(Sem-1/FYUGP) SEC-QAR

2023

Mathematics

SEC

Paper : SEC0108303

Quantitative Aptitude and Reasoning

Time: 1.30 Hours Full Mark: 30

The figures in the margin indicate full marks for the question.

1. (a) Which of the following are rational number

1x5 = 5

$$\pi$$
, e, $\sqrt{2}$, $\sqrt{3}$, $\sqrt{4}$, $\sqrt{9}$

(b) Fillup the blank of the series

Z, W, T, Q,

(c) Fill up the blank of the series

40, 30, 22, 16,

(d) If 20% of A = 30% of B = $\frac{1}{6}$ of C

then A:B:C: is -

- (i) 2:3:6 (ii) 3:2:16, (iii) 10:15:18, (iv) 15:10:18
- (e) Write the comparision between table and diagram.
- 2. Answer any five (5) questions of the following.

2x5=10

- (a) If GOODNESS is coded as HNPCODTR then how GREATNESS can be written in that coding language as-
 - (A) HQZSMFRT
 - (B) HQFZURTM
 - (C) HQFZUODTR
 - (D) HQFZUMFRT

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(b)	Introducing a man to her husband a women said "his brothers father is the only son of my grandfather. How is the women related to the man?
(c)	Write short note on Relative frequency
(d)	Write short note on commulative frequency.
(e)	If "DONKEY" is coded as '88' and "SPARROW" is coded as '79', then how will "PEGION" be coded?
	(A) 73 (B) 96 (C) 85 (D) 91
(f)	Josh is the son of sonal. Sonal is Manasi's sister and Manvi's mother. Taru is Manvi's husband. How is Josh related to Taru?
	(A) Father-in-law (B) Brother-in-law
	(C) Cousin (D) Brother
(g)	If CUD = 40, then KITE = ?
	(A) 10 (B) 20 (C) 30 (D) 45
(h)	Write a short note on prime number.
(i)	Find the average (mean) of first ten even numbers.
(j)	Prove that $\sqrt{2}$ is an irrational number.
Ans	wer any three questions of the following. $5x3=15$
(a)	The age of father 10 years ago was thrice the age of his son. 10 years hence father's age will be twice that of his son. Find the ratio of their present ages.
(b)	A man buys a house for Rs. 5 Lakh and rents it. He puts $12^{1}/_{2}\%$ of each month's rent aside for repairs, pays Rs. 1660 as annual Taxes and realizes 10% on his investment thereafter. Find the monthly rent of the house.
(c)	The average of five consecutive numbers A, B, C, D and E is 48. What is the product of A and E?
(d)	Find mean and median of the following data
applied .	Class interval: 20-30, 30-40, 40-50, 50-60, 60-70
	Frequency: 3 6 8 10 5

3.

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(e) Find the mode from the following frequency distribution.

Classinterval: 0-10, 10-20, 20-30, 30-40, 40-50

Frequenccen:

5

30

10

Also write two merits and demerits of mode.

(f) The everage of five numbers is 58. The average of the first two numbers is 48.5 and the averages of last two numbers is 53.5. What is the third number?
