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Question Paper Code: 41041

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

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)

- Which of the following number is a prime?
(a) 111 (b) 119 (c) 143 (d) 127
- How many numbers from 22 to 90 are exactly divisible by 11?
(a) 6 (b) 7 (c) 8 (d) 9
- Find the Number of factors of 100
(a) 9 (b) 2 (c) 4 (d) 10
- The L.C.M. of two numbers is 48. The numbers are in the ratio 2 : 3. Then sum of the number is:
(a) 30 (b) 40 (c) 38 (d) 36
- Find the unit digit of the expression $216^{789} + 991^{254} + 632^{161}$?
(a) 5 (b) 0 (c) 9 (d) 7
- How many digits are used to number a book containing 300 pages.
(a) 694 (b) 792 (c) 698 (d) 784

7. Three numbers are in the ratio 1 : 2 : 3 and their HCF is 12. The numbers are
(a) 4, 8, 12 (b) 5, 10, 15 (c) 10, 20, 30 (d) 12, 24, 36
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. The HCF of two prime numbers is
(a) Their product (b) their sum (c) one (d) zero
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. Find the number of 3 digit numbers, which are divisible by 9
(a) 99 (b) 100 (c) 101 (d) 98
14. A year ago, the father was 8 times as old as his son. Now his age is the square of his son's age. Find their present ages?
(a) 7 years, 49 years (b) 8 years, 64 years
(c) 6 years, 36 years (d) 5 years, 25 years
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. Every year an amount increases by $\frac{1}{8}^{\text{th}}$ of itself. How much will it be after two years if its present value Rs.64000?
- (a) Rs. 64000 (b) Rs. 75000 (c) Rs. 81000 (d) Rs. 80000
21. 40% of $x = 120$, find the value of x ?
- (a) 300 (b) 200 (c) 600 (d) 240
22. 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
23. 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%
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. 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
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. What was the day of the week on 17th June, 1998?
- (a) Tuesday (b) Monday (c) Sunday (d) Wednesday

40. 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
41. A bag contains 1 rupee, 2 rupee and 5 rupee coins amounting to Rs. 264. If the ratio of the number of these coins is 3 : 5 : 4. Find the number of 1 rupee coins.
- (a) 66 (b) 48 (c) 24 (d) 8
42. Arjun walked 30 m towards East, took a right turn and walked 40 m .Then he took a left turn and walked 30 m .In which direction is he now from the starting point?
- (a) South-East (b) South (c) North-East (d) East
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. According to a military code, SYSTEM is SYSMET and NEARER is AENRER. What is the code for FRACTION?
- (a) CARFTINO (b) FRACNOIT (c) CARFTION (d) CARFNOIT
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. Pork : Pig :: Beef : ?
- (a) Farmer (b) Herd (c) Cow (d) Lamb
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 of 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. Tree : Forest :: Grass : ?
- (a) Lawn (b) Field (c) Garden (d) Farm
65. $49 : 81 :: 100 : ?$
- (a) 64 (b) 144 (c) 169 (d) None of these
66. Find the odd man out $81:243, 16:64, 64:192, 25:75$
- (a) $81:243$ (b) $16:64$ (c) $64:192$ (d) $25:75$
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 #\\$52, 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.
- FIXING**
(1) GNIXIF (2) ƆIXINƆ
(3) ƆNIXIF (4) ƆNIXIF
- (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
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