A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 54031

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2022

Fourth Semester

Civil Engineering

15UGS431 - REASONING AND QUANTITATIVE APTITUDE

(Common to ALL branches)

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer Any 50 Questions

PART A - (50 x 2 = 100 Marks)

1. Which of the following not a pair of co-prime numbers? CO1- R

   (a) (4, 9) (b) (9, 14) (c) (3, 27) (d) (5, 13)

2. Which of the following not a prime number? CO1- R

   (a) 31 (b) 41 (c) 71 (d) 91

3. Find the numbers of divisors/factors of 127? CO1- E

   (a) 2 (b) 3 (c) 8 (d) 9

4. Find the unit digit of $789^{263}+ 485^{529} + 902^{335}$ CO1- E

   (a) 2 (b) 4 (c) 6 (d) 5

5. The sum of first 15 even numbers is? CO1- E

   (a) 225 (b) 120 (c) 240 (d) 105

6. Find the value of $1^2+2^2+3^2+……..+11^2=?$ CO1- App

   (a) 66 (b) 132 (c) 385 (d) 506

7. Number of squares in the 8*8 chess board is CO1- R

   (a) 64 (b) 65 (c) 204 (d) 224

8. Find the number of 3digit number upto 400.which are divisible by 11. CO1- E

   (a) 25 (b) 26 (c) 27 (d) 28

9. Two numbers are 48 and 64. If HCF of two number is 16. Find the LCM? CO1- E

   (a) 188 (b) 192 (c) 144 (d) 16

10. Find the highest common factor of 300, 450 and 525. CO1- E

(a) 125 (b) 50 (c) 75 (d) 25

11. The average of first 50 natural numbers is? CO1- R

(a) 12.25 (b) 21.25 (c) 25 (d) 25.5

12. The average of first 20 multiples of 6? CO1- R

(a) 63 (b) 62.5 (c) 60 (d) 65

13. The average of 7 consecutive number is 20.The largest of these numbers is CO1- E

(a) 20 (b) 22 (c) 23 (d) 24

14. 63% of $3\frac{4}{7}$ is? CO1- E

(a) 2.25 (b) 2.40 (c) 2.50 (d) 2.75

15. 40% of X120 Find the value of X =? CO1- E

(a) 300 (b) 600 (c) 200 (d) 240

16. If A is 35% greater than B then how much percentage is B smaller than A? CO1- App

(a) 16 2/3% (b) 18 2/3% (c) 16% (d) None of these

17. If P% of P is 36 then, P is equal to CO1- E

(a) 15 (b) 60 (c) 600 (d) 3600

18. What is present age of X in years? CO1- App

(a) 35 (b) 42 (c) 49 (d) None of these

19. A man is 24 years older than his son. In two years, his age will be twice the age of his son. The present age of the son is. CO1- App

(a) 14 years (b) 18 years (c) 20 years (d) 22 years

20. By selling a book for 270, 20% profit was earned. What is the cost price of the book? CO1- App

(a) 216 (b) 226 (c) 254 (d) 225

21. The cost price of 6 pens is equal to the selling price of 4 pens. Find the profit percent CO1- Ana

(a) 25% (b) 60 % (c) 50% (d) 80%

22. A sum of money fetched an interest of Rs. 2400 in 3 years at an interest rate of 8%. Find the sum CO1- E

(a) Rs. 8000 (b) Rs. 13000 (c) Rs. 16000 (d) Rs. 16000

23. A sum of Rs. 2500 at compound interest at 20% per annum for 2 years amount to CO1- E

(a) Rs. 3600 (b) Rs. 8100 (c) Rs. 3000 (d) Rs. 8082

24. If a: b = 3: 5 and b: c = 4: 2 find a: b: c =? CO1- E

(a) 3: 8: 5 (b) 3: 6: 8 (c) 6: 10: 5 (d) 4: 6: 3

25. The ratio of three numbers is 2:3:1 and their sum is 216. The first number of the three numbers is? CO1- E

(a) 18 (b) 72 (c) 27 (d) 26

26. What is the value of x in 3: 12:: x: 6? CO1- E

(a) 9.69 (b) 5.7 (c) 7.5 (d) 1.5

27. The speed of the car is 10 m/s. What is the speed in kmph? CO1- E

(a) 25 kmph (b) 30 kmph (c) 50 kmph (d) 36 kmph

28. A person crosses a 400 m long street in 90 seconds. What is his speed in km/hr? CO1- E

(a) 16 (b) 7.2 (c) 8.4 (d) 10

29. A person crosses a 600 m long street in 5 minutes. What is his speed in km/hr? CO1- E

(a) 3.6 (b) 7.2 (c) 8.4 (d) 10

30. If 6 men take 9 days to complete a work, how many men can complete the work in 3 days? CO1- E

(a) 2 men (b)12 men (c) 9 men (d) 18 men

31. A can do a piece of work in 10 days and B can do the same work in 15 days. How long will they take if both work together**?** CO1- E

(a) 6 days (b) 8 days (c) 4 days (d) 5 days

32. Three pipes can fill a tank in 6, 10 and 15 hours respectively. If they are opened together, how long does it take to fill the tank? CO1- E

(a) 3 Hours (b) 30 Hours (c) 10 Hours (d) 3.3 Hours

33. A train of length 600 m crosses a Pole in 4 min. 30 seconds. Find the speed of the train CO1- E

(a) 6 kmph (b) 5 kmph (c) 9 kmph (d) 8 kmph

34. The number of new words that can be formed by rearranging the letters of the word ‘ALIVE’ is CO1- E

(a) 23 (b) 24 (c) 119 (d) 120

35. Find 8P3 CO1- E

(a) 336 (b) 504 (c) 1 (d) 0

36. The angle between the minute hand and hour hand of a clock when the time is 8.30 is CO1- E

(a) 80^o (b) 70^o (c) 75^o (d) 85^o

37. How many times are the hands of a clock coincide in a day CO1- E

(a) 44 (b) 48 (c) 24 (d) 22

38. Today is Friday, after 126 days, it will be: CO1- E

(a) Sunday (b) Tuesday (c) Friday (d) Monday

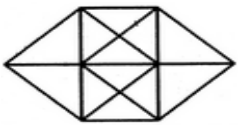
39. Today is Tuesday, after 94 days, it will be: CO1- E

(a) Sunday (b) Tuesday (c) Friday (d) Monday

40. On 8th September 2004, it was Monday. What was the day of the week on 8th September 2003? CO1- E

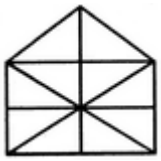
(a) Tuesday (b) Monday (c) Sunday (d) Saturday

41. Find the number of triangles in the given figure CO2- E



(a) 20 (b) 24 (c) 32 (d) 28

42. Find the number of triangles in the given figure. CO2- E



(a) 19 (b) 20 (c) 21 (d) 23

Directions (43 to 47): Read the following information carefully and answer the questions given below:

1. A, B, C, D, E and F are six friends are sitting in a circle facing the center.

2. F is the 4th left of E

3. A is not between D and E but some other one.

4. C is next left of F.

43. Who is left of D ? CO2- U

(a) A (b) C (c) B (d) E

44. What is the position of E? CO2- U

(a) Left of F (b) Third right of B (c) Between C and B (d) None of these

45. Who is sitting just right to D? CO2- U

(a) B (b) A (c) F (d) E

46. Who is right of E? CO2- U

(a) B (b) A (c) C (d) F

47. Who is facing D? CO2- U

(a) F (b) E (c) A (d) C

48. In a row of 25 boys, Mithun is twelfth from the left and Nitin is eighth from the right. How many boys are between them? CO2- U

(a) 4 (b) 7 (c) 6 (d) 5

49. A is 100 m North east of B. C is 100 m South west of B. Then, C is in which direction of A? CO2- E

(a) 200 m South West (b) 200 m North West (c) 100 m West (d) 100 m North

50. You go North, turns right, then right again and then go to the left .In which direction are you now? CO2- E

(a) North (b) West (c) East (d) South

Directions (51 to 55): Read the following information carefully and answer the questions given below:

- In a family, there are six members P, Q, R, S, T and U.
- P and Q are married couple, P is the wife.
- S is the only daughter of R who is the sister of P.
- T is brother of S.
- Q is son- in- law of U, whose wife is has died.

51. How is U related to P? CO2-U

(a) Mother (b) Father (c) Sister (d) Son

52. How is T related to R? CO2-U

(a) Son (b) Cousin (c) Daughter (d) Sister

53. How is R related to Q? CO2-U

(a) Daughter-in-Law (b) Sister (c) Sister - in -law (d) Aunt

54. How many male members are there in the family? CO2-U

(a) One (b) Two (c) Four (d) Three

55. How is P related to T ? CO2-U

(a) Mother (b) Aunt (c) Daughter (d) Son

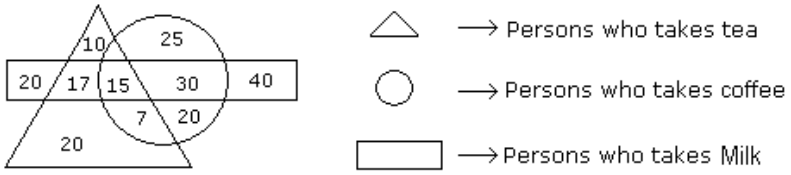
56. Find the next number in the sequence 3, 12, 27, 48, 75, 108, __? CO2-Ana

(a) 147 (b) 162 (c) 183 (d) 192

57. Find the odd man out 81:243, 16:64, 64:192, 25:75 CO2-Ana

(a) 81:243 (b) 16:64 (c) 64:192 (d) 25:75

Directions (58 to 62): Study the diagram given below and answer each of the following questions:



58. How many persons who take Coffee and Milk but not tea? CO2-U

(a) 30 (b) 15 (c) 75 (d) 40

59. How many persons are there who take both tea and coffee but not Milk? CO2-U

(a) 7 (b) 25 (c) 10 (d) 15

60. How many persons take Tea? CO2-U

(a) 97 (b) 69 (c) 122 (d) 62

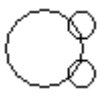
61. How many persons are there who takes only Milk? CO2-U

(a) 122 (b) 40 (c) 60 (d) 30

62. How many persons take all the three? CO2-U

(a) 17 (b) 15 (c) 30 (d) 7

63. Which of the following diagrams indicates the best relation between Hockey, Football and Cricket? CO2-U

(a)  (b)  (c)  (d) 

64. Thirty six vehicles are parked in a parking lot in a single row.After the first car, there is one scooter. After the second car, there are two scooters. After the third car, there are three scooters and so on. Work out the number of scooters in the second half of the row. CO2-U

(a) 10 (b) 12 (c) 15 (d) 17

65. How many such numbers are there in the below sequence, each of which is immediately preceded by a consonant and immediately followed by a symbol? CO2-U

R * T J L 2 $ D = M # 8 C % B < K 1 & A W ? P E + Q @ 7 F 6

(a) 0 (b) 2 (c) 3 (d) 2

66. Arrange the given words in a meaningful sequence CO2-U

1. Andhra Prades 2. Universe 3. Tirupati 4. World 5. India

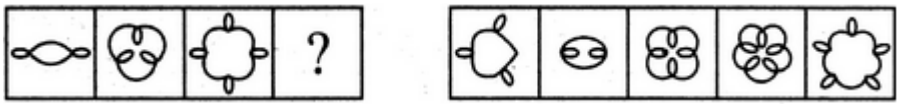
(a) 1, 5, 3, 2, 4 (b) 2, 1, 3, 5, 4 (c) 3, 1, 5, 4, 2 (d) 5, 4, 2, 1, 3

67. Push : Pull :: Throw : ? CO2-U

(a) Jump (b) Collect (c) Pick (d) Game

68. Selecting a suitable figure from the Answer Set that would replace the question mark (?) in Figure (D). CO2-U

Problem Figures: **Answer Figures:**



(A) (B) (C) (D) **(1) (2) (3) (4) (5)**

(a) 1 (b) 3 (c) 4 (d) 5

69. 13 : 91 :: 21 : ? CO2-U

(a) 12 (b) 147 (c) 98 (d) None of these

70. If white is called blue, blue is called red, red is called yellow, yellow is called green, green is called Black, black is violet and violet is called orange, what would be the colour of human blood? CO2-U

(a) Red (b) Green (c) Yellow (d) Violet

71. If sky is called sea, sea is called water, water is called air, air is called cloud and cloud is called river, Then what do we drink when thirst? CO2-U

(a) Sky (b) Air (c) Water (d) Sea

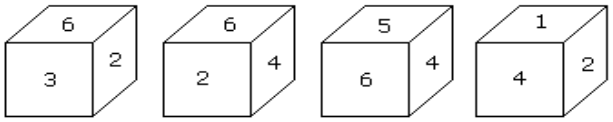
72. If 'nso ptr kli chn' stands for 'Sharma gets marriage gift'. 'ptr lnm wop chn' stands for 'wife gives marriage gift', 'tti wop nhi' stands for 'he gives nothing' what would mean 'gives'? CO2-U

(a) chn (b) nhi (c) ptr (d) wop

73. ZEBRA can be written as 2652181, how can COBRA be written? CO2-Ana

(a) 302181 (b) 3152181 (c) 31822151 (d) 1182153

74. Which number is on the face opposite to 5? CO2-Ana



(a) 4 (b) 1 (c) 2 (d) 3

75. Find the missing number in the sequence 3, 7, 15, ? , 63, 127 CO2-Ana

(a) 30 (b) 31 (c) 47 (d) 52