Ans5) Long forward payoff = $\boxed{F}$ (forward price), $\underline{S_t}$ (spot
$= S_t - F$ rate at maturity

Long Put option payoff = $\max(F - S_t, 0)$
(Strike price = F)

Total = $S_t - F + \max(F - S_t, 0)$

If $S_t \geqslant F_t$ Total = $S_t - F$.

     $S_t < F_t$ Total = 0

$\therefore$ $\boxed{\text{Total} = \max(S_t - F, 0)}$ (Ans).

We know, Put-Call parity:

$c - p = S_0 - Ke^{-rT}.$ Here, $K = F$.

$\Rightarrow$ $c - p = S_0 - Fe^{-rT}$

But, $F = S_0 e^{rT}$ $\Rightarrow c - p = S_0 - S_0 \Rightarrow \boxed{c = p}$

∴ Value of European Put = Value of European Call (with same strike price and maturity

(Ans)