Reg. No. : | | | | | | | | | | |

Question Paper Code: 50041

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

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 number is a prime?

   (a) 111 (b) 119 (c) 143 (d) 127

2. Find the Number of factors of 100

   (a) 9 (b) 2 (c) 4 (d) 10

3. If 7*81 is divisible by 11. Find the value of smallest natural number * is

   (a) 3 (b) 9 (c) 0 (d) 1

4. Find the unit digit of the expression $216^{789} + 991^{254}+632^{161}$?

   (a) 5 (b) 0 (c) 9 (d) 7

5. How many prime numbers between 50 to 100.

   (a) 15 (b) 10 (c) 9 (d) 11

6. The HCF of two prime numbers is

   (a) Their product (b) their sum (c) one (d) zero

7. Find the least number which is exactly divisible by 10, 12, 14, 16 and 18.

   (a) 5010 (b) 5020 (c) 5040 (d) 5030

8. The LCM of two prime numbers is

(a) Their product (b) their sum (c) one (d) zero

9. Find the highest common factor of 36 and 84

(a) 4 (b) 6 (c) 12 (d) 18

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 divisble 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. The average of the first 5 prime number is

(a) 3.6 (b) 5.6 (c) 5.4 (d) 7

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. 40% of x = 120, find the value of x?

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

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. What percent is 70 of 280?

(a) 25% (b) 50% (c) 75% (d) None of these

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. Present age of the X and Y are in the ratio 5:6 seven years hence the ratio will become 6:7. What is present age of X in years?

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

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. By selling an article for Rs. 384, a trader gains 20%. Find the cost price of article

(a) 160 (b) 240 (c) 320 (d) 480

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. A sum of money fetched an interest of Rs. 3840 in 4 years at an interest rate of 8%. Find the sum

(a) Rs. 8000 (b) Rs. 12000 (c) Rs. 16000 (d) Rs. 19200

37. The Difference between C.I and S.I on a sum of Rs. 10000 for two years at a rate of 5% interest is

(a) Rs. 25 (b) Rs. 20 (c) Rs. 10 (d) Rs. 5

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. Find the principle, interest on Rs.900/- at 6% p.a. for 3 years?

(a) Rs.5000 (b) Rs.4500 (c) Rs.3500 (d) Rs.2200

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. If $a : b = 4 : 8$ and $b : c = 3 : 2$ find $a : b : c$ =?

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

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 12 men work 8 hours a day to complete a work in 10 days. How many men working 12 hours a day can complete the work in 5 days?

(a) 16 (b) 4 (c) 12 (d) 8

51. 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

52. A and B together can do a work in 4 days. A alone can do it in 12 days. What time B will take to do

(a) 6 days (b) 8 days (c) 12 days (d) 10 days

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. Two pipes A and B can fill a tank in 20 minutes when opened simultaneously. If pipe A alone takes 60 minutes to fill the tank, how much time will pipe B alone take to fill the tank?

(a) 60 min (b) 40 min (c) 30 min (d) 20 min

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. Two pipes A and B can fill a cistern in 20 and 30 minutes respectively, and a third pipe C can empty it in 40 minutes. How long will it take to fill the cistern if all the three are opened at the same time?

(a) 19 1/7 min (b) 15 1/7 min (c) 17 1/7 min (d) 7 1/7 min

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. A train of length 260 m crosses a bridge of length 40 m in 12 seconds. Find the speed of the train?

(a) 60 kmph (b) 25 kmph (c) 90 kmph (d) 100 kmph

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

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

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

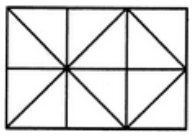
72. Today is Friday, after 126 days, it will be

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

73. How many days are there in x weeks x days?

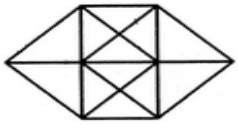
(a) $7x^2$ (b) 8x (c) 14x (d) 7

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



(a) 6 (b) 7 (c) 9 (d) 10

75. Find the number of triangles in the given figure.



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