$\frac{15\%}{85\%}$ $\frac{3}{17}$

14. $P(AB)=5\%$, $P(A\bar{B})=15\%$, $P(\bar{A}B)=10\%$

$P(\bar{A}\bar{B})=70\%$

(1) $P(A)=P(AB)+P(A\bar{B})=20\%$

$P(B)=P(AB)+P(\bar{A}B)=15\%$

(2) $P(B|A)=\frac{P(AB)}{P(A)}=25\%$

(3) $P(B|\bar{A})=\frac{P(\bar{A}B)}{P(\bar{A})}=12.5\%$

(4) $P(A|\bar{B})=\frac{P(A\bar{B})}{P(\bar{B})}=\frac{3}{17}$

(5) $P(A|B)=\frac{P(AB)}{P(B)}=\frac{1}{3}$

16. (1) $\frac{1}{C_{n-k+1}^{1}}=\frac{1}{n+1-k}$

(2) $P=\frac{n-1}{n}\cdot\frac{n-2}{n-1}\cdot\cdots\cdot\frac{1}{n-k+1}=\frac{1}{n}$ $\frac{146}{200}$ 73

$\frac{54}{200}+\frac{77}{200}+\frac{15}{200}$

19. 设A为选的人进入，B为选到一级，C为选到二级，D为选到三级

$P(A)=P(B)P(A|B)+P(C)P(A|C)+P(D)P(A|D)$

$=\frac{3}{10}\times\frac{9}{10}+\frac{11}{20}\times\frac{7}{10}+\frac{3}{20}\times\frac{1}{2}=73\%$

23. (1) 设A_i为有i件次品，B为取出的是正品

$P(B)=\sum_{i=0}^{4}P(A_i)P(B|A_i)=\frac{1}{5}\left(1+\frac{3}{4}+\frac{2}{4}+\frac{1}{4}+0\right)=\frac{1}{2}$

(2) $P(A_0|B)=\frac{P(A_0B)}{P(B)}=\frac{P(B|A_0)\cdot P(A_0)}{\frac{1}{2}}=\frac{1\times\frac{1}{5}}{\frac{1}{2}}=\frac{2}{5}$

27. $P = 0.5 \times (0.7 \times 0.2 + 0.8 \times 0.3) + 0.8 \times 0.7 \times 0.8$

$= 0.638$ 为 63.8%

补充题：$AB\cup\bar{A}$ 与 $(C\cup D)$ 独立

$$P[(AB\cup\bar{A})\cap(C\cup D)]=P[(\bar{A}\cup B)\cap(C\cup D)]$$

$$=1-P[(A\bar{B})\cup(\bar{C}\bar{D})]=1-P(A\bar{B})-P(\bar{C}\bar{D})+P(A\bar{B}\bar{C}\bar{D})$$

$$=P(\bar{A}\cup B)+1-P(\bar{C}\bar{D})-(1-P(A\bar{B}\bar{C}\bar{D}))$$

$$=P(\bar{A}\cup B)+P(C\cup D)-P[(\bar{A}\cup B)\cup(C\cup D)]$$

$$=P(\bar{A}\cup B)+P(C\cup D)-P(\bar{A}\cup B)-P(C\cup D)+P(\bar{A}\cup B)\cdot P(C\cup D)$$

$$=P(\bar{A}\cup B)P(C\cup D)=P(AB\cup\bar{A})\cdot P(C\cup D)$$

得证