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Question Paper Code: 54031

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

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)

- Which of the following number is a prime?
(a) 111 (b) 119 (c) 143 (d) 127
- $\frac{22}{7}$ is?
(a) Integer (b) Rational Number (c) Irrational Number (d) Natural Number
- What least number must be added to 3000 to obtain a number exactly divisible by 19?
(a) 2 (b) 8 (c) 11 (d) 17
- If $7*81$ is divisible by 11. Find the value of smallest natural number * is
(a) 3 (b) 9 (c) 0 (d) 1
- How many prime numbers between 50 to 100.
(a) 15 (b) 10 (c) 9 (d) 11
- The HCF of two prime numbers is
(a) Their product (b) their sum (c) one (d) zero

7. On dividing 15968 by a certain number the quotient is 89 and the remainder is 37. Find the divisor?
- (a) 159 (b) 179 (c) 156 (d) 163
8. $\frac{(489 + 375)^2 - (489 - 375)^2}{(489 \times 375)} = ?$
- (a) 144 (b) 864 (c) 2 (d) 4
9. If a clock strikes once at 1 O'clock, twice at 2 O'clock and so on, how many times will it strike in a day
- (a) 78 (b) 156 (c) 144 (d) None of these
10. Find the largest number of 4-digits divisible by 12, 15 and 18.
- (a) 9900 (b) 9750 (c) 9450 (d) 9000
11. The sum of first 12 odd numbers is
- (a) 78 (b) 144 (c) 156 (d) None of these
12. Find the number of 3 digit numbers, which are divisible by 9
- (a) 99 (b) 100 (c) 101 (d) 98
13. The sum of all two digit numbers divisible by 5 is
- (a) 1035 (b) 1245 (c) 1230 (d) 945
14. The sum of all even natural numbers between 1 and 31 is
- (a) 16 (b) 128 (c) 240 (d) 512
15. $7777 + 777 + 77 + 7 = ?$
- (a) 8316 (b) 8459 (c) 8638 (d) 8724
16. Find the average of first ten multiples of 3?
- (a) 13 (b) 15 (c) 18 (d) 16.5
17. In a cricket match, Rahul scored a century with 13 boundaries and 3 sixes. What percentage of his runs did he make by running between the wickets?
- (a) 70% (b) 50% (c) 35% (d) 30%
18. Average of five consecutive odd numbers is 35. Find the greatest number in these five numbers?
- (a) 33 (b) 35 (c) 37 (d) 39

19. If the average of seven numbers is 35. If one is included. The average becomes 40. The included number is
(a) 70 (b) 75 (c) 65 (d) 80
20. Find the average of all numbers between 5 and 49 which are divisible by 5.
(a) 20 (b) 25 (c) 30 (d) 35
21. If the length of the rectangle is decreased by 20% and breadth is increased by 25% then change of the area is
(a) 5% (b) 20 % (c) 0% (d) 10%
22. If the sides of a square are decreased by 10%, find the percentage decreased by its area?
(a) 20% (b) 19% (c) 15% (d) 10%
23. 40% of a number is 80. What is 30% of one – fourth of the number?
(a) 60 (b) 30 (c) 15 (d) 10
24. The sum of ages of Sarvesh and his father is 46 years. 3 years back father's age was 4 times more than Sarvesh's age. Find present age of Sarvesh.
(a) 11 years (b) 8 years (c) 12 years (d) 16 years
25. If 20% of a certain number is 80, then what is 30% of that number is
(a) 100 (b) 120 (c) 150 (d) 140
26. At present, Shyam is twice as old as his sister. Three years back, he was thrice her age. Find his sister's present age?
(a) 8 (b) 9 (c) 12 (d) 6
27. After 5 years, age of Neelam would be 28 years. What was her age 8 years ago?
(a) 15 (b) 20 (c) 25 (d) 30
28. Eighteen years ago, a father was three times as old as his son. Now father is only twice as old as his son. Then the sum of the present ages of the son and the father is
(a) 54 (b) 72 (c) 105 (d) 108
29. A sum of Rs. 7500 at compound interest at 4% per annum for 2 years amount to
(a) Rs. 7800 (b) Rs. 8100 (c) Rs. 8112 (d) Rs. 8082

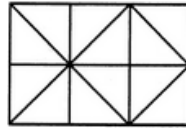
30. The sum of the present ages of a father and his son is 60 years. Six years ago, father's age was five times the age of his son. After six years, son's age will be
(a) 52 years (b) 20 years (c) 32 years (d) 40 years
31. The cost price of 6 pens is equal to the selling price of 4 pens. Find the profit percent
(a) 25% (b) 60% (c) 50% (d) 80%
32. If a worker in a factory receives one rupee on the first day from the second days onwards his wage is increased by one rupee every day. What is the total amount of wage he receives after 40 days?
(a) Rs. 720/- (b) Rs. 820/- (c) Rs. 810/- (d) Rs. 740/-
33. By selling a watch for Rs. 980/-, a man loses 30% what is that watch cost price
(a) Rs.1200/- (b) Rs.1300/- (c) Rs. 1400/- (d) None of these
34. By selling a book for 270, 20% profit was earned. What is the cost price of the book?
(a) 216 (b) 226 (c) 254 (d) 225
35. A man bought a second-hand typewriter for Rs.1200 and spent Rs.200 on its repairs. He sold it for Rs.1680. His profit per cent is
(a) 20% (b) 10% (c) 8% (d) 16%
36. The sum of the ages of 5 children born at the intervals of 3 years each is 50 years what is the age of the youngest child?
(a) 4 years (b) 7 years (c) 5 years (d) 6 years
37. If a dozen mirrors are fallen down. The ratio between broken and unbroken mirrors is
(a) 2 : 3 (b) 3 : 4 (c) 5 : 7 (d) 5 : 4
38. At what rate per annum a sum of Rs. 2400/- will become Rs. 3600/- in 5 years
(a) 10% (b) 15% (c) 20% (d) 12%
39. Find the sum lend at C.I at 5% per annum will amount to Rs. 441 in 2 years?
(a) Rs. 420/- (b) Rs. 380/- (c) Rs. 400/- (d) Rs. 375/-
40. The price of two tables and three chairs is Rs.5600. What will be the price of six tables and nine chairs?
(a) Rs.16800 (b) Rs.11200 (c) Rs.22400 (d) None of these

41. If $x : y = 5 : 8$ and $y : z = 4 : 7$ then find $x : z$.
- (a) 32 : 35 (b) 67 : 56 (c) 5 : 14 (d) 5 : 7
42. The ratio of two numbers is 3:4 and their sum is 28. The greater of the two numbers is?
- (a) 8 (b) 12 (c) 14 (d) 16
43. A motorist travels for 6 hours, the first half at 60 kmph and rest 48 kmph. Find the distance traveled by him
- (a) 324 km (b) 320 km (c) 300 km (d) 340 km
44. If $a:b=1:2, b:c=3:4$ and $c:d=2:3$ find $a:b:c:d$?
- (a) 3:6:8:24 (b) 6:12:16:24 (c) 6:18:24:16 (d) 3:6:2:3
45. What is the value of x in $1.7: 5.1:: 1.9: x$?
- (a) 9.69 (b) 5.7 (c) 7.5 (d) 8.67
46. A person crosses a 600 m long street in 5 minutes. What is his speed in km/hr?
- (a) 3.6 (b) 7.2 (c) 8.4 (d) 10
47. The speed of the car is 10 m/s. What is the speed in kmph?
- (a) 25kmph (b) 30kmph (c) 50kmph (d) 36kmph
48. A man starts at 3 pm with the speed of 50 Kmph. Another man follows him at 4 pm with the speed of 75 Kmph. When will they meet?
- (a) 5 pm (b) 6 pm (c) 7 pm (d) 6.30 pm
49. An athlete runs 200m race in 24 seconds. What is his speed?
- (a) 20 km/hr (b) 25 km/hr (c) 27.5 km/hr (d) 30 km/hr
50. If 4 men can colour 48 m long cloth in 2 days, then 6 men can colour 36 m long cloth in
- (a) 1 day (b) $3/2$ days (c) $3/4$ day (d) $1/2$ day
51. Find 7P_7
- (a) 4440 (b) 5040 (c) 1 (d) 0
52. Find 7C_5
- (a) 20 (b) 42 (c) 21 (d) 24

53. 36 workers can reap a field in 6 days. If the work is completed in 4 days, the extra workers required are
- (a) 10 (b) 25 (c) 18 (d) 15
54. A can do a work in 24 days and B can do it in 8 days. In how many days A and B can do the work?
- (a) 20 days (b) 10 days (c) 6 days (d) 8 days
55. If 3 persons can do 3 times of a particular work in 3 days, then, 7 persons can do 7 times of that work in
- (a) 7 days (b) 6 days (c) 4 days (d) 3 days
56. In an examination, 35% of the students passed and 455 failed. How many students appeared for the examination?
- (a) 490 (b) 700 (c) 845 (d) 1300
57. 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?
- (a) 3 hours (b) 30 hours (c) 10 hours (d) 3.33 hours
58. Today is Monday. After 61 days, it will be
- (a) Thursday (b) Tuesday (c) Wednesday (d) Saturday
59. A pipe can fill a tank in 3 hours. Because of leak in the bottom, it is filled in 4 hours. If the tank is full, how much time will the leak take to empty it?
- (a) 10 hours (b) 11 hours (c) 12 hours (d) 9 hours
60. What was the day of the week on 17th June, 1998?
- (a) Tuesday (b) Monday (c) Sunday (d) Wednesday
61. Two trains 300m and 400m long run at the speeds of 40 kmph and 50kmph respectively in opposite Directions on parallel tracks. The time taken to cross each other?
- (a) 20 sec (b) 25 sec (c) 26 sec (d) 28 sec
62. In how many ways can the word APTITUDE be arranged such that the vowels always come together?
- (a) 81 (b) 1440 (c) 576 (d) 120

63. There are 10 yes or no questions. In how many ways can these be answered
(a) 1024 (b) 256 (c) 100 (d) 20
64. In how many different number of ways the letters of the word 'ENGINEERING' can be arranged
(a) 27200 (b) 27700 (c) 277200 (d) 272700
65. The number of new words that can be formed by rearranging the letters of the word 'ALIVE' is
(a) 23 (b) 24 (c) 119 (d) 120
66. Grish walked 15 m North – West, then turned South and walked another 12 m. How far was he from the starting point
(a) 9 m (b) 3 m (c) 18 m (d) 27 m
67. How many times in a day, are the hands of a clock in straight line but opposite in direction
(a) 48 (b) 22 (c) 24 (d) 12
68. How many times are the hands of a clock at right angles in a day?
(a) 22 (b) 44 (c) 38 (d) 48
69. How many times are the hands of a clock coincide in a day?
(a) 44 (b) 48 (c) 24 (d) 22
70. How many persons are there who take both tea and coffee but not Milk?
(a) 7 (b) 25 (c) 10 (d) 15
71. Which of the following is not a leap year?
(a) 2000 (b) 700 (c) 800 (d) 1200
72. Today is Friday, after 126 days, it will be
(a) Sunday (b) Tuesday (c) Friday (d) Monday
73. How many days are there in x weeks x days?
(a) $7x^2$ (b) $8x$ (c) $14x$ (d) 7

74. Count the number of squares in the given figure.



(a) 6

(b) 7

(c) 9

(d) 10

75. Which of the following diagrams indicates the best relation between Hockey, Football and Cricket?

