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**Question Paper Code: 44031**

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

Fourth Semester

Civil Engineering

14UGS431 - QUALITATIVE AND QUANTITATIVE APTITUDE

(Common to ALL branches)

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer Any 50 Questions

PART A - (50 x 2 = 100 Marks)

1. What is the difference between the place values of 2 in the numeral 7229?  
(a) 20                      (b) 200                      (c) 180                      (d) 18
2. How many numbers from 22 to 90 are exactly divisible by 11?  
(a) 6                      (b) 7                      (c) 8                      (d) 9
3. Find the Number of factors of 100  
(a) 9                      (b) 2                      (c) 4                      (d) 10
4. Find the highest common factor of 36 and 84  
(a) 4                      (b) 6                      (c) 12                      (d) 18
5. Find the unit digit of the expression  $216^{789} + 991^{254} + 632^{161}$ ?  
(a) 5                      (b) 0                      (c) 9                      (d) 7
6. LCM of two numbers is 48 and their HCF is 8. If one of the two numbers is 16, find the other number  
(a) 12                      (b) 24                      (c) 32                      (d) 36

7.  $7777 + 777 + 77 + 7 = ?$   
(a) 8316                      (b) 8459                      (c) 8638                      (d) 8724
8. 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
9. A man's average daily expenditure is Rs.12 during March, Rs.14 during April and Rs. 17 during May. Find the Average daily expenditure for the three months?  
(a) 13.35                      (b) 14.22                      (c) 14.33                      (d) 13.33
10. Number decreased by 20% gives 480. The number is  
(a) 500                      (b) 600                      (c) 550                      (d) None of these
11. The sum of first 12 odd numbers is  
(a) 78                      (b) 144                      (c) 156                      (d) None of these
12. If A is 25% greater than B then how much percentage is B smaller than A?  
(a) 20%                      (b) 25%                      (c) 28%                      (d) 21%
13. The ages of two friends is in the ratio 6:5. The sum of their ages is 66. After how many years will the ages be in the ratio 8:7?  
(a) 13                      (b) 19                      (c) 12                      (d) None of these
14. 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
15. Find the average of first ten multiples of 3?  
(a) 13                      (b) 15                      (c) 18                      (d) 16.5
16. 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
17. A class consists of 36 girls and 44 boys. If the average weight of the girls is 40 kg and that of boys is 35 kg, find the average weight of all students in the class?  
(a) 37.25 kg                      (b) 37.5 kg                      (c) 37 kg                      (d) 37.75 kg

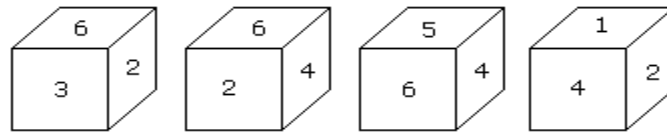
18. A man bought a second-hand typewriter for Rs.1200 and spent Rs.200 on its repairs. He sold it for Rs.1680. His profit per cent is
- (a) 20%                      (b) 10%                      (c) 8%                      (d) 16%
19. The average of the first 5 prime number is
- (a) 3.6                      (b) 5.6                      (c) 5.4                      (d) 7
20. 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
21. 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%
22. A sum of money becomes Rs. 2200 after three years and Rs. 4400 after six years on compound interest. The sum is
- (a) Rs. 1400                      (b) Rs. 1100                      (c) Rs. 1000                      (d) Rs.1200
23. The ratio of three numbers is 5:3:4 and their sum is 108. The second number of the three numbers is?
- (a) 12                      (b) 15                      (c) 27                      (d) 29
24. 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
25. 40% of a number is 80. What is 30% of one – fourth of the number?
- (a) 60                      (b) 30                      (c) 15                      (d) 10
26. 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
27. The ages of Vikas and Nikash are in the ratio of 5 : 3. If Vikas is 8 year elder than Nikash, find the age of Nikash?
- (a) 10                      (b) 12                      (c) 15                      (d) 20

28. 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
29. The present age of Ram and Raj differ by 7. Five years back, Raj was twice the age of Ram. Find the age of Ram after 4 years.
- (a) 16            (b) 20            (c) 21            (d) 25
30. 10 men can prepare 20 toys in 12 days working 15 hours a day. Then in how many days can 24 men prepare 32 toys working 20 hours a day?
- (a) 6 days            (b) 10 days            (c) 20 days            (d) 25 days
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. 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
33. 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
34. How many four digit numbers can be formed using the digits {1, 3, 4, 5, 7, 9} (Repetition of digits is not allowed)?
- (a) 360            (b) 300            (c) 60            (d) 180
35. 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
36. At what rate of compound interest will a sum of Rs. 8000 amount to Rs. 8820 in two years?
- (a) 8%            (b) 10%            (c) 6%            (d) 5%
37. When the time in the clock is 7.20, then the angle between the hands of the clock is
- (a) 100 degrees            (b) 120 degrees            (c) 90 degrees            (d) 110 degrees

38. How long does it take for a sum of Rs. 2500 to become Rs. 12500 at 10% simple interest?  
 (a) 40 years                      (b) 50 years                      (c) 25 years                      (d) 49 years

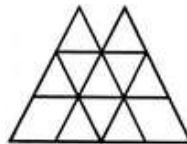
39. Solve for  $x$ ,  $2x : 25 = 6 : \frac{x}{3}$   
 (a) 18                      (b) 15                      (c) 12                      (d) 5

40. Which number is on the face opposite to 5?



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

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



- (a) 16                      (b) 18                      (c) 12                      (d) 17

42. A man travels a distance of 2 km by walking at a speed of 6 km/hr. He returns back at a speed of 4 km/hr. what is his average speed?

- (a) 4.5 kmph                      (b) 4.8 kmph                      (c) 5 kmph                      (d) 5.1 kmph

43. 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

44. A man walking at the rate of 5 km/hr crosses a bridge in 15 minutes. The length of the bridge (in meters) is:

- (a) 600                      (b) 750                      (c) 1000                      (d) 1250

45. In a certain code is, RIPPLE is written as 613382 and LIFE is written as 8192. How is PILLER written in that code?

- (a) 318826                      (b) 318286                      (c) 618826                      (d) 338816

46. If 6 men take 9 days to complete a work, how many men can complete the work in 3 days?

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

47. 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
48. 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
49. 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
50. 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*
51. In how many ways can the word APTITUDE be arranged such that the vowels always come together?
- (a) 8!                      (b) 1440                      (c) 576                      (d) 120
52. There are 10 yes or no questions. In how many ways can these be answered?
- (a) 1024                      (b) 256                      (c) 100                      (d) 20
53. How many 4's are there preceded by 7 but not followed by 3?
- 5 9 3 2 1 7 4 2 6 9 7 4 6 1 3 2 8 7 4 1 3 8 3 2 5 6 7 4 3 9 5 8 2 0 1 8 7 4 6 3
- (a) Three                      (b) Four                      (c) Five                      (d) Six
54. 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
55. Find the next number in the sequence 1, 4, 10, 22, 46, \_\_\_?
- (a) 64                      (b) 86                      (c) 94                      (d) 122
56. Which of the following is not a leap year?
- (a) 2000                      (b) 700                      (c) 800                      (d) 1200

57. Find the missing letters a, d, c, f, ?, h, g, ?, i  
 (a) e, j                      (b) e, k                      (c) f, j                      (d) j, e
58. 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*
59. A is 100 *m* North east of B. C is 100 *m* South west of B. Then, C is in which direction of A?  
 (a) 200 *m* South West                      (b) 200 *m* North West  
 (c) 100 *m* West                      (d) 100 *m* North
60. If  $P + Q$  means  $P$  is the sister of  $Q$ ;  $P - Q$  means  $P$  is the brother of  $Q$ ;  
 $P * Q$  means  $P$  is the daughter  $Q$ : If  $A - B - C + D * E$ , how is  $E$  related to  $A$ ?  
 (a) Aunt                      (b) Sister                      (c) Daughter                      (d) Mother
61. If  $P$  is the brother of  $Q$ ,  $Q$  is the sister of  $R$ , and  $R$  is the father of  $S$ , how is  $P$  related to  $S$ ?  
 (a) Father                      (b) Maternal Uncle                      (c) Paternal Grandpa                      (d) Paternal Uncle
62.  $A, B, C, D, E$  and  $F$  are sitting in a row.  $D$  and  $E$  are in the center.  $A$  and  $B$  are at the ends.  $C$  is sitting to the left of  $A$ .  $E$  is to the right of  $D$ . Who is to the right of  $B$ ?  
 (a) D                      (b) E                      (c) F                      (d) C
63. 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?  
 (a) 4                      (b) 7                      (c) 6                      (d) 5
64. Find the missing number in the sequence 3, 7, 15, ?, 63, 127  
 (a) 30                      (b) 31                      (c) 47                      (d) 52
65. Find the missing letters a, d, c, f, ?, h, g, ?, i  
 (a) e, j                      (b) e, k                      (c) f, j                      (d) j, e
66. Find the odd man out AZ, GT, MN, SH, XB  
 (a) GT                      (b) MN                      (c) SH                      (d) XB
67. If the following series is written in the reverse order, which number will be fourth to the right of the seventh number from the left?  
 7, 3, 9, 7, 0, 3, 8, 4, 6, 2, 1, 0, 5, 11, 13

- (a) 0                      (b) 5                      (c) 9                      (d) 11

68. Find the next number in the sequence 10, 14, 26, 42, 70, ?

- (a) 100                      (b) 102                      (c) 106                      (d) 114

69. Find the next number in the sequence 4, 12, 36, 108, ?

- (a) 144                      (b) 216                      (c) 304                      (d) 324

70. Arrange the given words in a meaningful sequence

1. Frog    2. Eagle    3. Grasshopper    4. Snake    5. Grass

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

71. If ZEBRA can be written as 2652181, how can COBRA be written?

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

72. In a certain code, DESK is written as #5\$2, RIDE is written as %7#\$. How is RISK written in that code?

- (a) %725                      (b) %752                      (c) %7#2                      (d) %7\$#

73. In a certain code language, '123' means 'hot filtered coffee'. '356' means 'very hot day' and '589' means 'day and night'. Which digit stands for 'very'?

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

74. Choose the alternative which is closely resembles the mirror image of the given combination.

**SUPERVISOR**  
 (1) ROSIVREPUZ            (2) SNPEFVIZOF  
 (3) RSONPSEFIV            (4) SNPEFVIOZF

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

75. Arrange the given words in a meaningful sequence:

1. Curd    2. Grass    3. Butter    4. Milk    5. Cow

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