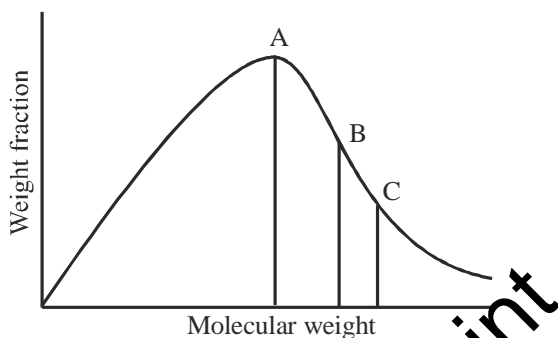


143. The $\sin^2 \theta$ values obtained from X-ray powder diffraction pattern of a solid are $2x$, $4x$, $6x$, $8x$ where x is equal to 0.06 . The wavelength of X-ray used to obtain this pattern is 1.54 \AA . The unit cell and the unit cell length, respectively are
 (a) BCC, 3.146 \AA (b) FCC, 3.146 \AA (c) SCC, 6.281 \AA (d) BCC, 1.544 \AA

144. Distribution of molar masses in a typical polymer sample is shown below



The A, B and C represent

- (a) \bar{M}_w , \bar{M}_v and \bar{M}_n , respectively (b) \bar{M}_n , \bar{M}_v and \bar{M}_w , respectively
 (c) \bar{M}_v , \bar{M}_w and \bar{M}_n , respectively (d) \bar{M}_n , \bar{M}_w and \bar{M}_v , respectively
145. Two bound stationary states, 1 and 2, of a one-electron atom, with $E_2 > E_1$ (E is the total energy) obey the following statement about their kinetic energy (T) and potential energy (V)
 (a) $T_2 > T_1$; $V_2 > V_1$ (b) $T_2 > T_1$; $V_2 < V_1$
 (c) $T_2 < T_1$; $V_2 > V_1$ (d) $T_2 = T_1$; $V_2 > V_1$

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