a)

we know,

$$= \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \begin{pmatrix} (1-b)^{n-\lambda} & \frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} & P^{\lambda-1}(1-b)^{\beta-1} \\ = \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} \frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} & P^{\lambda+\alpha-1} & (1-b)^{n-\lambda+\beta-1} \\ = \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} \frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} & P^{\lambda+\alpha-1} & (1-b)^{n-\lambda+\beta-1} \\ = \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} \frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} & P^{\lambda+\alpha-1} & (1-b)^{n-\lambda+\beta-1} \\ = \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \end{pmatrix} P^{\lambda} \begin{pmatrix} \lambda \\ \lambda \end{pmatrix} P^{\lambda} \end{pmatrix} P^{$$

$$= (y) \frac{\Gamma(d+B)}{\Gamma(d)\Gamma(B)} \cdot P^{y+d-1} (1-P)^{n-y+B-1}$$

$$= \binom{y}{T} \frac{\Gamma(\lambda+\beta)}{\Gamma(\lambda+\beta)} \binom{y}{\Gamma(\lambda+\beta+\beta-1)} \binom{y}{\gamma} \binom{y}{\Gamma(\lambda+\beta+\beta-1)} \binom{y}{\Gamma(\lambda+\beta+1)} \binom{y}{\Gamma(\lambda+\beta+1)} \binom{y}{\Gamma(\lambda+\beta+1)} \binom{y}{\Gamma(\lambda+\beta+1)} \binom{y}{\gamma} \binom{y}{$$

$$= (y) \frac{\Gamma(d+B)}{\Gamma(d)\Gamma(B)} \cdot \frac{\Gamma(y+d)\Gamma(n-y+B)}{\Gamma(y+d+B)} \int_{0}^{1} \frac{\Gamma(n+d+B)}{\Gamma(y+d)\Gamma(n-y+B)} dp$$

$$= Ly) \frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} \cdot \frac{\Gamma(\gamma+\alpha)\Gamma(n-\gamma+\beta)}{\Gamma(n+\alpha+\beta)}$$

$$= \frac{L(A+9)L(N-A+B)}{L(N-A+B)} \cdot \frac{L(A+P)L(B)}{L(N-A+B)} \cdot \frac{L(A+P)L(B)}{L(N-A+B)} \cdot \frac{L(A+P)L(B)}{L(N-A+B)} \cdot \frac{L(N-A+B)}{L(N-A+B)} = \frac{L(A+P)L(B)}{L(N-A+B)} \cdot \frac{L(N-A+B)}{L(N-A+B)} \cdot \frac{L(N-A+B)}{$$

8\* (P17) ~ Betal ytd, n+B-Y) Proved

- (1) [1016] [1010] [1010] (1 [1010]) (1 [1010]) (1 [1010]) (1 [1010])

1 (27d) [(n-2+18)

(AtotA)

(a) T(b) T(b) -