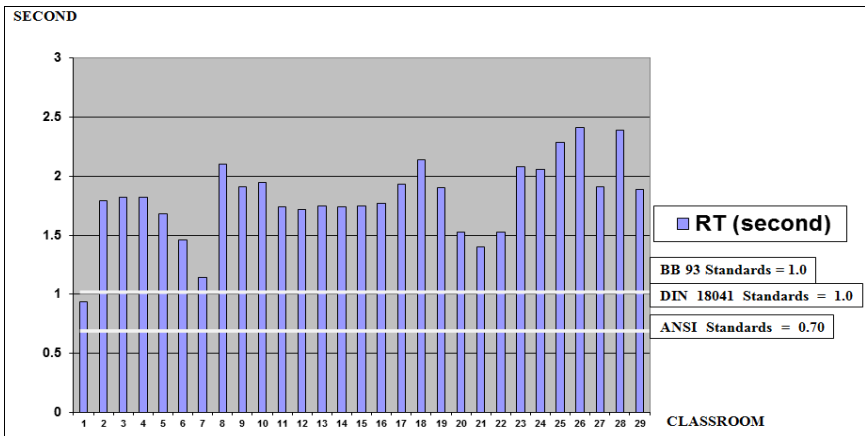


### 5.3.2 Comparison of Reverberation Time with the International Standard

Figure 5.3, Figure 5.4 and Figure 5.5 show the comparison of reverberation time for all classroom with International Standard of ANSI/ASAS12 2002, Building Bulletin 93 and DIN 18041 based on 500Hz, 1000Hz and 2000Hz octave band. 93% of the classroom have reverberation time exceeded 1.0 sec (in case refer to BB 93). Thus, almost all classes can be rated as not acoustically comfortable. This is because, some of classrooms have been using painted block concrete for the walls and cement render for the floor which has low sound absorption coefficient.

The C28 Seminar Room B has higher volume than the C1 classroom (737.30 m<sup>3</sup> and 265.81 m<sup>3</sup> respectively). This can be the factor of higher reverberation time for C28 Seminar Room B because the small spaces have short reverberation time and vice versa. It has been mentioned that large spaces need more absorption to have a good reverberation time. For the C1 classroom, the reverberation time was shorter because the floor has been installed with a thin carpet. It has high sound absorption as compared to other materials such as cement render, vinyl above the concrete and tile for the floor.



**Figure 5.3** Comparison of RT for classrooms with International Standard for the octave band of 500Hz