



Level: Matric
Paper: Mathematics - I (247)
Time Allowed: 03 Hours

Semester: Spring 2019
Maximum Marks: 100
Pass Marks: 40

Note: ATTEMPT FIVE QUESTIONS. QUESTION # 1 IS COMPULSORY.

Q.No.1	<p>Fill in the blanks</p> <p>i, Fraction form of 17% is _____.</p> <p>ii, Zakat on an amount of 120,000 is _____.</p> <p>iii, the percentage of profit charged is called _____.</p> <p>iv, the periodic installment to be paid by the insured is called _____.</p> <p>v, the tax charged on all taxable income is called _____.</p> <p>vi, In a^n, "a" is called _____.</p> <p>vii, third term of $A_n = n+3$, when $n=0$ is called _____.</p> <p>viii, $(A \cup B)' =$ _____.</p> <p>ix, If $x=2$ in $y=4x$, then the value of y is _____.</p> <p>x, the middle value of data arranged in numerical order is called _____.</p>	20
Q.No.2	<p>a, If $a:b = 4:6$ then find $3a:b$?</p> <p>b, Calculate ushr on a wheat crop amounting to Rs. 260,000 produced by artificial resources.</p>	20
Q.No.3	<p>a, Distribute the amount of profit Rs. 215000 among three persons in such a way that the ratio of their shares is 4:3:5.</p> <p>b, If the amount in Rupees of Gold is 780,000. Find Zakat on it.</p>	20
Q.No.4	<p>a, Find the compound profit for one year at the rate of 5% annually on amount of Rs. 49000.</p> <p>b, If the total income of a man annually is Rs. 760,000 with exemption of Rs. 112000. Then find the tax chargeable at @ 3.5%.</p>	20
Q.No.5	<p>a, Prove that: $3 \log 4 + 2 \log 5 - \frac{1}{3} \log 64 - \frac{1}{2} \log 16 = 2$</p> <p>b, Find the value of x if $\log x = 2.0374$</p>	20
Q.No.6	<p>a, If $X = \{2, 5, 7\}$ and $Y = \{3, 6, 8\}$ then establish any four binary relations in $X \times Y$.</p> <p>b, Find three A.Ms between $6\sqrt{2}$ and $\sqrt{2}$.</p>	20
Q.No.7	<p>a, Find the harmonic mean of 15, 25 and 45.</p> <p>b, Find the geometric mean of 16, 36 and 81.</p>	20
Q.No.8	<p>Draw the graph of the following equations.</p> <p>(i) $y = 7x - 5$ (ii) $3y = 5x - 2$</p>	20

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