Self Practice 14B

1. **Add:**

   (a) 18 minutes 25 seconds + 12 minutes 20 seconds

   (b) 4 hours 20 minutes + 6 hours 42 minutes

   (c) 23 hours 30 minutes + 3 hours 42 minutes

   (d) 2 hours 20 minutes 55 seconds + 3 hours 58 minutes 22 seconds

   (e) 3 hours 2 minutes 8 seconds + 5 hours 45 minutes 63 seconds

Solution 1:-

(a) 18 min 25 sec + 12 min 20 sec

$$
\begin{array}{rll}
 & 18 \text{ min} & 25 \text{ sec} \\
+ & 12 \text{ min} & 20 \text{ sec} \\
\hline
 & 30 \text{ min} & 45 \text{ sec} \\
\end{array}
$$

Ans ⇒ 30 min 45 sec

(b) 4 hrs 20 mins + 6 hrs 42 mins

$$
\begin{array}{rll}
 & 4 \text{ hrs} & 20 \text{ mins} \\
+ & 6 \text{ hrs} & 42 \text{ mins} \\
\hline
 & 10 \text{ hrs} & 62 \text{ mins} \\
+ & 1 \text{ hr} & -60 \text{ mins} \\
\hline
 & 11 \text{ hrs} & 02 \text{ mins} \\
\end{array}
$$

Ans ⇒ 11 hrs 02 mins

(d) 2 hrs 20 min 55 sec + 3 hrs 58 min 22 sec

```
        2 hrs        20 mins        55 sec
    +   3 hrs        58 mins        22 sec
        5 hrs        78 mins        77 sec
                  +  1 min        - 60 sec
        5 hrs        79 mins        17 sec
    + 1 hr         - 60 mins
        6 hrs        19 mins        17 sec
```

Ans ⇒ 6 hrs 19 mins 17 sec

In Q1 (c) and (e) are homework.

2. **Subtract:**

   (a) 16 minutes 31 seconds from 20 minutes 40 seconds

   (b) 2 hours 45 minutes from 5 hours 20 minutes

   (c) 12 hours 20 minutes 39 seconds from 16 hours 20 minutes 20 seconds

   (d) 3 hours 58 minutes from 5 hours 20 minutes

   (e) 1 hour 5 minutes 59 seconds from 23 hours 3 minutes 35 seconds

Solution 2:-

(a) 16 min 31 sec from 20 min 40 sec

```
        1 10           3 10
        2̶0̶ min         4̶0̶ sec
    -   16 min         31 sec
        04 min         09 sec
```

Ans ⇒ 04 min 09 sec

(b) 2 hrs 45 min from 5 hrs 20 min

$$\begin{array}{ll} \overset{4}{\cancel{5}}\ hrs & \overset{7\ \ 10}{\cancel{8}\cancel{0}}\ min\ (60+20=80) \\ -\ 2\ hrs & 45\ min \\ \hline 2\ hrs & 35\ min \end{array}$$

Ans⟹ 2 hrs 35 min

(c) 12 hrs 20 mins 39 sec from 16 hrs 20 mins 20 sec

$(60+19=79)$

$$\begin{array}{llll} 15 & \overset{79}{\cancel{}} & & \\ & +9 & & \overset{7\ \ 10}{\cancel{8}\cancel{0}} \\ \cancel{16}\ hrs & \cancel{20}\ mins & \cancel{20}\ sec\ (60+20=80) \\ -\ 12\ hrs & 20\ mins & 39\ sec \\ \hline 03\ hrs & 59\ mins & 41\ sec \end{array}$$

Ans⟹ 03 hrs 59 mins 41 sec

(e) 1 hr 5 min 59 sec from 23 hrs 3 min 35 sec

$(60+2=62)$

$$\begin{array}{lll} & \overset{5\ \ 62\ \ 12}{\cancel{6}\ \cancel{2}} & \overset{8\ \ 15}{\cancel{9}\cancel{5}} \\ \overset{2\ 2}{\cancel{2}\cancel{3}}\ hrs & \overset{2}{\cancel{3}}\ min & \cancel{35}\ sec\ (60+35=95) \\ -\ \ \ \ 1\ hr & 5\ min & 59\ sec \\ \hline 21\ hr & 57\ min & 36\ sec \end{array}$$

Ans⟹ 21 hr 57 min 36 sec