Question 1

a.   Simplify: (-9) – [(-5)- {11- (8 – $\overline{5 - 2}$)}].   **[3]**

b.   Evaluate $\dfrac{-13}{8} + \dfrac{7}{16} + \dfrac{-3}{4}$ **[3]**

c.   Simplify: i. $\dfrac{-16}{9} \times \dfrac{12}{-5}$ ii. $\dfrac{-27}{32} \div \dfrac{-9}{16}$ **[4]**

Question 2

a.   Simplify following expression and express as rational number.

$$\dfrac{10^2 \times 15^3}{2^2 \times 3 \times 5^5 \times 6^4}$$ **[3]**

b.   An ore contains 15% of iron. How much ore is required to get 18 kg of iron?   **[3]**

c.   **i.**   Find the value of x such that $\left(\dfrac{3}{7}\right)^3 \times \left(\dfrac{3}{7}\right)^{-8} = \left(\dfrac{3}{7}\right)^{2x+3}$ **[2]**

   ii.   Simplify: $\left[\left\{\left(\dfrac{-1}{3}\right)^{-2}\right\}^{-1}\right]^{-2}$ **[2]**

Question 3

a.   Rashmi bought a purse for Rs. 720 and sold it for Rs. 660. Find her loss or gain per
        cent.   **[3]**
b.   Find the simple interest and amount on Rs.8400 for 4 years at 8% per annum.   **[3]**
c.   Convert the following reoccurring fractions into vulgar fraction.
        i. $0.\overline{8}$ ii. $2.1\overline{43}$ **[4]**

Question 4

a.   By selling cow for Rs.14250, a former suffer a loss of Rs. 750. Find the percent of loss.   **[3]**
b.   In what time will Rs. 3600 amount to Rs. 4320 at 4% per annum simple interest.   **[3]**

c.   **i.**   Represent fractions $\dfrac{-12}{5}$ and $\dfrac{22}{7}$ on separate number line.   **[2]**

   ii.   Express $\dfrac{729}{64}$ in exponential form   **[2]**

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