BAMS1613 Oct 2020 Answers

Q1 a) (i) 41.118 years, 9.222 years

(ii) Median =40.833 years, Q_3 = 48 years

(iii) Mode = 40.929 years

b) 46, 58, 12

Q2 a) (i) 0.76189

(ii) 0.1092

b) (i) 0.5524

(ii) 0.90413

c) (i) 0.1056 or 10.56%

(ii) Number of cups =0.18454X 500 = 92.27 $\approx$ 92

(iii) 184.62 $\approx$ 185

Q3a) (i) RM(36.8682, 40.1318)

(ii) (0.3186, 0.5956)

b) H_0: $\mu = 1500$, H_1: $\mu > 1500$, Z=3.4553, reject H_0

c) H_0: $\pi \geqslant 0.65$, H_1: $\pi < 0.65$, Z=−1.7974, reject H_0

Q4 a) (i) 0.0452

(ii) 0.2655

b) (i) 0.9875

(ii) Y = 1.2396 + 1.0449X

(iii) If the age of the machine increases by one year, the number of breakdowns is expected to increase by 1.0449 $\approx$ 1 time.

(iv) 0.9821