

Roll No.

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Course: B.Voc, Program: Public Services
Subject: Mathematics and Reasoning-I , Code: MAR-501
Semester-I

Time: 03 Hours**Max Marks: 70****Instructions to the Students:**

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of short answer type. All questions are compulsory. Each question carries 2 marks.
3. Section B comprises 8 long answer type questions out of which students must attempt any 5. Each question carries 10 marks.
4. Do not write anything on the question paper.

Q.No.	SECTION –A(SHORT ANSWER TYPE QUESTIONS)	Marks
1. a	Which of the following two ratios is greater 17:18 and 10:11?	(2)
b	By selling an article for Rs. 600 a man losses 25%. At what price he will sell the article to make a profit of 40%?	(2)
c	What will be the smallest number divisible by 6, 8, 18, 24 and 36 ?	(2)
d	Find $13\frac{3}{13} + 13\frac{9}{13} + 13\frac{12}{13} + 13\frac{15}{13} = ?$	(2)
e	If $4 \times 2 \times 6 = 1626$ and $3 \times 7 \times 4 = 974$, then find $5 \times 6 \times 8 = ?$	(2)
f	In the following question, select the odd number from the given alternatives: (a) 6051 (b) 2027 (c) 2306 (d) 5024	(2)
g	Fill in the blanks in the following: $7:17 :: - : 50$.	(2)
h	If REASON is coded as 72 and BELIEVED as 64. What is the code number for GOVERNMENT ?	(2)
i	Complete the following series: 1, 4, 9, 16, 25, 36, ?	(2)
j	Fill the following gap: 4EZ, 5GY, 7IX, ?, 14MV, 19OU.	(2)

SECTION -B (LONG ANSWER TYPE QUESTIONS).

2. Simplify the following expression: (10)

$$\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{4}} + \frac{1}{\sqrt{4}+\sqrt{5}} + \frac{1}{\sqrt{5}+\sqrt{6}} + \frac{1}{\sqrt{6}+\sqrt{7}} + \frac{1}{\sqrt{7}+\sqrt{8}} + \frac{1}{\sqrt{8}+\sqrt{9}}$$

3. The HCF and product of two numbers are 15 and 6300, respectively. What is the possible pairs of the number? (10)

4. If $\frac{a}{2} = \frac{b}{3} = \frac{c}{5}$, then find the value of $(a + b + c) : c$. (10)

5. A man bought two goats for Rs. 1008. He sold one at a loss of 20% and other at a profit of 44%. If each goat was sold for the same price, the cost price of the goat, which was sold at loss? (10)

6. Fill in the blanks in the following series: (10)

ACEG : BDFH :: CEGI : ?

7. In a certain code 37 means **which class** and 583 means **caste and class** and **caste is wrong** means 951. What is the code for **caste**? (10)

8. Fill in the blanks the following series: (10)

(i) ab _ _ bca _ _ ab _

(ii) h _ eg _ fegh _ eghfe

9. Fill in the blanks the following: (10)

4	11	7
3	8	5
5	2	3
72	197	?

==END OF PAPER==