

**Question Paper Code: 94431B**

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Fourth Semester

Mechanical Engineering

19UGS431 - REASONING AND QUANTITATIVE APTITUDE

(Regulation 2019)

(Common to EEE, Agriculture and Chemical Engineering)

Duration: 1.45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any TEN of the following questions)

S. no	Question	Mark	CO	BLOOM'S LEVEL	MARKS	% OF MARKS
1	Find the average of first ten multiples of 3 a) 13                      b) 15 c) 18                      d) 16.5	2	CO1	Understand	02/50	4%
2	If P% of P is 36, then P is equal to a) 15                      b) 60 c) 600                      d) 3600	2	CO1	Understand	02/50	4%
3	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	2	CO1	Understand	02/50	4%
4	The ratio of two numbers is 3:4 and their sum is 28. The greater of the two numbers is? a) 8                      b) 12 c) 14                      d) 16	2	CO1	Understand	02/50	4%
5	The ratio of boys to girls in a class is 5:3. The class has 16 more boys than girls. How many girls are there in the class? a) 16                      b) 6 c) 24                      d) 64	2	CO1	Understand	02/50	4%
6	The speed of the car is 10 m/s. What is the speed in kmph? a) 25kmph                      b) 30kmph	2	CO1	Understand	02/50	4%

c) 50kmph                      d) 36kmph

- 7 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                      2      CO1      Understand      02/50      4%
- 8 There are 10 yes or no questions. In how many ways can these be answered?  
a) 1024                      b) 256  
c) 100                      d) 20                      2      CO1      Understand      02/50      4%
- 9 The number of new words that can be formed by rearranging the letters of the word 'ALIVE' is  
a) 23                      b) 24  
c) 119                      d) 120                      2      CO1      Understand      02/50      4%
- 10 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                      2      CO1      Understand      02/50      4%
- 11 A party consists of grandmother, father, mother, four sons and their wives and one son and two daughters to each of the sons. How many females are there in all?  
a) 14                      b) 17  
c) 16                      d) 24                      2      CO1      Understand      02/50      4%
- 12 Tree : Forest :: Grass : ?  
a) Lawn                      b) Field  
c) Garden                      d) Farm                      2      CO1      Understand      02/50      4%
- 13 Find the next series  
FAG, GAF, HAI, IAH,  
a) JAK                      b) HAL  
c) JAI                      d) HAK                      2      CO1      Understand      02/50      4%
- 14 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                      2      CO1      Understand      02/50      4%

15	Choose the word which is different from the rest. a) kiwi c) ostrich	b) eagle d) emu	2	CO1	Understand	02/50	4%
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PART – B (3 X 10 = 30 Marks)

**(Answer any THREE of the following questions)**

S.no	Question	Mark	CO	BLOOM'S LEVEL	MARKS	% OF MARKS
16	(a) A sum is invested for three years compounded at 5%, 10% and 20% respectively. In three years, if the sum amount Rs. 1386, then find the sum (b) 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?	10	CO1	Apply	10/50	20%
17	Read the following information carefully and answer the questions given below: <ul style="list-style-type: none"> <li>• Seven students, A, B, C, D, E, F and G are sitting in the first row of the class facing the teacher.</li> <li>• B is third to left of C who is third to right end.</li> <li>• G is second to right of D.</li> <li>• F and D are at two ends.</li> <li>• A is second to left of E and second to right of B.</li> </ul> a) Who is sitting in the middle of the row? b) What are the neighbors E? c) Write the arrangements of seven students	10	CO1	Apply	10/50	20%
18	(a) A and B together can do a work in 4 days. A alone can do it in 12 days. What time B will take to do (b) 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	10	CO1	Apply	10/50	20%

tank?

- 19 (a) 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'?

10 CO1 Apply 10/50 20%

- (b) 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

- 20 (a) If  $A + B$  means A is the brother of B;  $A - B$  means A is the sister of B and  $A \times B$  means A is the father of B. Which of the following means that C is the son of M?

(A)  $M - N \times C + F$  (B)  $F - C + N \times M$

(C)  $N + M - F \times C$  (D)  $M \times N - C + F$

- (b) A, B, C, D and E are sitting on a bench. A is sitting next to B, C is sitting next to D, D is not sitting with E who is on the left end of the bench. C is on the second position from the right. A is to the right of B and E. A and C are sitting together. In which position A is sitting?

10 CO1 Apply 10/50 20%

- a. Between B and D    b. Between B and C  
c. Between E and D    d. Between C and E