A)  $b = 0$
  - B)  $b < 0$
  - C)  $b > 0$
  - D)  $b \neq 0$
40. Histogram is a graph of
- A) Time series
  - B) Frequency distribution
  - C) Qualitative data
  - D) Ogive



41. A circle in which sectors represents various quantities is called
- A) Histogram  
B) Frequency Polygon  
C) Component Bar chart  
D) Pie Chart
42. SPSS is a
- A) Computer hardware used in mouse  
B) Software package used for data analysis  
C) Chemical used in experiments  
D) International organization
43. The correlation coefficient is used to determine
- A) A specific value of the y-variable given a specific value of the x-variable  
B) A specific value of the x-variable given a specific value of the y-variable  
C) The strength of the relationship between the x and y variables  
D) None of these
44. When regression line passes through the origin then
- A) Regression coefficient is zero  
B) Correlation is zero  
C) Association is zero  
D) Intercept is zero
45. In a set of observations, unusual lower and higher values are called as
- A) Outliers  
B) Central liners  
C) Median liners  
D) Free liners
46. The median value for the below given data set :  
(13, 18, 13, 14, 13, 16, 14, 21, 13) is
- A) 9  
B) 13  
C) 14  
D) 15
47. The probability of an event cannot be
- A) 0.3  
B) 0.5  
C) - 0.5  
D) 1.0
48. Normal distribution is
- A) Platykurtic  
B) Mesokurtic  
C) Leptocurtic  
D) All of the above
49. Which of the following is an example of a secondary source of information ?
- A) Experiment  
B) Survey  
C) Journal  
D) Questionnaire
50. Hypothesis tests are designed so that the \_\_\_\_\_ hypothesis will be rejected.
- A) null  
B) alternative  
C) alpha  
D) beta



PART – B

51. Sphene is \_\_\_\_\_  
A) Magnesium silicate                      B) Calcium iron silicate  
C) Calcium titanate silicate              D) Iron titanate silicate
52. Amphiboles are \_\_\_\_\_  
A) Hydrated ferro - magnesian silicates      B) Ferro magnesian silicates  
C) Potassium - aluminium silicates          D) Hydrated alumino silicates
53. Mica belongs to \_\_\_\_\_  
A) Nesosilicate              B) Sorosilicate              C) Phyllosilicate      D) Inosilicate
54. Kaolinite results from the alteration of the \_\_\_\_\_  
A) Quartz                      B) Feldspars              C) Micas                      D) Amphiboles
55. Rock crystal is a transparent variety of \_\_\_\_\_  
A) Quartz                      B) Feldspars              C) Garnet                      D) Corundum
56. In the SOI toposheet of 1:50,000 scale, how many meters represented by 1 cm ?  
A) 1000m                      B) 500m                      C) 250m                      D) 100m
57. The amount of horizontal displacement in a normal fault is called as \_\_\_\_\_  
A) Throw                      B) Heave                      C) Tear                      D) Strike
58. Consider the following minerals :  
1. Corundum  
2. Quartz  
3. Topaz
- What is the correct sequence of the above in terms of descending order of their hardness ?  
A) 1 – 2 – 3                      B) 2 – 3 – 1                      C) 1 – 3 – 2                      D) 3 – 1 – 2
59. Open folds are those in which the angle between the two limbs of the fold is \_\_\_\_\_  
A)  $> 90^\circ$  but  $< 180^\circ$                       B)  $> 75^\circ$  but  $< 150^\circ$   
C)  $> 45^\circ$  but  $< 90^\circ$                       D)  $> 120^\circ$  but  $< 210^\circ$





60. Among the following pairs of mineral deposits and their location, which of the following pair is/are matched correctly ?
1. Chromite-Cuttack
  2. Gold- Hutti
  3. Apatite-KGF
  4. Gypsum-Ananthapur
- A) 1, 2 and 3                      B) 1 and 2 only                      C) 1,2,3 and 4                      D) 3 and 4 only
61. Quartz is commonly found in sedimentary rocks because it
- A) Is not found in the mantle                      B) Is resistant to weathering
- C) Does not possess any cleavage planes                      D) Is commonly found in igneous rocks
62. The brittle deformation in rock where no displacement (movement) occurs is a
- A) Dip-slip fault                      B) Strike-slip fault                      C) Joint                      D) Oblique-slip fault
63. Which of the following sedimentary environment would produce a graded bed ?
- A) Glaciers                      B) Lacustrine                      C) Swamp                      D) Turbidity flow
64. Identify the correct sequence for the rank of coal from lowest to highest ?
- A) Bituminous-anthracite-lignite-peat                      B) Peat - lignite - bituminous - anthracite
- C) Peat -lignite-anthracite-bituminous                      D) Anthracite - bituminous - lignite - peat
65. Which of the following radioactive isotope method is not suitable for dating the Precambrian rocks ?
- A)  $^{14}\text{C}$                       B) Rb/Sr method
- C) Sm/Nd method                      D) U-Pb method
66. What is the flow pattern of the river system that resembles the tree branch ?
- A) Trellis pattern
- B) Dendritic pattern
- C) Radial pattern
- D) Rectangular pattern
67. Which of the following symbol is used to denote tetragonal axis of symmetry ?





68. Which of the following discontinuity is found between outer core and Inner core ?  
A) Mohorovicic      B) Conrad      C) Repetti      D) Lehman
69. What is the mean orbital velocity of the earth ?  
A) 29.80 km/sec      B) 18.50 km/sec      C) 22.50 km/sec      D) 33.50 km/sec
70. Galilean moons are  
A) Moons of Mars      B) Moons of Saturn  
C) Moons of Jupiter      D) Moons of Earth
71. Which of the following is an expendable mineral ?  
A) Gold      B) Magnetite  
C) Galina      D) Petroleum
72. The path finder element for gold is  
A) As      B) Hg      C) Mo      D) Ag
73. Which of the following metal in India is recovered mainly as by product ?  
A) Iron      B) Copper      C) Silver      D) Lead
74. Exclusive Economic Zone (EEZ) extends up to \_\_\_\_\_ nautical miles.  
A) 200      B) 250      C) 300      D) 350
75. Standard thickness of a mineral section is \_\_\_\_\_ mm.  
A) 0.30      B) 0.03      C) 0.33      D) 3.00
76. The grade of the ore below which the economic mining is not feasible is called as \_\_\_\_\_ grade.  
A) Mill      B) Cut-off      C) Average      D) Mining
77. Choose the odd one out from below  
A) Level      B) Raise      C) Cross cut      D) Floatation
78. Porous and pervious rock in which oil and natural gas remained trapped is known as \_\_\_\_\_ rock.  
A) Reservoir      B) Cap      C) Trap      D) Reserved
79. The tax imposed on the value of the mineral removed from the ground is known as  
A) Property tax      B) Royalty      C) Income tax      D) Reserve tax





91. Blind valley is  
A) Depositional in Krast area                      B) Erosional land form  
C) Steep valley    D) Surface runoff
92. Which of the following Brachiopod genera is considered as 'living fossil' ?  
A) Lingula                      B) Productus                      C) Atrypa                      D) Spirifer
93. Index fossil are those which have  
A) Short geological range and short geographical range  
B) Wide geological range and very wide geographical range  
C) Short geological range and very wide geographical range  
D) Wide geological range and short geographical range
94. Which of the following flora belongs to lower Gondwana ?  
A) Gangamopteris              B) Cladophlebis              C) Sphenopteris              D) Ptilophyllum
95. The skeleton of entire corolla colony is called as  
A) Corralite                      B) Corralium                      C) Columellea              D) Rhabdosome
96. The oldest rocks in India are  
A) More than 3 billion years old                      B) 2.5 to 3.0 billion years old  
C) 2.5 to 2.0 billion year old                      D) More than 2.0 billion year old
97. The coal reserves of India dominantly found in \_\_\_\_\_ Super group of rocks.  
A) Cuddapah                      B) Vindhyan                      C) Gondwana                      D) Dharwar
98. Which of the following Group/ stratigraphic unit does NOT lie within the Dharwarcraton ?  
A) Babudan group                      B) Closepet granite  
C) Chitradurga group                      D) Kairagarh volcanic
99. Eparchean unconformity separates the geological units of  
A) Early Archaean to late Archaean              B) Archaean to Proterozoic  
C) Proterozoic to Paleozoic                      D) Archaean to Panerozoic
100. Sargur Group rocks are  
A) Older than Dharwars                      B) Younger than Dharwars  
C) Younger than Closepet granite              D) Equivalent to Dharwars
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**SPACE FOR ROUGH WORK**