

ACET Logical Reasoning

Topic 2 – Calendars

Basic Facts to Remember

1. The Gregorian Calendar starts on a Monday i.e. 01/01/01 was a Monday.
2. Unless specified in the question – directly or indirectly, a week begins on Monday and ends on Sunday.
3. It is a poor simplification that every fourth year is a LEAP YEAR.
4. Both 1900 and 2000 are divisible by 4 yet 1900 is not a leap year while 2000 is.
5. So, if a year is divisible by 100 but not 400, it isn't a leap year; while a year that is divisible by both 100 and 400 is a leap year.

Concept Builders

Q1. Fill in the blanks:

- a. A non-leap year consists of _____ days or _____ weeks and _____ day(s).
- b. This extra day(s) is called the _____ day/days.
- c. A leap year consists of _____ days or _____ weeks and _____ day(s).
- d. This extra day(s) is called the _____ day/days.
- e. One _____-day means the year would end on the _____ day with which it begins. Hence, the next year would begin on the _____ day of the week. For example, if 1999, starts on Friday, 2000 would begin on _____.
- f. Two _____-days means the year would end on the _____ day with which it begins. Hence, the next year would begin on the _____ day of the week. For example, if 2000, starts on Saturday, 2001 would begin on _____.
- g. The day on 01/01/02 was _____.
- h. The day on 01/01/03 was _____.
- i. The day on 01/01/04 was _____.
- j. The day on 01/01/05 was _____.
- k. The day on 01/01/06 was _____.
- l. The day on 01/01/07 was _____.
- m. In the first century (year 1 to 100), there were _____ non-leap years and _____ leap years leading to a total of _____ -days OR effectively just _____ -days.

- n. In the second century (year 101 to 200), there were _____ non-leap years and _____ leap years leading to a total of _____ -days OR effectively just _____ -days.
- o. In the third century (year 201 to 300), there were _____ non-leap years and _____ leap years leading to a total of _____ -days OR effectively just _____ -days.
- p. In the fourth century (year 301 to 400), there were _____ non-leap years and _____ leap years leading to a total of _____ -days OR effectively just _____ -days.
- q. In the first four centuries (year 1 to 400), there were _____ non-leap years and _____ leap years leading to a total of _____ -days OR effectively just _____ -days.
- r. The day on 01/01/101 was _____. (Same for 501, 901, 1301, 1701 so on)
- s. The day on 01/01/201 was _____. (Same for _____, _____, _____, _____)
- t. The day on 01/01/301 was _____. (Same for _____, _____, _____, _____)
- u. The day on 01/01/401 was _____. (Same for _____, _____, _____, _____)
- v. The day on 01/01/801 was _____. (Same for _____, _____, _____, _____)
- w. The day on 01/01/1201 was _____.
- x. The day on 01/01/1601 was _____.
- y. The day on 01/01/2001 was _____.
- z. The day on 01/01/2401 would be _____.

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Q2. True / false:

- a. January, March, May, July, August, October and December all have the same number of odd-days i.e. 3.
- b. February may have 0 or 1 odd-days depending upon whether the year is non-leap or leap.
- c. April, June September and November do not have any odd-days.
- d. 01/01 and 01/10 always fall on the same day of the week.
- e. For July to have 5 weekends, it must begin with a Saturday.
- f. For Nov to have 5 weekends, it must begin with a Saturday.
- g. For a non-leap year, the calendar can be reused after 7 years.
- h. For a leap year, the calendar can be reused after 28 years.
- i. If the first four days don't have a Wednesday the month can't have five Wednesdays.
- j. A leap year can't have 53 weekends unless it starts with a weekend.