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Question Paper Code: 41408

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2016

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
- $\frac{22}{7}$ is?
(a) Integer (b) Rational Number (c) Irrational Number (d) Natural Number
- Find the Number of factors of 100
(a) 9 (b) 2 (c) 4 (d) 10
- If 7^*81 is divisible by 11. Find the value of smallest natural number * is
(a) 3 (b) 9 (c) 0 (d) 1
- Find the unit digit of the expression $216^{789} + 991^{254} + 632^{161}$?
(a) 5 (b) 0 (c) 9 (d) 7
- 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. Three number 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. Find the HCF of $\frac{2}{3}$, $\frac{3}{4}$ and $\frac{4}{5}$.
 (a) $\frac{1}{60}$ (b) $\frac{2}{5}$ (c) $\frac{1}{12}$ (d) $\frac{2}{15}$
9. The HCF of two prime numbers is
 (a) Their product (b) their sum (c) one (d) zero
10. Five bells commence tolling together and toll at intervals of 2,5,6,8 and 9 seconds respectively. How many times do they toll together in an hour?
 (a) 11 (b) 12 (c) 10 (d) 6
11. The sum of first 12 odd numbers is
 (a) 78 (b) 144 (c) 156 (d) None of these
12. If $1 + 2 + 3 + \dots + k = 21$ then $1^3 + 2^3 + 3^3 + \dots + k^3 = ?$
 (a) 400 (b) 21 (c) 9261 (d) 441
13. Find the number of 3 digit numbers, which are divisible by 9
 (a) 99 (b) 100 (c) 101 (d) 98
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. The average of 13 results is 50.If the average of first 7 results is 52 and that of last 7 results is 49. Find the 7th result?
 (a) 50 (b) 52 (c) 56 (d) 57
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. The average age of our family of four is 35. Excluding me, the average age is 40. Find my age?
- (a) 15 (b) 25 (c) 20 (d) 30
19. The average of the first 5 prime number is
- (a) 3.6 (b) 5.6 (c) 5.4 (d) 7
20. Vinay scores 96 in the first internal and 82 in the second internal. How much should he score in the third internal in order to get an average of 90?
- (a) 94 (b) 92 (c) 90 (d) 88
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. 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. After selling 30% of the Oranges, a fruit vendor has 280 Oranges left. How many did he have originally?
- (a) 400 (b) 520 (c) 390 (d) 300
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. 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. 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 man is 24 years older than his son. In two years, his age will be twice the age of his son. The present age of the son is
- (a) 14 years (b) 18 years (c) 20 years (d) 22 years

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. 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
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 man buys a cycle for Rs.1400 and sells it at a loss of 15%. What is the selling price of the cycle?
- (a) Rs. 1090 (b) Rs. 1160 (c) Rs. 1190 (d) Rs. 1202
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. 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
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. A sum of Rs. 7500 at compound interest at 4% per annum for 2 years amount to
- (a) Rs. 7800 (b) Rs. 8100 (c) Rs. 8112 (d) Rs. 8082
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. 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. 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. A can do a piece of work in 10 days and B can do the same work in 15 days. How long will they take if both work together?
- (a) 6 days (b) 8 days (c) 4 days (d) 5 days
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. The angle between the minute hand and hour hand of a clock when the time is 8.30 is

- (a) 80° (b) 70° (c) 75° (d) 85°

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

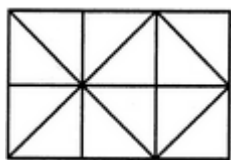
55. Today is Monday. After 61 days, it will be

- (a) Thursday (b) Tuesday (c) Wednesday (d) Saturday

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

- (a) 2000 (b) 700 (c) 800 (d) 1200

57. Count the number of squares in the given figure



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

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. Selecting a suitable figure from the Answer Set that would replace the question mark (?) in figure (D).
- Problem Figures: Answer Figures:
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- (A) (B) (C) (D) (1) (2) (3) (4) (5)
- (a) 1 (b) 21 (c) 3 (d) 4
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) 7IXINΘ
(3) ΘNIXIF (4) ΘNIXIF

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

75. Choose the alternative which is closely resembles the water image of the given combination.

D6Z7F4

(1) DΘZ7F4 (2) DΘZ7F4
(3) DΘZ7F4 (4) DΘZ7F4

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