Experiment No: 17

Determination of Optimum Asphalt Content by Marshall Method of Mix Design

Name : **Student No**:

Asphalt content (P_b)%	Specimen wt. in air (W_a) gm	Specimen wt. in water (W_w) gm	Specimen wt. in air (SSD) (W_s) gm	G_{mb}	Unit wt. (lb/cft) G_{mb}x62.4	G_{mm}	P_S	G_{sb}	$\%V_a$	%VMA	%VFA	Height of specimen (mm)	Correction factor	Stability observed (lbs.)	Corrected stability (lbs.)	Flow value (0.25 mm)

$$G_{mb} = \frac{W_a}{Ws - W_w}; \qquad G_{mm} = \frac{P_{mm}}{\frac{P_s}{G_{se}} + \frac{P_b}{G_b}}; \qquad P_s = 100 - P_b; \qquad P_{mm} = 100; \qquad G_{se} = \frac{P_{mm} - P_b}{\frac{P_{mm}}{G_{mm}} - \frac{P_b}{G_b}}; \qquad G_{sb} = \frac{P_1 + P_2 + P_3}{\frac{P_1}{G_1} + \frac{P_2}{G_2} + \frac{P_3}{G_3}}$$

$$\%V_a = 100\frac{G_{mm} - G_{mb}}{G_{mm}}; \qquad \%VMA = 100 - \frac{G_{mb} * P_s}{G_{sb}}; \qquad \%VFA = \frac{\%VMA - \%V_a}{\%VMA} * 100$$