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GENERAL KNOWL	EDGE AND ELEMENT.	ARY MATHEMATICS
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SEAL

PART—A GENERAL KNOWLEDGE

- 1. What is 'Coro-bot'?
 - (A) An American robotic technology to detect the presence of COVID-19 virus among patients
 - (B) An Indian robot developed to reduce physical contact of caregivers with COVID-19 patients
 - (C) A robot for testing the efficacy of COVID vaccines
 - (D) An Indian robotic technology for collecting COVID-19 related data during fieldwork
- 2. Which Article(s) in the Indian Constitution is/are related to the State Public Service Commissions in India?
 - (A) Article 76
 - (B) Article 324
 - (C) Article 315-323
 - (D) Article 350 B
- **3.** Who is the present Attorney General of India?
 - (A) M. C. Setalvad
 - (B) K. K. Venugopal
 - (C) Nand Kumar Sai
 - (D) N. K. Singh
- **4.** Which of the following is a Non-Constitutional body in India?
 - (A) Election Commission
 - (B) NITI Aayog
 - (C) Finance Commission
 - (D) UPSC (D) (D)

- 5. Gauhati High Court looks after the jurisdiction of how many states?
 - (A) 2
 - (B) 3
 - (C) 4
 - (D) 5
- 6. Which bank aims to attract skilled and talented persons who can work with the bank remotely from any part of the country through the initiative named 'GIG-A—Opportunities'?
 - (A) State Bank of India
 - (B) Reserve Bank of India
 - (C) HDFC
 - (D) Axis Bank
- **7.** Which tiger reserve in the country has been declared as UNESCO biosphere reserve?
 - (A) Panna Tiger Reserve
 - (B) Kamlang Tiger Reserve
 - (C) Orang Tiger Reserve
 - (D) Periyar Tiger Reserve
- 8. In which north-eastern state of India has the light emitting species of mushroom been found?
 - (A) Assam
 - (B) Arunachal Pradesh
 - (C) Meghalaya
 - (D) Tripura

- **9.** Which e-commerce giant has signed a MOU with the Department of MSME and Mines of Government of Karnataka for promoting the state's arts, crafts and handloom?
 - (A) Amazon
 - (B) Flipkart
 - (C) Snapdeal
 - (D) eBay

10. What is the full form of SEZ?

- (A) Specified Environmental Zone
- (B) Special Environment Zone
- (C) Special Economic Zone
- (D) Special Entrepreneurial Zone
- 11. Which of the following is true about the UNCTAD "World Investment Report 2020"?
 - (A) Global FCI is projected to increase in 2021
 - (B) Among developed countries, FDI flows to Europe is expected to rise by 30% to 45%
 - (C) Developing economies are expected to see the biggest fall in FDI
 - (D) Global FDI will have recovery in 2025
- **12.** Who is the author of *Future of Higher Education – Nine Mega Trends*?
 - (A) Franz Alt
 - (B) CA V. Pattabhi Ram
 - (C) Urjit Patel
 - (D) Anand Basu

13. Who is the current Chief Justice of India?

- (A) N. V. Ramana
- (B) H. J. Kania
- (C) Ranganath Mishra
- (D) Ranjan Gogoi
- 14. What is the maximum number of members in the Rajya Sabha?
 - (A) 238
 - (B) 245
 - (C) 250
 - (D) 254
- **15.** Which is one of the requirements of Arjuna Award to be conferred upon a sportsperson?
 - (A) Consistent outstanding performance over a period of three years
 - (B) Consistent outstanding performance over a period of four years
 - (C) Consistent outstanding performance as a coach
 - (D) Consistent outstanding performance in more than one sports for three years
- **16.** Which of the following state is a Language Hotspot of the country, India?
 - (A) Andaman and Nicobar Islands
 - (B) Tamil Nadu
 - (C) Arunachal Pradesh
 - (D) Odisha

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17. When is National Farmers' Day observed in India?

- (A) 10th December
- (B) 23rd December
- (C) 31st October
- (D) 19th August

18. 'Kathakali' is a dance form which has originated from the state of

- (A) Karnataka
- (B) Odisha
- (C) Kerala
- (D) Tamil Nadu
- **19.** Which artist won the Best New Artist at the 63rd Grammy Awards?
 - (A) Beyonce
 - (B) Megan Thee Stallion
 - (C) Billy Eilish
 - (D) Taylor Swift
- **20.** Which security force has deployed female doctors at forward locations in Ladakh for the first time ever?
 - (A) SSB
 - (B) NSG
 - (C) BSF
 - (D) ITBP
- **21.** Which Labour Law, 2020 has replaced thirteen existing laws?
 - (A) Code on Wages
 - (B) Social Security Code
 - (C) The Occupational Safety, Health and Working Conditions Code
 - (D) None of the above

- **22.** Who appoints the Judges of the High Courts in India?
 - (A) The President
 - (B) The Prime Minister
 - (C) The Cabinet
 - (D) The Rajya Sabha
- 23. Where is Morse Code used?
 - (A) Telephone
 - (B) Telegram
 - (C) Satellite Navigation
 - (D) Computers
- 24. 'Fisheries' are included under which Policy Objective?
 - (A) Ecosystem Vitality
 - (B) Environmental Health
 - (C) Waste Management
 - (D) Pollution Emissions
- **25.** 'Apple' is a trademark related to which country?
 - (A) China
 - (B) UK
 - (C) USA
 - (D) India
- **26.** Where will the next G20 Summit be held?
 - (A) New York
 - (B) Rome
 - (C) London
 - (D) New Delhi

- 27. Where was the recent G7 Summit, 2021 held?
 - (A) Canada
 - (B) India
 - (C) UK
 - (D) USA
- **28.** The symbol 'Ag' in Chemistry is used to denote which element?
 - (A) Silver
 - (B) Lead
 - (C) Gold
 - (D) Mercury
- **29.** Who is the Head of the National Development Council (Rashtriya Vikas Parishad)?
 - (A) The President of India
 - (B) The Prime Minister of India
 - (C) The Speaker of the Lok Sabha
 - (D) A Committee of Cabinet Ministers
- **30.** Which of the following is **not** a native tribe of Arunachal Pradesh?
 - (A) The Nyishis
 - (B) The Adis
 - (C) The Rabhas
 - (D) The Galos

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- **31.** As per the new ICC policy, what is the minimum age limit for qualifying to play International Cricket?
 - (A) 15 years
 - (B) 18 years
 - (C) 21 years
 - (D) 25 years
- **32.** India has signed a MOU with which country on energy cooperation?
 - (A) Japan
 - (B) Denmark
 - (C) Israel
 - (D) Finland
- 33. What does UMANG stand for?
 - (A) Unified Manually Assisted Naval Gadget
 - (B) Unified Manned Artificial Navigation Guide
 - (C) Unidentified Manual Assistance for Navigation Guide
 - (D) Unified Mobile Application for New-age Governance
- **34.** The river Brahmaputra is known in Arunachal Pradesh as
 - (A) Siang
 - (B) Subansiri
 - (C) Lohit

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(D) Ranganadi

35. In which year was the APPSC founded?

- (A) 1978
- (B) 1980
- (C) 1984
- (D) 1988

36. With what objective was the Doctrine of Lapse introduced in India by the British?

- (A) For annexation of Indian Kingdoms
- (B) For facilitating agricultural revenue
- (C) For maintenance of revenue record
- (D) For promoting European values
- **37.** Who among the following was a naturalised Indian to be awarded the 'Bharat Ratna' award?
 - (A) C. Rajagopalachari
 - (B) Nanaji Deshmukh
 - (C) Mother Teresa
 - (D) C. V. Raman

38. Who has been appointed as the first CEO of the WHO Foundation?

- (A) Patrick Amoth
- (B) Anil Soni
- (C) Edwin Dikoloti
- (D) Harsh Vardhan

- **39.** Which company will construct the new Parliament building of India?
 - (A) GMR Group
 - (B) Reliance Infrastructure
 - (C) Hyundai E & C
 - (D) Tata Group
- **40.** In which year was the Disaster Management Act passed?

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- (A) 1995
- (B) 2000
- (C) 2005
- (D) 2015
- **41.** Arunachal Pradesh is located between which latitudes?
 - (A) 26.28° N and 29.30° N latitude
 - (B) 27.28° N and 29.30° N latitude
 - (C) 26.28° N and 30.30° N latitude
 - (D) 26.28° N and 31.30° N latitude
- **42.** Who was the first Governor of Arunachal Pradesh?
 - (A) Sri R. D. Pradhan
 - (B) Dr. Gopal Singh
 - (C) Sri Bhishma Narain Singh
 - (D) Sri Mata Prasad

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- **43.** Which is the longest river in the world?
 - (A) Brahmaputra
 - (B) Hwang Ho
 - (C) Euphrates
 - (D) Nile
- **44.** Who is associated with the Bhoodan Movement in India?
 - (A) Jaya Prakash Narayan
 - (B) Vinoba Bhave
 - (C) Shiv Narayan Agnihotri
 - (D) Swami Shraddhanand
- **45.** Who is the inventor of the World Wide Web?
 - (A) Sir Timothy John Berners-Lee
 - (B) Linus Torvalds
 - (C) James Gosling
 - (D) Ted Codd
- **46.** Which state is known as the Orchid Paradise of India?
 - (A) Kashmir
 - (B) Himachal Pradesh
 - (C) Meghalaya
 - (D) Arunachal Pradesh
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- **47.** Which battle established the supremacy of the British in India?
 - (A) The Battle of Wandiwash
 - (B) The Battle of Plassey
 - (C) The Battle of Haldighati
 - (D) The Mysore Wars
- **48.** 'Hepatomegaly' is a term associated with which part of the human body?
 - (A) Intestines
 - (B) Kidneys
 - (C) Liver
 - (D) Pancreas
- **49.** Which space agency has launched the 'Chandra X-Ray Observatory'?
 - (A) ISRO
 - (B) NASA
 - (C) RFSA
 - (D) JAXA
- **50.** Which Bank has partnered with India for developing the East Coast Economic Corridor?
 - (A) Asian Development Bank
 - (B) State Bank of India
 - (C) World Bank
 - (D) IMF

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PART—B ELEMENTARY MATHEMATICS

- **51.** The smallest composite number is
 - (A) 1
 - (B) 2
 - (C) 3
 - (D) 4

52. Which direction will you face if you start facing west and make $\frac{3}{4}$ of a revolution anticlockwise?

- (A) East
- (B) West
- (C) North
- (D) South

53. What is the multiplicative identity for the set of integers?

- (A) 0
- (B) 1
- (C) -1
- (D) None of the above

54. Find the value of $t^6 + \frac{1}{t^6}$, if $t - \frac{1}{t} = 2$.

- (A) 196
- (B) -240
- (C) 192
- (D) 198
- in all terms 2 danks built

55. The perimeter of a rectangle having length 40 cm and a diagonal 41 cm is given by

- (A) 89 cm
- (B) 89 cm^2
- (C) 98 cm
- (D) 98 cm^2

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- **56.** Which one of the following is **not** a congruence criterion of triangles?
 - (A) SSS congruence criteria
 - (B) AAA congruence criteria
 - (C) SAS congruence criteria
 - (D) ASA congruence criteria
- **57.** Which one of the following is **not** a measure of central tendency?
 - (A) Standard deviation
 - (B) Mean
 - (C) Median
 - (D) Mode
- **58.** For any three integers a, b, c; the property $a \times (b \times c) = (a \times b) \times c$ is known as
 - (A) closure property
 - (B) commutative property
 - (C) associative property
 - (D) distributive property
- **59.** The numbers _____ and _____ are their own reciprocals.
 - (A) 0, 1
 - (B) 1/2, 2
 - (C) 1, -1
 - (D) None of the above

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60. Which one of the following quadrilaterals has two pairs of adjacent sides equal and its diagonals intersect at right angles?

- (A) Square
- (B) Rectangle
- (C) Trapezium
- (D) Rhombus
- 61. A rectangular piece of land measures 0.7 km by 0.5 km. Each side is to be fenced with 4 rows of wires. The length of the wire needed for the job is

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- (A) 12·2 km
- (B) 9.6 km
- (C) 10.5 km
- (D) 11.2 km
- 62. A coin is flipped to decide which team starts the game. What is the probability that your team will start?
 - (A) 1/2
 - (B) 1/3
 - (C) 1/4
 - (D) 1/5
- 63. The scores in mathematics test (out of 25) of 15 students are as follows :
 - 19, 25, 23, 20, 9, 20, 15, 10, 5, 16, 25, 20, 24, 12, 20

Find the mode and the median of this data.

- (A) Mode = 20, Median = 15
- (B) Mode = 15, Median = 15
- (C) Mode = 25, Median = 20
- (D) Mode = 20, Median = 20

- 64. Half of a herd of deers is grazing in the field and three-fourth of the remaining is playing nearby. The rest 9 are drinking water from the pond. Find the number of deers in the herd.
 - (A) 74
 - (B) 78
 - (C) 80
 - (D) None of the above

65. The diagonals of a rhombus measure 16 cm and 30 cm. Its perimeter is

- (A) 78 cm
- (B) 68 cm
- (C) 58 cm
- (D) 48 cm

66. 1 million = ____ hundred thousand.

- (A) 1
- (B) 10
- (C) 100
- (D) None of the above
- 67. Find the least number which when divided by 12, 16, 24 and 36 leaves a remainder 7 in each case.
 - (A) 144
 - (B) 136
 - (C) 151
 - (D) 158

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68. Roman numeral of 98 is

- (A) XCVIII
- (B) CXVIII
- (C) LXVIII
- (D) XLVIII

69. An item marked at ₹ 840 is sold for ₹ 714. What is the discount %?

- (A) 20%
- (B) 15%
- (C) 12%
- (D) 10%

70. What amount is to be repaid on a loan of ₹ 12,000 for $1\frac{1}{2}$ years at 10% per

annum compounded half-yearly?

- (A) ₹13,891.50
- (B) ₹14,250·25
- (C) ₹14,750·50
- (D) ₹13,750.75

71. Curved surface area of a cone is 308 cm² and its slant height is 14 cm. Find the total surface area of the cone.

- (A) 444 cm^2
- (B) 450 cm^2
- (C) 475 cm^2
- (D) 462 cm^2

- 72. A floor of a building consists of 3000 tiles which are rhombus shaped and its diagonals are 45 cm and 30 cm in length, respectively. Find the total cost of polishing the floor, if the cost per m² is ₹ 4.
 - (A) ₹750
 - (B) ₹800
 - (C) ₹810
 - (D) ₹850
- **73.** The area of a triangle, with two sides 18 cm and 10 cm respectively and perimeter equal to 42 cm, is
 - (A) $20\sqrt{11} \text{ cm}^2$
 - (B) $19\sqrt{11} \text{ cm}^2$
 - (C) $22\sqrt{11} \text{ cm}^2$
 - (D) $21\sqrt{11} \text{ cm}^2$
- **74.** The digits of a two-digit number differ by 3. If the digits are interchanged, and the resulting number is added to the original number, we get 143. What can be the original number?
 - (A) 85
 - (B) 74
 - (C) 63
 - (D) 96
- **75.** Present ages of Anjali and Rahul are in the ratio 4 : 5. Eight years from now the ratio of their ages will be 5 : 6. Their present ages are
 - (A) 28 years and 35 years
 - (B) 36 years and 45 years
 - (C) 24 years and 30 years
 - (D) 32 years and 40 years

- **76.** A batsman hits boundaries for 6 times out of 30 balls. Find the probability that he did not hit the boundaries.
 - (A) 1/5
 - (B) 2/5
 - (C) 3/5
 - (D) 4/5
- **77.** Which one of the following is the Pythagorean triplet whose smallest number is 8?
 - (A) 8, 16, 17
 - (B) 8, 17, 18
 - (C) 8, 15, 17
 - (D) 8, 15, 16
- **78.** Which one of the following is Hardy-Ramanujan number?
 - (A) 1724
 - (B) 1725
 - (C) 1727
 - (D) 1729
- **79.** An algebraic expression that contains only one term is called
 - (A) monomial
 - (B) binomial
 - (C) trinomial
 - (D) None of the above
- **80.** If x and y are inversely proportional, then
 - (A) x + y = constant
 - (B) x y = constant
 - (C) xy = constant
 - (D) x/y = constant

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- **81.** Simplify :
 - $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5}$ (A) 1
 (B) 5
 (C) 6
 (D) 10
- 82. What should be taken away from $3x^2 - 4y^2 + 5xy + 20$ to obtain $-x^2 - y^2 + 6xy + 20$?
 - (A) $-4x^2 + 3y^2 + xy$
 - (B) $4x^2 3y^2 xy$
 - (C) $2x^2 5y^2 + 11xy + 40$
 - (D) None of the above
- 83. Evaluate :
 - $(x-a)(x-b)(x-c)\cdots(x-z)$
 - (A) $x^n (a + b + c + \dots + z) x + (abc \dots z)$
 - (B) 1
 - (C) 0
 - (D) None of the above
- **84.** A shopkeeper bought a chair for ₹ 375 and sold it for ₹ 400. What was his gain percentage?
 - (A) 5.67%
 - (B) 6.67%
 - (C) 7.5%
 - (D) None of the above

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- **85.** Is it possible to have a triangle with sides 6 cm, 3 cm, 2 cm?
 - (A) Possible
 - (B) Not possible
 - (C) May or may not be possible
 - (D) Question is not defined
- **86.** Find the values of the unknowns *x* and *y* in the following diagram :



- (A) $x = 50^{\circ}, y = 50^{\circ}$
- (B) $x = 70^{\circ}, y = 70^{\circ}$
- (C) $x = 80^{\circ}, y = 80^{\circ}$
- (D) $x = 60^{\circ}, y = 60^{\circ}$
- 87. Two angles forming a linear pair are
 - (A) supplementary
 - (B) complementary
 - (C) alternate angles
 - (D) corresponding angles
- **88.** Solution of the quadratic equation $x^2 + x + 1 = 0$, is



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89. Anwar thinks a number. If he takes

away 7 from $\frac{5}{2}$ of the number, he gets

23. What is the number he thinks?

- (A) 10
- (B) 12
- (C) 16
- (D) 18

90. The ages in years of 10 teachers of a school are as follows :

32, 41, 28, 54, 35, 26, 23, 33, 38, 40 What is the range of the ages of the teachers?

- (A) 35 years
- (B) 28 years
- (C) 29 years
- (D) 31 years
- **91.** Choose the correct option from the following :
 - (A) $\frac{2}{9} > \frac{2}{3} > \frac{8}{21}$ (B) $\frac{2}{3} > \frac{2}{9} > \frac{8}{21}$ (C) $\frac{2}{3} > \frac{8}{21} > \frac{2}{9}$ (D) $\frac{2}{9} > \frac{8}{21} > \frac{2}{3}$

92. How many millimeters make 1 kilometer?

- (A) 1,000 mm
- (B) 10,000 mm
- (C) 1,00,000 mm
- (D) 10,00,000 mm

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93. The smallest whole number is

- (A) 1
- (B) 2
- (C) 4
- (D) None of the above

94. Two numbers having only 1 as a common factor are called ______ numbers.

- (A) prime
- (B) co-prime
- (C) composite
- (D) odd

95. The set {…, -4, -3, -2, -1, 0, 1, 2, 3, 4, …} of numbers is known as

- (A) the set of whole numbers
- (B) the set of natural numbers
- (C) the set of integers
- (D) None of the above
- 96. The zero of the polynomial $P(x) = 8x^3 24x^2 + 24x 8$ is
 - (A) 1
 - (B) 0
 - (C) 2
 - (D) 2

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- 97. Intersection of a sphere by a plane is
 - (A) a circle
 - (B) a sphere
 - (C) a semicircle
 - (D) a hemisphere
- **98.** If 15 workers can finish a task in 42 hours, then the number of workers required to complete the same task in 30 hours is
 - (A) 21
 - (B) 22
 - (C) 23
 - (D) 25

99. Factorize the following :

 $36a^{2} - 9b^{2} + 54bc - 81c^{2}$ (A) 9 (2a + b + 3c) (2a + b - 3c) (B) 9 (2a + b + 3c) (2a - b - 3c) (C) 9 (2a - b - 3c) (2a + b - 3c)

(D) 9(2a+b-3c)(2a-b+3c)

100. Choose the correct option from the following :

- (A) 0.05 > 0.050 > 0.0500
- (B) 0.05 < 0.050 < 0.0500
- (C) 0.05 = 0.050 = 0.0500
- (D) None of the above

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