Reg. No. :

Question Paper Code: 31047

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

Fourth Semester

Civil Engineering

01UGS431 - QUALITATIVE AND QUANTITATIVE APTITUDE

(Common to all branches)

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer Any 50 Questions.

PART A - (50 x 2 = 100 Marks)

1. The smallest prime number is
   (a) 1   (b) 2   (c) 3   (d) 5

2. How many prime numbers are less than 50?
   (a) 16   (b) 14   (c) 15   (d) 18

3. Find the average of all the numbers between 6 and 34 which are divisble by 5.
   (a) 3   (b) 9   (c) 12   (d) 15

4. The sum of two numbers is 40 and their difference is 4. The ratio of the number is.
   (a) 11 : 9   (b) 11 : 18   (c) 21 : 19   (d) 22 : 9

5. In how many many ways can the letters of the word 'LEADER' be arranged?
   (a) 360   (b) 72   (c) 144   (d) 720

6. The H.C.F. of $\frac{2}{3}, \frac{8}{9}, \frac{64}{81}$ and $\frac{10}{27}$ is.

   (a) $\frac{2}{3}$ (b) $\frac{2}{81}$ (c) $\frac{160}{3}$ (d) $\frac{160}{81}$
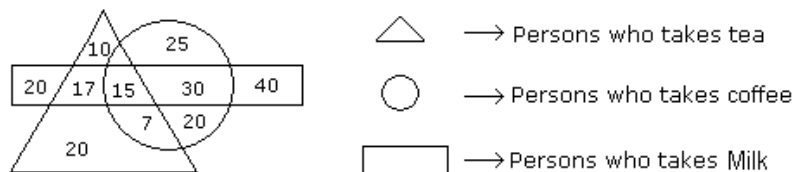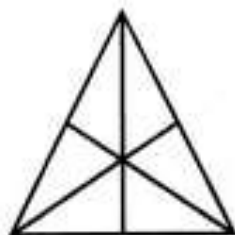
7. Find the lowest common multiple of 24, 36 and 40.

    (a) 120   (b) 240   (c) 360   (d) 480

8. Find the average of first 10 multiples of 8?

    (a) 90   (b) 44   (c) 88   (d) 45

Study the diagram given below and answer each of the following questions from 9 to 13.

△ ⟶ Persons who takes tea

○ ⟶ Persons who takes coffee

▭ ⟶ Persons who takes Milk

9. How many persons who take tea and milk but not coffee?

    (a) 10   (b) 17   (c) 20   (d) 40

10. A student multiplied a number by 3/5 instead of 5/3. What is the percentage error in the calculation?

    (a) 34%   (b) 44%   (c) 54%   (d) 64%

11. If $P\%$ of P is 36, then P is equal to

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

12. The average of 7 consecutive number is 20.The largest of these numbers is

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

13. The average of 5 number is 20. If each number is multiplied by 4, then the average of the new set of number is

    (a) 20   (b) 24   (c) 22   (d) 25

14. 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 the son. After 6 years, son's age will be.

    (a) 12 Years   (b) 14 Years   (c) 18 Years   (d) 20 Years

15. At present, the ratio between the ages of Arun and Deepak is 4 : 3. After 6 years, Arun's age will be 26 years. What is the age of Deepak at present?

    (a) 12 Years   (b) 15 Years   (c) 19and half Years   (d) 21 Years

16. The average of five numbers is 27. If one number is excluded, the average becomes 25. What is the excluded number?

    (a) 30   (b) 40   (c) 32.5   (d) 35

17. The average of 13 results is 40 and that of first six is 30 and last six is 34. Find the value of 7th number.
   (a) 132   (b) 130   (c) 134   (d) 136

18. The average monthly income of A and B is Rs. 5050. The average monthly income of B and C is Rs. 6250 and the average monthly income of A and C is Rs. 5200. What is the monthly income of A?
   (a) 2000   (b) 3000   (c) 4000   (d) 5000

19. The present ages of three persons in proportions 4 : 7 : 9. Eight years ago, the sum of their ages was 56. Find their present ages (in years).
   (a) 8, 20, 28   (b) 16, 28, 36   (c) 20, 35, 45   (d) None of these

20. Find out the alternative which will replace the question mark MXN: 13 x 14 :: FXR : ?
   (a) 14 x 15   (b) 5 x 17   (c) 6 x 18   (d) 7 x 19

21. If 0.75 : X :: 5 : 8, then x is equal to
   (a) 1.12   (b) 1.2   (c) 1.25   (d) 1.3

22. Simplify: 12 x 7 − 18 ÷ 2 + 6
   (a) 39   (b) 66/8   (c) 16   (d) 81

23. If 7 spiders make 7 webs in 7 days, then 1 spider will make 1 web in how many days?
   (a) 1   (b) 7/2   (c) 7   (d) 49

24. 36 men can complete a piece of work in 18 days. In how many days will 27 men complete the same work?
   (a) 12   (b) 18   (c) 22   (d) 24

25. Shyam walks 5 km towards East and then turns left and walks 6 km. Again he turns right and walks 9 km. Finally he turns to his right and walks 6 km. How far is he from the starting point?
   (a) 26 km   (b) 21 km   (c) 14 km   (d) 9 km

26. Find the number of triangles in the given figure.
   (a) 13   (b) 9   (c) 7   (d) 16

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27. A car moves at the speed of 80 *km/hr*. What is the speed of the car in metres per second?

    (a) 8 m/sec   (b) 20(1/9) m/sec   (c) 22(2/9) m/sec   (d) None of these

28. MDDM, OFFO, QHHQ, _____, ULLU.

    (a) RIIR   (b) SIIS   (c) RJJR   (d) SJJS

29. Find the next number in the sequence 1,2,6,15,31,___.

    (a) 47   (b) 56   (c) 57   (d) 63

30. Nisha turned East and walked 10 feet from *A* to *B*. Then she turned right and walked 3 feet. Again she turned right and walked 14 feet to reach *C*. How far is she from *A*

    (a) 27 feet   (b) 13 feet   (c) 4 feet   (d) 5 feet

31. Meena walked 40 *metres* towards North, took a right turn and walked 50 *metres*, again he took a right turn and walked 40 *metres*. How far is he from the starting point?

    (a) 40m   (b) 50m   (c) 90m   (d) 130m

32. Three unbiased coins are tossed simultaneously. What is the probability of getting exactly two heads?

    (a) 2/8   (b) 1/8   (c) 3/8   (d) 5/8

33. Find the probability of getting 53 Fridays in a leap year?

    (a) 1/7   (b) 4/7   (c) 3/7   (d) 2/7

Study the given Details below and answer each of the following questions from 34 to 37.

- Six friends are sitting in a circle and are facing the centre of the circle.
- Deepa is between Prakash and Pankaj.
- Priti is between Mukesh and Lalit.
- Prakash and Mukesh are opposite to each other.

34. Who is sitting right to Prakash?

    (a) Mukesh   (b) Deepa   (c) Pankaj   (d) Lalit

35. Who is just right to Pankaj?

    (a) Deepa   (b) Lalit   (c) Prakash   (d) Priti

36. Who are the neighbours of Mukesh?

    (a) Prakash and Deepa   (b) Deepa and Priti
    (c) Priti and Pankaj   (d) Lalit and Priti

37. The compound interest on Rs. 30,000 at 7% per annum is Rs. 4347. The period (in years) is:

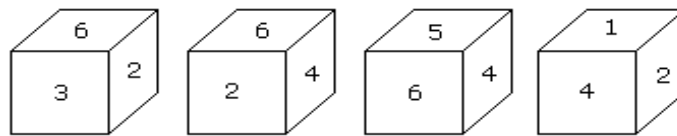(a) 2   (b) $2\dfrac{1}{2}$ (c) 3   (d) 4

38. A man walks 5 km towards south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?

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

39. Rasik walked 20 m towards north. Then he turned right and walks 30 m. Then he turns right and walks 35 m. Then he turns left and walks 15 m. Finally he turns left and walks 15 m. In which direction and how many metres is he from the starting position?

     (a) 15m West   (b) 30m East   (c) 30m West   (d) 45m East

40. Which number is on the face opposite to 6?

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

41. Arrange the words given below in a meaningful sequence.

     1. Police   2. Punishment   3. Crime   4. Judge   5. Judgment

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

42. Arrange the words given below in a meaningful sequence.

     1. Nation   2. Village   3. City   4. District   5. State

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

43. Which of the following is a prime number?

     (a) 33   (b) 81   (c) 93   (d) 97

44. The sum of the first five prime numbers is:

     (a) 11   (b) 18   (c) 26   (d) 28

45. The L.C.M. of $\dfrac{2}{3}, \dfrac{3}{5}, \dfrac{4}{7}$ and $\dfrac{9}{13}$ is

     (a) 36   (b) $\dfrac{1}{36}$ (c) $\dfrac{1}{1365}$ (d) $\dfrac{12}{45}$

46. The H.C.F. and L.C.M. of $4^2, 4^5, 4^7, 4^{12}$ is

     (a) 4^2 and 4^{12} (b) 1 and 4^{12} (c) 1 and 4   (d) 4 and 4^{12}

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47. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

    (a) 4   (b) 10   (c) 16   (d) 15

48. The total number of digits used in numbering the pages of a book having 366 pages is:

    (a) 732   (b) 990   (c) 1098   (d) 1305

49. A man has Rs. 480 in the denominations of 1 rupee notes, 5 rupee notes and 10 rupee notes. The number of notes of each denomination is equal. What is the total number of notes that he has?

    (a) 45   (b) 60   (c) 75   (d) 90

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

    (a) 80º   (b) 75º   (c) 60º   (d) 105º

51. Evaluate : $\sqrt{10+\sqrt{25+\sqrt{108+\sqrt{154+\sqrt{225}}}}}$

    (a) 4   (b) 6   (c) 8   (d) 10

52. Evaluate : $\sqrt{41-\sqrt{21+\sqrt{19-\sqrt{9}}}}$

    (a) 3   (b) 5   (c) 6   (d) 6.4

53. The average of all odd numbers up to 100 is:

    (a) 49   (b) 49.5   (c) 50   (d) 51

54. The average of runs of a cricket player of 10 innings was 32. How many runs must he make in his next innings so as to increase his average of runs by 4?

    (a) 2   (b) 4   (c) 70   (d) 76

55. How many artists are players?

    (a) 5   (b) 8   (c) 25   (d) 16

56. How many players are neither artists nor doctors?

    (a) 25   (b) 17   (c) 5   (d) 10

57. How many artists are neither players nor doctors?

    (a) 10   (b) 30   (c) 17   (d) 15

58. 'College' is related to 'Teachers' in the same way as 'Hospital' is related to

    (a) Doctors   (b) Patients   (c) Medicine   (d) Beds

59. Choose the pair in which the words are differently related from the rest.
    (a) Car : Road   (b) Ship : Sea   (c) Rocket : Space   (d) Aeroplane : Pilot

60. The ratio of the cost price and the selling price is 4 : 5. The profit percent is:
    (a) 10%   (b) 20%   (c) 25%   (d) 30%

61. The average weight of A, B and C is 45 kg. If the average weight of A and B be 40 kg and that of B and C be 43 kg, then the weight of B is
    (a) 17 kg   (b) 20 kg   (c) 26 kg   (d) 31kg

62. The average weight of 16 boys in a class is 50.25 kg and that of the remaining 8 boys is 45.15 kg. Find the average weights of all the boys in the class
    (a) 47.55 kg   (b) 48 kg   (c) 48.55 kg   (d) 49.25 kg

63. If a number is exactly divisible by 85, then what will be the remainder when the same number is divided by 17?
    (a) 3   (b) 1   (c) 4   (d) 0

64. A person crosses a 1200 *m* long street in 8 minutes. What is his speed in km per hour?
    (a) 9   (b) 2.5   (c) 150   (d) 540

65. If A is the brother of *B; B* is the sister of *C*; and *C* is the father of *D,* how *D* is related to *A*?
    (a) Brother   (b) Sister   (c) Nephew   (d) Cannot be determined

66. Find the odd man out: 1, 4, 9, 16, 23, 25, 36
    (a) 9   (b) 23   (c) 25   (d) 36

67. Find the missing one: QPO, NML, KJI, _____, EDC
    (a) HGF   (b) CAB   (c) JKL   (d) GHI

68. How many 3-digit numbers can be formed from the digits 2, 3, 5, 6, 7 and 9, which are divisible by 5 and none of the digits is repeated?
    (a) 5   (b) 10   (c) 15   (d) 20

69. In a certain code SOLE is written as $54# and DIME is written as 3%7#. How is MODES written in that code?
    (a) 75#3$ (b) 753#$ (c) 753%$ (d) 75%3$

70. In a certain code SOLE is written as $54# and DIME is written as 3%7#. How is MODES written in that code?
    (a) 75#3$ (b) 753#$ (c) 753%$ (d) 75%3$

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Study the given Details below and answer each of the following questions from 71 to 74.
- Five girls are sitting on a bench to be photographed.
- Seema is to the left of Rani and to the right of Bindu.
- Mary is to the right of Rani.
- Reeta is between Rani and Mary.

71. Who is sitting immediate right to Reeta?
    (a) Bindu   (b) Rani   (c) Mary   (d) Seema

72. Who is in the middle of the photograph?
    (a) Bindu   (b) Rani   (c) Reeta   (d) Seema

73. Who is second from the right ?
    (a) Mary   (b) Rani   (c) Reeta   (d) Bindu

74. Who is second to the right of *C*?
    (a) M   (b) L   (c) D   (d) None

75. Which of the following pairs of persons has the first person sitting to the immediate right of second person?
    (a) DL   (b) KF   (c) CH   (d) DH

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