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Question Paper Code: 31047

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Civil Engineering

01UGS431 - QUALITATIVE AND QUANTITATIVE APTITUDE

(Common to all branches)

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

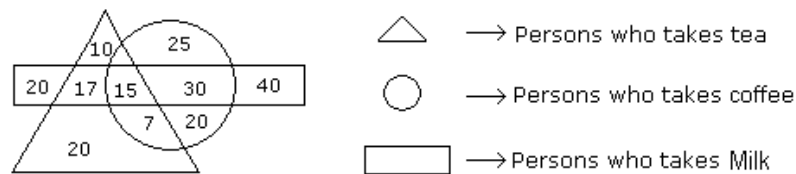
Answer Any 50 Questions.

PART A - (50 x 2 = 100 Marks)

- Sum of two numbers is 25 and their difference is 13. Find their product
(a) 104 (b) 114 (c) 315 (d) 325
- Sum of a number and its square is 182, what is the number?
(a) 15 (b) 26 (c) 14 (d) 13
- Find the highest common factor of 36 and 84.
(a) 4 (b) 6 (c) 12 (d) 18
- The HCF of the number is 11 and their LCM is 7700. If one of the number is 275, then the other is
(a) 279 (b) 283 (c) 308 (d) 318
- 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.



9. How many persons who take tea and milk but not coffee?
- (a) 10 (b) 17 (c) 20 (d) 40
10. How many persons are there who take both tea and coffee but not milk?
- (a) 7 (b) 25 (c) 10 (d) 15
11. How many persons take milk?
- (a) 97 (b) 69 (c) 122 (d) 62
12. How many persons are there who takes only coffee?
- (a) 25 (b) 45 (c) 20 (d) 30
13. How many persons take all the three?
- (a) 17 (b) 15 (c) 30 (d) 7
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) 19 and 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 sum of the present ages of a father and his son is 45 years. Five years ago, the product of their ages was 34. The ages of the son and the father are respectively:
 (a) 6 and 39 (b) 7 and 38 (c) 9 and 36 (d) 11 and 34
20. Find out the alternative which will replace the question mark MXN: $13 \times 14 :: \text{FXR} : ?$
 (a) 14×15 (b) 5×17 (c) 6×18 (d) 7×19
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: $12 \times 7 - 18 \div 2 + 6$
 (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

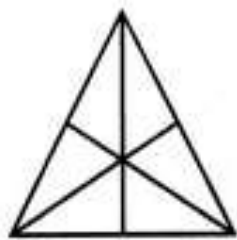
26. Find the number of triangles in the given figure.

(a) 13

(b) 9

(c) 7

(d) 16



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) $20\frac{1}{9} \text{ m/sec}$

(c) $22\frac{2}{9} \text{ m/sec}$

(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) $\frac{2}{8}$

(b) $\frac{1}{8}$

(c) $\frac{3}{8}$

(d) $\frac{5}{8}$

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

(a) $\frac{1}{7}$

(b) $\frac{4}{7}$

(c) $\frac{3}{7}$

(d) $\frac{2}{7}$

34. Find the missing number 1, 4, 9, 16, 25, 36, 49, (...)

(a) 54

(b) 56

(c) 64

(d) 81

35. Which of the following is not a leap year?

(a) 700

(b) 800

(c) 1200

(d) 2000

36. $\frac{348 \times 348 \times 348 + 112 \times 112 \times 112}{348 \times 348 - 348 \times 112 + 112 \times 112} = ?$

(a) 236

(b) 460

(c) 472

(d) 230

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

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

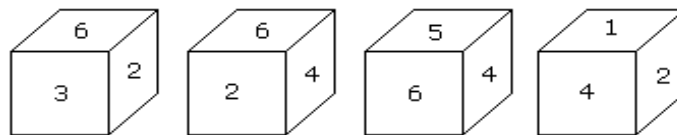
38. A man walks 5 km towards south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?

- (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 $\frac{2}{3}, \frac{3}{5}, \frac{4}{7}$ and $\frac{9}{13}$ is

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

46. If $A + B$ means A is the mother of B; $A - B$ means A is the brother B; $A \% B$ means A is the father of B and $A \times B$ means A is the sister of B, which of the following shows that P is the maternal uncle of Q? (An)
- (a) $Q - N + M \times P$ (b) $P + S \times N - Q$ (c) $P - M + N \times Q$ (d) $Q - S \% P$
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. 100 oranges are bought at the rate of Rs. 350 and sold at the rate of Rs. 48 per dozen. The percentage of profit or loss is:
- (a) $14\frac{2}{7}\%$ gain (b) 15% gain (c) $14\frac{2}{7}\%$ loss (d) 15% loss
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) 80° (b) 75° (c) 60° (d) 105°
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. If a number, when divided by 4, is reduced by 21, the number is:
- (a) 18 (b) 20 (c) 28 (d) 38

56. The present ages of three persons are the ratio 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
57. If 75% of a number is added to 75, then the result is the number itself. The number is
 (a) 50 (b) 60 (c) 300 (d) 400
58. 'College' is related to 'Teachers' in the same way as 'Hospital' is related to
 (a) Doctors (b) Patients (c) Medicine (d) Beds
59. A bag contains 10-paisa, 20-paisa and 25-paisa coins in the ratio 7:4:3. If the total value is Rs. 90, the number of 25-paisa coins in the bag is:
 (a) 120 (b) 160 (c) 280 (d) 300
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 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
67. A and B can do a work in 8 days, B and C can do the same work in 12 days. A, B and C together can finish it in 6 days. A and C together will do it in
 (a) 4 days (b) 6 days (c) 8 days (d) 12 days

68. A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

- (a) 120 metres (b) 180 metres (c) 324 metres (d) 150 metres

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\$

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 from the left in photograph ?

- (a) Reeta (b) Mary (c) Bindu (d) Seema

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

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