Exercise 8.5

Multiple choice questions

1. Which of the following is not a measure of dispersion?
   (1) Range (2) Standard deviation
   (3) Arithmetic mean (4) Variance
2. The range of the data 8, 8, 8, 8, 8. . . 8 is
   (1) 0 (2) 1 (3) 8 (4) 3
3. The sum of all deviations of the data from its mean is
   (1) Always positive (2) always negative (3) zero (4) non-zero integer
4. The mean of 100 observations is 40 and their standard deviation is 3. The sum of squares of all deviations is
   (1) 40000 (2) 160900 (3) 160000 (4) 30000
5. Variance of first 20 natural numbers is
   (1) 32.25 (2) 44.25 (3) 33.25 (4) 30
6. The standard deviation of a data is 3. If each value is multiplied by 5 then the new variance is
   (1) 3 (2) 15 (3) 5 (4) 225
7. If the standard deviation of x, y, z is p then the standard deviation of $3x+5$, $3y+5$, $3z+5$ is
   (1) $3p+5$ (2) $3p$ (3) $p+5$ (4) $9p+15$
8. If the mean and coefficient of variation of a data are 4 and 87.5% then the standard deviation is
   (1) 3.5 (2) 3 (3) 4.5 (4) 2.5
9. Which of the following is incorrect?
   (1) $P(A)>1$ (2) $0 \le P(A) \le 1$ (3) $P(\phi)=0$ (4) $P(A)+P(\overline{A})=1$
10. The probability a red marble selected at random from a jar containing p red, q blue and r green marbles is
    (1) $\frac{q}{p+q+r}$ (2) $\frac{p}{p+q+r}$ (3) $\frac{p+q}{p+q+r}$ (4) $\frac{p+r}{p+q+r}$
11. A page is selected at random from a book. The probability that the digit at units place of the page number chosen is less than 7 is
    (1) $\frac{3}{10}$ (2) $\frac{7}{10}$ (3) $\frac{3}{9}$ (4) $\frac{7}{9}$
12. The probability of getting a job for a person is $\frac{x}{3}$. If the probability of not getting the job is $\frac{2}{3}$ then the value of x is
    (1) 2 (2) 1 (3) 3 (4) 1.5