"THE PRAYER TIMES" AND "IMSÂKIYYAS", PREPARED BY US ARE CALCULATED ACCURATELY USING "THE LATEST UP-TO-DATE TECHNOLOGY" AND PUBLISHED WORLDWIDE IN "44 LANGUAGES".

The characteristic signs of the prayer times stated by Nass, that is, by âyât-al-kerîma and ahâdîth-al-sharîfa since centuries do not change and cannot be changed. The Islamic astronomy experts have carried out the calculations of these times with due sensitivity and accurately, and have been in use since then.

The times we publish now are those definitely correct times. As will be explained with documents, the times found using the latest technology to the full in the calculations are the same as those times that have been in use including and prior to the year 1982.

In fact the Presidency of Religious Affairs (of Turkey) in their circular dated 30 March 1988 and no. 234-497 have also confirmed that those times are correct.

The calculation method and rules of prayer times that have been in use up to this day without any change cannot be changed up to the day of resurrection. It is because these are the times the signs of which are stated by Nass.

1) Since the prayer times are calculated according to the Sun's center, the Sun is said to have set when the Sun's center reaches the horizon. Actually, for the Sun to have set, it has to go down more as much as its radius until its upper edge disappears from the horizon. **This is called the Sun's "Nısf-qutr-ı zâhirî** (apparent radius)**.**

In the astronomical calculations, since the centers of the Sun and the Earth are taken as the reference points, the Sun is said to have risen when the Sun's center comes to this haqîqî üfq (astronomical horizon) at sunrise, and it is said "*the Sun set*" astronomically when the Sun's center comes again to this plane of haqîqî üfq (astronomical horizon) at sunset. In fact, because the Sun's half is above this astronomical horizon both at astronomical sunrise and sunset, half of the Sun is visible to the observer from the higher places of the location. Again, it has not set according to this calculation when it is said to have set astronomically. It is because half of the Sun is above the horizon.

2) The "Refraction" does not exist in the results found by the formulae. Because the refraction does not take place in the astronomical formulae, and the light rays coming from the Sun are subjected to refraction as they pass through the air layers of varying densities and atmospheric conditions. The phenomenon of "Refraction" and related part does not exist in the result found by the formula. The result found by the formulae must be corrected by taking into consideration the refraction. In other words, the Sun as a whole should be below the horizon as much as this difference both at sunrise and sunset. **This is called "Refraction of light rays".**

3) The result found again by this formula is for a completely flat surface. Obviously, the Earth is not flat. Astronomical calculations are always performed with reference to flat places such as seas, wide planes, and information and measurements referring to such flat places are being published in the handbooks called "Almanacs". However, since the Prayer times belong to the whole city, the fasts and the prayers of those living at higher places of the city should also be valid. The settlement areas and the cities, unlike planes and seas, are not flat. The lands are hilly. Therefore, the time we should find must be the time for the highest place if the location. The time

thus found will be the time encompassing the location as a whole. **And this is called "Inhitât-ı üfq** (dip of horizon)**".**

4) Finally, the formula used for calculating the prayer times yields results according to the centers of the Earth and the Sun. Therefore, the result found is with reference to the centers of the Earth and the Sun. However, this is not what we are looking for. The human kind live not at the Earth's center, they live on its surface. The calculations using the astronomical formulae with reference to the haqîqî üfq (astronomical horizon) are performed with reference to the center of the Earth. Therefore, it is necessary to include also the parallax **(Ikhtilâf-ı manzar)**, that is, the results should be brought to the location on the surface of the Earth. The calculations for transformation of results to the Earth's surface are accomplished by using this component. Since the parallax, contrary to the effects of the three components of the Temkin mentioned above, delays the sunrise and brings forward the sunset, its effect is opposite to those of the other three components. This is why the Temkin period is found by subtracting the effect of Parallax from the sum of the first three. **And this is called "Ikhtilâf-I manzar"** (parallax)**.**

The Period of Temkin is subtracted from all prayer times (awqāt) including İmsâk, and, added to all prayer times after noon, including Zuhr (early afternoon prayer) time. Thus the correct shar'î times are found and recorded in the calendars.

This is because there is a difference equal to the temkin period between the times calculated according to the astronomical formulae [theoretical, astronomical horizon], and the sher'î times [based on apparent/visible horizon]. The temkin period specific to the highest locality of a city [for the citizens using the same calendar] cannot be altered. If the temkin period is reduced, then the zuhr salât and the following salâts will be being performed before their due times. And the sawm (fasting) will be being started later than the due time. Such salâts and sawms will not be sahîh (valid). They are to be made qadâ of [made up for, performed again, at their proper times] since they will be fâsid (invalid).

➢ The Temkin periods calculated for the latitudes from zero degree up to sixty degrees and for heights with 25 meters increments up to five hundred meters have been calculated and published in tabular form by islamic astronomes in their works. This temkin table can be seen by clicking on the **Temkin Table** link.. **The Temkin periods must be used in calculating the Imsâk and Prayer Times as a requirement of the science of astronomy. The imsâk and prayer times calculated without using the temkin periods will be erroneous.**

The inclusion of these four components in the prayer times results found is certainly necessary, because they do not exist in the formula for calculating the prayer times. The piece of time obtained by summing up the first three components and subtracting the Ihtilâf-ı manzar (parallax) is called the Temkin Period**. The temkin periods in the sher'î times of all prayers is equal to the temkin periods at the sunrise and sunset times.**

If the temkin period is reduced or removed, the zuhr (early afternoon) prayer and those after it will be being performed before their due times. And the sawm (fasting) will be being started after the sahûr (latest time when eating is free, before the beginning of fasting) has passed. Such salâts (prayers) and sawms (fastings) will not be sahîh (valid). **The temkin period for Istanbul is accepted as 10 minutes. It is subtracted from the times before noon, and added to the salât times after noon. Hence, the true and correct sher'î times are found and written in the calendars.** It is noted also in **(Dürr-i yektâ)** that the fasting of a person delaying the imsâk time for 3-4 minutes, thinking that the temkin is a safety margin, and, the fasting and the maghrib salât of the one who brings forward the iftâr and the maghrib time, will be all fâsid (invalid).

The **temkin period** emerges in the calculations, and it is a period of vital use, a scientific and astronomic requirement. It is certainly not a reserve period. The **temkin period** is used for bringing the time found by astronomical calculation to the time when the characteristic signs specific to a prayer as noted in the books of Islamic scholars appear in the sky. **There is a single temkin for a city.** Bu da, herhangi bir namazın hakiki vaktinden, yani astronomik formülle bulunan vaktinden, şer'î vaktini bulmak için kullanılırAnd, it is used for finding the sher'î time of a prayer from the time found by astronomical calculations. **There are not sparate temkins for every salât.**

Reducing or removing the temkin period means giving not the prayer time but the time found by the astronomical formula, at which the prayer are not to be performed, the prayer performed and the fasts kept according to such times will be fâsid (invalid), that is, they will be spoilt. It is because the times found according to the astronomical formulae with respect to the haqîqî üfk (astronomical horizon), are not the sher'î times with respect to the sher'î horizon, which are the correct times. Making statements such as *"unnecessary, exaggerated"* for this necessitous period is an indication of not knowing what the temkin period is. **In other words, it is a kind of assuming that the times found by simplified astronomical formulae are the prayer times, which is a very gross mistake, it is a kind of deluding the Muslims and misleading them into erroneous paths.**

❖ In the calculation of all prayer times and the Ramdân-ı sherîf imsâkiyyas both in our www.namazvakti.com and www.turktakvim.com addresses, including those calculated and sent upon request, the accurate and up-to-date values of **meyl-i shems (Declination of the Sun)** and **ta'dîl-i zemân (Equation of Time)** are used, which are given in **"MICA" (Multiyear Interactive Computer Almanac)** prepared by **"United States Naval Observatory"**, which is published in the USA and used also by **NASA**. While the Sun's declination is given accurate to arcminutes in all the other almanacs published and on sale worldwide, declinations are given accurate to arcsecond in **MICA**. In parallel to this, the **equation of time** values are given accurate to 0.1 seconds. Thus, very accurate calculations are performed by us using **Up-to-date Astronomical Data and Computers**.

❖ The temkin periods can be seen, as given in the **Temkin Cedvelinde** prepared by Islamic astronomy specialists, for all cities from **(0) zero to 60 degrees** latitude with increments of one degree, from (0) altitude up to **500 meters** with increments of **25 meters**, in units of time **minutes** and **seconds**. Intermediate values can be determined by interpolation more easily on a computer or hand calculator. **The accuracy of the temkin periods to the time seconds of the results calculated by the Islamic Astronomy 'Ulamâ was verified by subtracting the corresponding values with the most up-to-date data and technology products, using software computing to 21 decimal points, and finding the result of subtraction equal to (0) zero.** We were then in admiration, exultant, as the Türkiye Calendar Committee of real men of religion and experts in 'ilm-al-hey'et (astronomy), seeing that all results they obtained under the conditions of those days were accurate to order of seconds. By this occasion, we saw with certainty how sensitive, accurate and perfect work our ancestors accomplished. In fact our admiration, love and faith with confidence in them are complete.

In order to correctly perform the calculations of prayer times, it is not sufficient to be expert only in astronomy, physics, algebra, geometry, geography and spherical astronomy, one should also be well versed in a completely different branch of specialization "Islamic astronomy". Those who are not competent in all these branches of science cannot correctly perform the prayer times calculations.

The one who claims that his prayer times are correct should prove his proclamation. Should be openly declared by him. Our dîn is not based on baseless words but on 'ilm. A

hadîth-i sherîf declares *"There is Islâm where there is 'ilm, there is no Islâm where there is no 'ilm"*. The value of a statement exists if it is based on 'ilmî (scientific) statements. If it is not based on 'ilmî (scientific) documents, it is of no value at all; such statements, the prayer times on such websites, the prayer times in their calendars are not to be regarded as reliable.

In order to understand whether something is wrong or correct, it has to be investigated. The relevant **questions to be asked** to the calendar and web site managers, to the responsible persons who publish different imsâk and prayer times are as follows:

• **Concerning the Temkin Period:** - Is temkin period used or not, - If used, at which times and how it is used, - Its length in minutes, - How is it calculated and found,	• **Concerning the Sun's altitude:** - The Sun's altitude values for imsâk and 'ishâ, - The relevant references.

PRESIDENCY OF THE TIME CALCULATION COMMITTEE OF TURKIYE CALENDAR

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