

Major Monuments of Mughal Period: Akbar to Shah Jahan

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ABSTRACT

Mughal Empire, the most powerful and influential dynasty, founded by Babur in 1526 ruled large parts of the Indian subcontinent from 16th to mid-19th century. The Mughals usually known for the sophisticated administrative systems and military progress promoted culture specially in the fields of art, literature and architecture. Mughals were renowned for their distinctive and grand architectural style which blended Persian, Timurid, Ottoman and Indian elements. This study begins with the introduction of Indo-Islamic architecture and how it evolved into Mughal style, its features and characteristics. Akbar's vision of integrating diverse influences resulted in the structures such as Fatehpur Sikri Complex which reflects a blend of Persian, Indian and Islamic architectural elements. Jahangir's reign is characterized by a shift towards more elaborate and decorative styles as seen in the Tomb of Itimad-ud-daulah which showcases intricate marble inlay work, emphasize on gardens as a representation of paradise, highlighting the personalities of Jahangir and the growing importance of individual expression in Mughal architecture. Shah Jahan's era apexes in the creation of iconic Taj Mahal, a symbol of eternal love and architectural mastery. This section discusses how Shah Jahan's monumental projects including the Red Fort and Jama Masjid reflect the zenith of Mughal architectural achievement characterized by grandiosity and symmetry. This research paper explores the monuments of the Mughal Empire during the reign of Akbar Jahangir and Shah Jahan, stressing upon the evolution of style, purpose and cultural significance. Data and information pertaining to the timeline of the construction, dimensions and structure of the buildings, the type of materials used, decoration techniques applied and the name of the master builders and architects has been discussed in the paper. Through a comprehensive analysis, the paper illustrates how Mughal architecture not only served religious and commemorative purposes but also acted as a means of solidifying authority and cultural legacy, ultimately leaving the lasting impact on the architectural landscape of India.

EVOLUTION OF ISLAMIC ARCHITECTURAL STYLE IN INDIA

In Islamic art, priority is given to calligraphy along with geometric and floral designs combined with inlay of semi-precious stones. Depiction of real animals is not permitted. Architecture is hailed as it leaves the stamp of Islam on ground. (Javid, 13) After its introduction in India certain modifications were made. The shape of the base of dome was changed from square to round and the dome from semicircular to bulbous. True arch and vaults were introduced. Hindu and indigenous features were added like *Chhatri* (small pillared dome pavilion without walls), *Jalis* (pierced stone screen), *Jharokha* (projected balcony with small vaulted roof) and *chhajja* (angled eave). Arcades and galleries were also modified. (Javid, 14)

MUGHAL ARCHITECTURAL STYLE

The establishment of Mughal dynasty in 1526 gave birth to a more inventive and profuse phase in Indian architecture. Now the buildings formed a flavoursome and corresponding group. (Thapar, 84) The work of Delhi Sultans exhibiting austerity and plainness was ornamented and softened now by Persian influence and attained a magnificent character. (Luniya, 520) Mughals were interested in planning forts, palaces, mosques, tombs and townships. They freely amalgamated the foreign and indigenous styles, thus resulting in the Mughal style which was also the national Indian architecture of that era. (Mehta, 283) There was high Arabian and Persian influence on external architecture along with the native Indo-Islamic and local Hindu style. (Peterson, 199)

Ferguson's view that Mughal architecture style had foreign origin was criticized by Havell who held that Indian culture utilised and absorbed foreign elements due to their worldwide connections. It would be wrong to say that the inspiration of master-builders were completely foreign. Sir John Marshall is of the view that complying with a single

universal style was difficult in a vast and diverse country like India. Personal taste of the Emperors matter the most. (Prasad, 467-8)

Mostly the buildings are found in and around Delhi, Agra, Lahore, Allahabad and also in Deccan region around Bijapur. (Basham, 320)

Salient features

The chief traits include bulbous domes, corner cupolas on slender pillars, notable palace halls and lofty vaulted gateways. They constructed mausoleums in the centre of parklike enclosure and built a double dome. (Luniya, 520-1) Hindu features incorporated were trabeated stone construction, ornamented carved piers and columns, shallow arches made out of corbels, temple bells in arches, lotus in Islamic geometric designs, ribbed fruits and pot-like finials, brackets fashioned as animals and birds, and curved roof with downward sloping cornice (imitation of thatched-hut roofs of Bengal). Multi-cusped arch and multifaceted columns were introduced having fluted sides with vase-shaped bases found in Pre-Mughal architecture of Delhi and Gujarat. (Javid, 14)

Visible Persian influences include tilework, iwan as mosque's central feature, *charbagh* (gardens divided into 4) and four centre-point arch form of building and persian motifs. (Petersen, 200)

The type of building material used can be divided into two phases—first, hard deep red sandstone was used during Akbar's reign, and second, white marble was used earlier in conjunction with red sandstone but later on entirely during the reign of Shah Jahan. (Chandra 2003, 147) Also, fine-cut masonry was used for majority of walls. For elements like domes and arches baked brick was used.

Decoration work was carried on by a number of techniques namely ceramic tilework, carved and inlaid stonework and *pietra dura*. Chinese, Persian and Indian tiles were applied in Persian fashion. Cuerda sec (coloured glazes) and tile mosaic (cut pieces of monochrome tiles) were used for pattern production. Carved stonework was used for shallow relief depictions for flowers and *jalīs*. (Petersen, 200)

Types of Monuments

The unrivalled grandeur and wealth of Mughals enabled them to construct a wide range of buildings—palaces, forts, mosques, tombs, pleasure gardens and new cities. (Luniya, 520) Most important are the mosques and tombs, having long cylindrical minarets and round domes. Mosques consists of a large lighted court with galleries, *mihrab* (a niche in the wall in the direction of Mecca), a pulpit and a tower for calling devotees to prayer. (Javid, 13) The fortified palaces (forts) have a common overall design. A monumental outer gate leads to an Elephant Gate from where Diwan-e-Aam (public audience hall) could be accessed. Behind these are the private complexes, elevated for privacy, comprising of—private audience hall (Diwan-e-Khas), a bath house, numerous courtyards having pavilions around pools and Zenana (separate area for women). On one side of this is a tower projecting (Mussaman Burj) which is octagonal in shape from which the emperor appeared once a day to show that he was alright. (Petersen, 201)

MONUMENTS UNDER AKBAR

Architectural activities commenced on a grand scale during the reign of Akbar. He built magnificent architectural complexes at all significant locations of imperial residence and established Public Works Department for the construction of buildings, gardens, roads, serais, bridges, wells and canals. The ideal synthesis of Hindu and Muslim art traditions are the key trait in his buildings. (Mehta, 286) He completely incorporated Hindu decorative art designs along with Persian or Central Asian influence, as seen from glazed blue tiles of decoration used in Fatehpur Sikri. (Chandra 2020, 318) The style was executed in red sandstone. Trabeate order construction was done and “Tudor arch” (4-centred arch) was used as decorative arcading. (Brown, 92)

Ajmer Fort

Built in 1570 and locally called the ‘Magazine’, the fort consists of a rectangular courtyard of dimensions 85 by 75 metres having 4 octagonal towers in corners and a half octagonal gateway. A rectangular pavilion is built in the centre of the courtyard and is divided into nine chambers, thus having a form of Hindu Mandal. It is built of yellow stone. (Petersen, 202) The perimeter of thick double walls is planned in a manner to form it a strong impenetrable structure. There is a sizable chamber in the interior having rooms in each of the angles. (Brown, 94)

Lahore Fort

The fort forms a parallelogram having dimensions 1200 feet by 1050 feet and is surrounded by a high bastioned wall. Interior accommodations are symmetrically disposed. The whole area is equally divided into two—the southern portion reserved for official and service buildings and rear portion containing royal palaces. The two portions are separated by an alignment of buildings. Fort is mainly built in red sandstone with the combination of beam and bracket in its

principle structural system. The designs show exceptional ingenuity and fancy. Tile decoration is distributed over the exterior walls on its northern aspect. (Brown, 93)

Humayun's Tomb

This tomb marks the real commencement of the Mughal architectural style. It characterized remarkable refinement of spatial symmetry and a great attention to detailing. Commissioned around 1565 by Humayun's widow Haji Begum, it took nearly 9 years to complete.

The structure is surrounded by a formal garden which was divided by parked pathways into four quadrants with water channels, cisterns and basins crossing them at regular intervals. Overall, it is enclosed by a high rubble wall.

The tomb rests on a 7.5 metres high square platform of 99 metres each side. It is made of red sandstone and the facade has a row of arched niches ornamented with white marble. The tomb measures 47.5 metres on each side and 38 metres in height. Within this is an octagonal chamber buttressed by 4 octagonal towers and on the central one the dome rests. It is bulbous, faced with white marble, has a double skin with a gap between inner and outer layers.

The fenestrations contains *Jaliwork*. The Hindu elements are domed *chhatris* (kiosks) on four corner towers (in Lodi style), elegant finials, white and grey marble inlay in red sandstone and other decorative designs. (Thapar, 85) The summit of the dome is crowned by an Arab finial. Exterior of the building has Persian arches and brilliant marble inlaid flat surfaces. (Basham, 321) Other persian features are the dome resting on high circular neck of supporting drum, glazed tiles, and 6 pointed stars on the facade. (Javid, 14)

All these things strongly suggest the experienced hand of Muslim architect most probably from Herat, Mirak Mirza Ghiyas, who was well trained in Timurid traditions. (Asher, 44) This monument, splendid and elegant in its proportions is often considered as a prototype of the Taj Mahal.

Agra Fort

Around the year 1564, Akbar started with the Agra fort and laid the first part of the palace. It got completed in 8 years and later on buildings were added by Akbar's successors. (Basham, 321)

In structure, the Fort is irregular semi-circle with its chord, 2700 feet in length, and it is parallel to the right bank of Yamuna river. There is a massive enclosure wall of solid sandstone rampart which was under 70 feet high and around 1.5 miles in circuit. It was the first instance when dressed stone was used on such a large scale. Most of the structures built by Akbar suffered destruction by Shah Jahan but one palace escaped it which was Jahangiri Mahal. (Brown, 92)

JAHANGIRI MAHAL's courtyard is Indian in design, with square pillars and bracket capitals richly carved and rows of small arches without voussoirs along with carved stone beams and giant corbels supporting *chhajjas*. (Basham, 321) These carvings are patterned after wood chiselling. Brackets on oblong top-storey chamber were surrounded by verandas, passages and staircases and is to the west of the central quadrangle. They are carved with geese, flamingos, lotuses, peacocks and serpent motifs. (Rizvi, 291) Most effective one was the pattern in white marble inlay against the warm red sandstone background.

There are two gateways—one on the southern side, Amar Singh Gateway, for private entry and other on west, Delhi Gate, for main entrance, which are surrounded by a deep paved trench. They were built in 1566 and are decorated with coloured tiles of winged dragons, elephants and foliated birds. (Haig, 536)

Allahabad Fort

Also known as the 'Palace of Forty Pillars', this palace-fortress was begun in 1583 and the largest one to be built by Akbar, as said by William Finch, who held that it engaged 5,000 to 20,000 workers and took 40 years in its construction. It is 3000 ft wide and certainly Hindu in design with its projecting veranda-roof supported on rows of Hindu pillars. (Majumdar, 589)

ZENANA PALACE The only structure preserved is a fine *baradari* (pavilion). Its characteristic beauty lies in its pillar arrangement around an interior hall in the centre. At the corners they are grouped in 4 and the rest in pairs. From every perspective a rich and elegant view is presented. A terraced roof enclosed by a pierced canopy with kiosk with *jali* atop rises over this colonnade. (Brown, 94)

Fatehpur Sikri complex

In 1569, Akbar founded a neighbourhood of Sikri, 23 miles from Agra and renamed it Fathpur (or Fatehpur) to celebrate his Gujarat conquest of 1573. It was the seat of his court from 1570 to 1585 and is since then deserted. (Smith, 351) A mosque and a palace are located on the top of a ridge overlooking a dried-up lake and the rest of the city is on the sides of ridge away from the lake. The city has 5 km square area with walls on three sides and fourth side

open to lake. (Petersen, 82) Most of the buildings are in Gujarati and Bengali style including deep eaves, balconies and fanciful kiosks. (Chandra 2020, 318)

The buildings can be classified into two—one for religious and the other for secular purposes. The latter one are more numerous and are further divided into three—the palaces, administrative buildings and the miscellaneous order one. (Brown, 95) Those of religious character are,

JAMI MASJID A congregational mosque completed in 1571 was the largest one in India at the time of its construction, measuring 165 metres east-west by 130 metres north-south. (Petersen, 84) Built in red sandstone, the mosque is enclosed within a courtyard consisting of pillared porches on two sides surmounted by a white *chhajja* and a parapet is distinguished by a series of *chhatris*. The prayer hall measures 88 by 20 metres and is divided into three, central section being covered by a dome and flanked by two smaller cupolas. In the hall, a niche marking the *Qibla* is embellished with engraved and painted inscriptions from Quran. All the arches have borders of lotus buds.

BULAND DARWAZA The entrance to the mosque has a glorious gateway—Buland Darwaza or the ‘Triumphal Gateway’, built for commemorating Akbar's Gujarat victory in 1576. It is a 41 meters high structure on 13 meters high platform. (Thapar, 88) The gate has large deep central iwan, flanked by two pairs of side iwans and is surrounded by a monumental inscription and capped by domed *chhatri*. (Petersen, 83)

TOMB OF SALIM CHISHTI Built around 1580, the tomb measures 14.5 metres on each side. It is defined by slender pillars with unusual struts curving upward to the roof. In contrast to the surrounding buildings, the Tomb is in white marble. A white *chhajja* is around the entire building supported on snake corbels with *Jaliwork*. Significant verses from Quran are inscribed in relief around the outer walls of tomb chamber. (Thapar, 88) A wooden canopy over sarcophagus is inlaid with arabesques in ebony and mother-of-pearl of exquisite design and most probably it was the work of north Punjabi artisans. In the interior walls, painted patterns can be seen along with colourful semi-precious stones on the flooring and *jalis* in the veranda. (Haig, 546-7)

The Palace, covering 250 meters square, is the largest building complex having three main areas—public area, *Mardana* (men's area) and *Zenana* (women's area). (Petersen, 83) The buildings in the palace are,

DIWAN-E-AAM or Akbar's office is Hindu in design as evident from a projecting veranda roof over a colonnade. (Basham, 322) This public audience hall is smaller rectangular pavilion with a central bay at front. The pavilion is raised 2 metres above the courtyard, thus ensuring a greater degree of security.

PACHISI COURT or a large courtyard is just behind Diwan-e-aam, in the centre of which is marked a cross. Here, Akbar is said to have played the giant version of Pachisi, an ancient Indian game.

DEEWAN-E-KHAS is a square double-storey building, 43 feet on outside and a single vaulted chamber of 28 ft 8 inches. A balcony and a *chhajja* above is supported on heavy corbels. There are domed *chhatri* at each roof corner. (Petersen, 83) In the chamber, a large and substantial pillar is placed centrally with its expanding capital which is supporting a circular stone platform from which ‘bridges’ radiate diagonally connecting the hanging galleries. The idea was that the Emperor would sit enthroned, signifying his “dominion over the four quarters”. Most remarkable in the central column was its variously pattern shaft branching out into 36 closely set brackets. (Brown, 96)

ANUP TALAO or the Peerless Pool, built in 1575, has somewhat similar arrangement of central column discussed above, having four bridges. It is a courtyard having a square pool with central island approach by bridges. It is the central portion of the Emperor's private residence and the main part of mardana.

Towards its south is a pavilion called *Khwabagh* (bedroom) and towards east is *Zenana* separated by a long wall, decorated with paintings and rich carvings. (Petersen, 83)

TURKISH SULTANA'S PALACE is a small one-storeyed building and is well known for the picturesque environment of paved courts, water courses and carved decoration on both inner and outer walls of the building, brackets, friezes, coupled columns, pillars, pilasters and piers along with luxurious vegetation and Chinese cloud forms on dado panels. Thus, it was called a ‘superb casket’. (Rizvi, 292)

PANCH MAHAL is a five-storeyed pavilion with ground floor having 84 pillars (a Hindu symbolism). Each storey above is diminishing proportionately up to the top and is crowned by domed canopy supported on four pillars. It is inspired by ancient Indian Assembly hall model mentioned in Buddhist literature. (Havell, 178-9) Most probably it was for Rajput wives and is built in Gujarati style of architecture. Each storey, arranged in pyramidal fashion and pillars, are of varying designs and unique carvings.

MARIAM'S HOUSE, known after Akbar's mother Mariam Makani, is a small block having a room surrounded by veranda on three sides and a set of three rooms on the fourth. (Desai, 49) Northern brackets shows carvings of Lord Ram worshipped by Hanuman and several others are a pair of fat geese, elephants and rosettes. (Rizvi, 293)

JODHA BAI'S PALACE measures 320 feet by 215 feet and enclosing walls of 32 ft high. Towards the east is a gatehouse. Buildings are arranged symmetrically surrounding a square quadrangle and in two stories. The whole structure is designed in such a way that each group of apartments could be divided from the others. Moreover, chambers below could be heated in winters and those above will always remain airy and cool, probably executed by the artisans from Gujarat. Blue glaze tiles were applied to the roofs and cupolas and upper room ceiling is in the form of waggon-vault with groins. (Brown, 95) The carvings on the bases, columns and capitals of central room pillars are in Hindu style with pellets, small lozenges, semi-lotus rosettes and bell-chain ornaments. The columns were first square, then octagonal, then 16-sided and then finally circular. The passage to the harem is through a dark vestibule and it turns sharply to the right, then left, preventing from anyone seeing straight into the quadrangle. (Rizvi, 292)

HAWA MAHAL or the 'Wind Palace' and 'Palace of Air' is towards the north of Jodha Bai's Palace. It is hanging or raised pavilion, designed to take advantage of the cooling breezes. In close association with the Panch Mahal, this pavilion provides a view of the reserve areas for royal household and overlooks the men's area.

BIRBAL HOUSE, also known as the 'Northern Palace of Haram Sara', is located to the west of the Jodha Bai's Palace and is one of the earliest parts of the building (1571 by an inscription). (Petersen, 83) It is two-storeyed with the four rooms and two porches on ground floor and two rooms and open terraces on above enclosed by stream. On the principle of double dome, cupolas over upper rooms and pyramidal roofs over porches were constructed to keep interior cool. (Brown, 96) Each pilaster is carved finely in low relief with pleasant geometrical patterns. The bases are cut with deep double semicircle enclosed in a fan-like halo. (Rizvi, 293)

HATHI POLE is located at the southern end of the Palace Complex and is probably the imperial entrance. Around this was a *Naqqar Khana*, a chamber where ceremonial drums were played and the view is impressive. Opposite this gate is a large sarai. Beyond the gate, chhatris and roofs of palaces are visible and upon entering, access is towards both the mosque complex and the Palace Complex.

HIRAN MINAR is a minaret spiked with stone projections resembling elephant tusks and is present at the foot of the rampart leading to Hathi pole. It is considered a hunting tower by some and a lighthouse for travellers by others. As derived from Iranian prototypes, this was a kind of *kos minar* (indicator of starting point for subsequent mile posts). (Asher, 58-9) According to some texts, this was built in the memory of Akbar's favourite elephant named Hiran.

Tomb of Adham Khan, Delhi

Built around 1562, the Tomb is large octagonal in shape containing the graves of both Adham Khan and his mother, Maham Anga. It was erected 15 km south of Akbar's Delhi. The stucco covering an octagonal format are significant as it was the end of the Lodi style persisting in the country for nearly two centuries. The tomb marks the end of a tradition of royalty by the Surs who were considered traitors by the Mughals. (Haig, 532)

Atgah Khan's tomb, Delhi

The Tomb of Atgah Khan, Akbar's foster-father who died in 1562 at the hands of Adham Khan, was constructed around 1567 by his son Mirza Aziz Koka. There is a rich and fine low relief carvings on its facade and inlay work of multicoloured marbles over red sandstone. The white marble slabs are covered with Quranic verses which were chosen carefully referring specifically to the nature of his demise. The architect was Ustad Khuda Quli and the calligrapher was Baqi Muhammad from Bukhara. (Asher, 42)

Tomb of Mohammed Ghaus

The tomb of Sheikh Mohammed Ghaus is situated in Gwalior and is square in plan, measuring 30.5 metres each side. It is built entirely of local grey, slightly yellowish sandstone. It has hexagonal, pillared double-storeyed open towers, crowned by *chhatris*, attached to its corners. (Nath, 217) A broad slanting *chhajja* projects over the arches on all sides which are closed by *jalis* on Northern and Eastern sides. The entrance is on the southern side. The single mortuary hall is square, 13 metres each, with squinches at corners supporting the single dome. It can be said a beautiful replica of '*chhaparkhat*' with its experimental roof and pinnacles at the corners. (Nath, 218-9).

MONUMENTS UNDER JAHANGIR

During 17th century, the pure Persian art vanished completely. Under Jahangir semi-precious stones like jade, lapis-lazuli and cornelian were set in white marble panels for creating delicately tinted flowers and leafy arabesques. For adding colour effect different coloured sandstones were used with limited glazed tiles. (Javid, 14) Jahangir contributed in Islamic elements like huge arched openings, massive entrance gateway with white marble mosaic covering it and top most pavilion of latticed marble.

Akbar's Mausoleum

Located in Sikandra, 8 km outside Agra, the mausoleum was probably planned by Akbar himself who visualised a Buddhist stepped-up form of masonry over his grave.

The whole structure is situated in the centre of a Charbagh and is surrounded by a perimeter wall having four quarters. The main entrance was towards the southern portal and for providing symmetry, false doors were added on the other three portals. (Thapar, 89) It stands on an enormous arcaded podium of 320 ft square and 30 ft high. The mausoleum itself is around 150 ft square and is multicellular having stepped walls of marble pierced with delicate trellis-work. It is flat-roofed with small kiosks at each corner. (Basham, 322) There are four graceful white marble minarets. Access to the tomb chamber is through the southern alcove. The main entrance gateway is of exceptional elegance for its pleasing proportions with bold inlaid ornamentation. It lacks a central dome. (Brown, 99)

On the structure, there is a fine mosaic of white marble and colourful stones on the red sandstone portion of the building by forming intricate geometric and floral patterns. (Thapar, 89)

Shah Begum's Tomb

Shah Begum, Jahangir's first wife, poisoned herself in 1604 and was buried in a garden called Khusro Bagh of Allahabad. According to an inscription it was completed in 1606-07 by Aqa Reza, the chief painter of that time.

The Chunar sandstone gate resembles the entrance to a fort. The entrance arch is flanked on either side by massive bastions. The three-tiered tomb has a lighter and graceful appearance. The top floor has a *chhatri* and in the centre is a false cenotaph. Calligraphy work was done by Mir Abd Allah Mushkin Qalam. (Asher, 104)

Begum Shahi Mosque

Better known as Mariyam-al-Zamani mosque, it met Jahangir's approval and was built in 1611-12, in Lahore. The two preserved gates provide access to a large walled courtyard. The east facade of the prayer chamber is pierced by 5 arched entrances, the central one within a high *pishtaq*. The brick core is covered with a plaster veneer, originally bearing painted ornament.

The interior of the prayer chamber is rectangular and is divided into five bays. There is a decoration at the centre of the main dome emitting star-like and net forms furnished in stucco. The walls and vaults are brilliantly painted with floral and geometric patterns. Within the star-patterns of the dome are the names of God inscribed. In representational objects cypress trees and wine vessels are depicted. (Asher, 116-7)

Anarkali's Tomb

The tomb is located 2.5 kms from Lahore fort and was probably built around 1612 in memory of one of the Jahangir's wives. The mausoleum is octagonal and has a large opening marking each facade along with semi-engaged octagonal turret at each of 8 junctures. The interior has a central domed chamber surrounded by smaller ones. The marble cenotaph is carved with floral arabesques and 99 names of God which are inlaid in black stone. (Asher, 118)

Serai Nur Mahal

Located in Jalandhar district of Punjab, it was constructed by Nur Jahan around 1618 and was completed in 1620. Gateway is impressive with its carved red sandstone. Its enclosure walls contained 124 chambers and a mosque. A three-storeyed royal apartment was towards the southern wall. (Asher, 128) The gateway was decorated with a central iwan flanked by three tiers of side iwans and has carvings of human, animal and mythical figures. (Petersen, 205)

Lahore Fort

Jahangir made several additions to Akbar's Lahore Fort. The chief architect was Khwaja Jahan Muhammad Dost. Among the buildings is **Maktab Khana** aur **Daulat Khana-i-Jahangiri** which is a small walled courtyard constructed in 1617 supervised by Mamur Khan. Around the central courtyard are the arched chambers.

In the **Jahangiri Quadrangle** there are several small flat-roofed rectangular chambers supported by red sandstone pillars. There is a complex carving of elephant brackets, pillars and screened windows in the northern pavilion.

Another one is the **Kala Burj** which has flattened interior dome with a net pattern that converges at a stellate medallion centre. Paintings of European influenced mythological birds and angels can be seen. (Asher, 113-4)

The outer walls are of brick and north and west brick walls are divided into vertical blocks of arched and panelled areas. (Asher, 115) A unique picture gallery with its tile decoration is distributed on its northern aspect from the Elephant Gate and is 480 yards long and 17 yards high. It contains the representation of sporting characters like elephant combats, polo, hunting; figurine compositions and floral designs; and mythological figures like jinns and Simurgh (a mythical Bird). (Brown, 93)

Tomb of Itimad-ud-Daulah

Built by Empress Noor Jahan around 1622 for her father Mirza Ghiyas Beg who was given the title of Itimad-ud-Daulah (the lord treasurer of the Empire), the building is considered second in beauty and grace after Taj Mahal in Agra. (Thapar, 87) The building is on Rajput style of architecture and is noted for its rare craftsmanship, refined femininity, higher aesthetic taste, purity in architecture, exquisiteness of execution and chaste decoration quality. It also marks a turning point in the evolution of Mughal architecture. (Luniya, 527)

The mausoleum stands in the garden surrounded by a formal scheme of lawns and ornamental arrangement of flower beds, flagged pathways, tanks and fountains. The building itself is built in white marble against the surrounding greenery. It is square in plan, 21 metres each, and comprises of a central structure enclosed within 4 octagonal minarets. A small pavilion on upper storey is covered by a Bangladar roof. (Brown, 100-1) The enclosing wall is in red sandstone and central chamber in white marble contains the cenotaph in yellow marble. The interior chamber in white marble with intricate stylized inlay and stucco designs contains the cenotaphs of Mirza Ghiyas Beg and Azmat Begum. The chamber is surrounded by a series of rooms and passages connected by verandas. The art of *pietra dura* actually started with this mausoleum. It was a technique of inlaid mosaic with hard and precious and semi-precious stones like lapis, onyx, jasper, topaz, and cornelian. The walls are profuse with wine vessels, cups, flower vases and scent bottles whose handles are serpent with birds' beaks, dragon-shaped, some are plain and few depict lion motif. There are animal motifs on the inlays of flower vases, which included dancing peacocks, accompanied by peahens, fish and mice. However, geometrical and floral designs are prevalent. (Rizvi, 294)

MONUMENTS UNDER SHAH JAHAN

The reign of Shah Jahan from 1628 to 1658 is considered to be the golden age of Mughal architecture and gave birth to a number of notable buildings which are celebrated even today. (Basham, 322) Shahjahan loved refined and cultured grandiose and magnificence. He forever aimed for unparalleled and peerless which are illustrated in his buildings at Agra and Delhi. It would be right to say that what Jahangir did on paper Shahjahan did practically in brick and mortar in architecture where the essence and grace of painting could be faithfully reproduced. (Williams, 113)

Orthodox Muslims gained prominence during his reign and thus the preference again shifted to Persian style. Introduction was made of 12 door pavilions with triple entrances on all four sides and 'baradari' (vaulted halls). (Javid, 14) Pure white marble completely took over red sandstone. Rich decoration was obtained by inlaid patterns and colour stones rather than coloured tiles. The style of ornamental elements of curvilinear order and marble arcades of engraved arches prevailed with the blend of spacious grandeur and femininity. (Luniya, 528)

Taj Mahal

Taj Mahal, most magnificent of all the buildings, is among the seven wonders of the world. It is located in Agra, Uttar Pradesh and was begun in 1631 and finished completion in 1653 after 22 years. Shahjahan build this in memory of his favourite Queen Arjumand Banu Begum better known as Mumtaz Mahal. He wished to make an unparalleled monument in the world and with passion he had discussions with various architects and consulted many books for 2 years before finalizing the design. It is the finest building owing to its refined proportions, spectacular detailing and unblemished execution.

According to some historians Taj Mahal was a Hindu monument due to the grouping of four small kiosks around the large dome which is credited to the Hindu 'pancharatna' (5 jewels) temple plan. However, the exceptionally high dome certainly has Persian prototypes as seen in the mosques at Damascus and Samarqand. (Thapar, 90)

Prominent artists were invited from all over India and from distant lands of Persia, Arabia and Turkey. After numerous consultations, plans and suggestions by the experts, a model in wood was first prepared which was followed by architects. Shahjahan also utilised the services of the Italian architects and French goldsmith, Austin de Bordeaux, for the silver domes of the Taj. (Prasad, 471-2) There was a hypothesis that Taj was planned and built purely by Italian or European Architects but it was criticized by Sir John Marshall, E.B. Havell and Percy Brown who acknowledged that Taj was mainly the work of Indians. Its chief designer as Ustad Ahmad Lahori, honoured by the title 'Nadir ul Asar'. The other architects were Mukarramat Khan and Mir Abdul Karim; calligraphist was Imanat Khan Sirazi from Shiraz and other from Baghdad who engraved the Arabic inscriptions; dome maker was Ismail Khan Rumi probably from Constantinople; chief supervisor and mason was Ustad Isa Khan from Agra; a flower cover was from Bukhara; carpenter was Ustad Pira of Delhi; sculptors were Banuhar, Jhat Mal and Zorawar from Delhi; and the horticulturist and garden planner was Ram Mal Kashmiri. Mainly Muslims carried the structural work and Hindus the decoration portion. The *pietra dura* was inlaid by the Hindu craftsman from Kannauj. (Mehta, 289)

Taj Complex includes several buildings—a 'Chauk-i-jilau Khana' or ceremonial forecourt, towards the South is flanked by four courtyards having apartments for attendants; further South is an area divided into four carvanserais by two intersecting streets. A bazaar is built around a square and a residential area grew which was called Mumtazabad. The gateway consists of a large rectangular structure where corner turrets were placed in the middle of a tall wall.

(Petersen, 274) In the centre of the complex is a marble terrace containing three buildings, Taj in the centre, a mosque of enough charm and beauty towards the West, and its exact replica called *jawab* or echo, a *Mehman khana* towards the East for maintaining symmetry and balancing the view. (Desai, 55)

The mausoleum is a square of 186 ft each composed of a central block buttressed by projections at each angle having a persian portal between each pair. The arches are of persian style and a bulbous dome rises from a circular drum. A small domed kiosk is on each side of the sub-chamber. The terrace is 22 feet high and 313 feet square having cylindrical minarets at each corner which is divided into stages at angles by galleries.

The central chamber containing the false cenotaph is lightened by marble trellis-work in window openings, breaking the glare of the sunlight. (Basham, 323) The false sarcophagi of Mumtaz Mahal and Shah Jahan is highly decorated with *pietra dura* and semi-precious stones.

The red sandstone was used in the outer buildings and gateway of the complex and white marble in the tomb and its minarets. Central iwan on the façade is framed by a pishtaq containing Quranic calligraphy. It is flanked by four smaller iwans, 2 on each storey. There is *pietra dura* decoration and 4 centre-pointed arches in the iwans and its spandrel. (Petersen, 275) Moreover, the soaring arches of 4 entrances are inlaid with exquisite flower designs alongside black marble calligraphy from Quran. Surrounding the central chamber is a finely carved ornate marble screen (*jali*) having the texture of lace. For the execution of *pietra dura*, precious stones and finest gems were brought from faraway places—crystal and jade from China, lapis lazuli and sapphires from Sri Lanka, jasper from Punjab, carnelian from Baghdad and turquoise from Tibet. (Thapar, 95) This mosaic work was mainly supervised by Ustad Isa's son Muhammad Sharif. Because of these additional jewelleries around 3 crores was the building cost of this monument. (Prasad, 472) Over the cenotaphs, the marble surface is inlaid with diapering and floral pendants with sprays of foliage with lilies in detached repeats and curved panels. The finial on the dome is the integration of Hindu and Islamic elements having Lotus with *kalasha* and a crescent moon.

The marble was bought from Makrana, Rajasthan and is of great texture of white with the delicate grey grain. Over the years it has developed a patina that is nearly undetectable yet enough to alter its colour values. This Patna is caused by sun rays and the red dust from the surrounding land that is blown into it by the monsoon rains. This results in a variety of tints that the building assumes at different hours of the day, from cold grey at dawn to a shimmering white at noon and then to a tender blush rose during the sunset accompanied by a wide range of half tones in between. (Haig, 564-5)

A formal garden with avenues of cypresses and long lily-ponds leads to the mausoleum. Towards the north is the river Yamuna which provides a wonderful reflection of the building. (Basham, 323) The garden is in style of persian *charbagh* and a square garden wall encloses it. The garden is equally divided into four and a square pool forms the centre. The mausoleum building is located at the far end, overlooking the river. 6 octagonal towers, capped with domed *chhatris*, strengthened the walls of the garden tomb complex. (Petersen, 274)

A pleasant and tuneful effect is imparted by the serenity and simplicity of the proportions of the building. The width and the height of the building is exactly the same. The dome and the arched facade are of the same height. (Thapar, 91) The key beauty of the Taj lies in the absolute explicitness and soundness of its architectural arrangement. Its dome, in the moonlight, hangs among the stars like a great pearl. (Brown, 109)

Wazir Khan's Mosque

Built around 1634, it is located in Lahore and its city's chief mosque. It is persian in style and extremely decorated with coloured and glazed tiles. (Basham, 323) It has a conventional arrangement of buildings around a brick-paved courtyard, has an entrance gateway, cloisters and sanctuary in the usual positions. The gateway is of low-pitched 'Lodi' style along with the domes roofing the sanctuary and 4 octagonal minarets at each corner. The interior decoration consists of painted patterns in distemper. (Haig, 561) Each and every proportion of the structure is supplemented with multi-coloured and vibrant schemes of colour by tempera painting of floral patterns and traditionally designed panels done in lustrous glaze. For the purpose of ornamentation, the wall surfaces are divided into panels. (Brown, 106)

Tomb of Jahangir

The tomb originally built by Noor Jahan is on the banks of Ravi river and three miles Northwest of Lahore. Shah Jahan erected a mausoleum costing around ₹10 lakh. (Prasad, 470-1) It is 1500 ft wide on side and stands at the centre of a square garden. The garden is enclosed by a high brick wall and a high gateway in the middle of each side. It is divided into 16 squares by paved causeways, having fountain and ornamental pools at each intersection. The main building is single storey having 100 ft high minarets and its corners. Several embellishing techniques were used like fresco paintings, inlay and mosaic tiles. In the interior, painting work was done; on the pavements and sides of the minarets, the inlay work; on the dados of corridors, the tile work; and white marble of the cenotaph, the semi-precious stones enriched with graceful scrolls. (Brown, 100)

Agra Fort

The earlier buildings were destroyed by Shah Jahan and he erected his own monuments in white marble. (Rizvi, 294)
The layout consists of a series of formal gardens and pavilions.

ANGURI BAGH is a square garden divided into four sections. It has a central rectangular pool with lobed sides for providing water for the garden. (Petersen, 202) The plant borders are significantly seen due to the geometric structure of the garden. The flower beds are made of interlocking cusped squares like a Jigsaw puzzle. (Petersen, 204)

DIWAN-E-AM AND DIWAN-E-KHAS of Agra Fort are graceful in their architecture. Diwan-e-Aam was built in 1627 at the occasion of Shah Jahan's succession. It was a prototype for his subsequent buildings. Its square pillars hold up collaborate arches that slope into tiny ogees and are rimmed with tiny projections. Shallow arches in the same form are used to panel the walls and pillars surfaces. Hall consists of elegant double columns and copper curved roof of Bengal style. It is finished with bronze finials projecting at right angles from curve. Such double columns are seen in Diwan-e-Khas which was built around 1637. (Rizvi, 294)

MOTI MASJID considered to be the most beautiful building of the Agra fort was built from 1645 to 1653, costing around Rs 3 lakh. Shahjahan constructed it in pure white marble in honour of his daughter Jahanara Begum. It measures 187 by 234 ft and is located on an elevated terrace and the courtyard to the north of the Diwan-e-Am. Its purity, simplicity, well balanced proportions and soundness of its architectural designs represents the constructive zenith of Shah Jahan's reign. Limited use of red sandstone and coloured inlay is also seen. (Mehta, 287)

MUSSAMAN BURJ overlooks the Yamuna river towards east of the palace. An octagonal copper dome crowned the tower and the interior is lined with pietra dura, carved marble inlay, *jaalis* over the doors and decorative rows of niches. One gets a straight view of the Taj and the river from inside. The marble dados contains the curved plants merging naturally. (Petersen, 202)

Apart from the mentioned buildings are **Jharokha Khas-o-Aam, Daulat khana-e-Khas**, highly costly and originally made of cloth and wood, **Khas Mahal** having three marble pavilions, 2 of which have Bengali curvilinear cornice; **Sheesh Mahal** (the Glass Palace) and the **Nagina Masjid** (the Jewel mosque). A huge **Chowk** (Plaza) was built by Shah Jahan opposite the Agra Fort where later on a noble mosque was erected at the cost of Rs 5 lakh in 1648. (Prasad, 376-7)

Jama Mosque Agra

Probably built by Jahanara Begum in 1648, Shah Jahan's daughter, it took 5 years to build and measures 130 ft by 100 ft. The arches forming the frontage have wide intervals and are appealingly distributed. Slender minarets alternating with the kiosks are disposed along the buttress. The admirable elements of the mosque include the central fountain and basin in which kiosks at the angles repeat those above. (Brown, 106)

City of Shahjahanabad

In Delhi, Shah Jahan laid down the walls of the seventh city accompanied by usual ceremonies on 12th May, 1639. It was named Shahjahanabad and was built from 1638 to 1658. City is enclosed with fine walls and gates and is bounded by Yamuna river and covers the area of 1000 yards by 600 yards. Red Fort dominates the layout. The palaces and courts are sequentially arranged. Chandni Chowk, which runs east-west, and Faiz Bahar, which extends south from the fort, served as the chief avenue of the street plan. (Petersen, 65) Apart from the imperial buildings the city consists of spacious residential accommodation for royal guards, store houses, kitchens, recreation chambers and stables for horses and elephants. (Mehta, 288)

Red Fort Delhi

This Delhi fort was built between April 1635 and 1644. It derives its name from the red sandstone used in its walls. It is an irregular octagonal structure having two long sides on the East and West and the north-south consists of 6 smaller ones. Construction work was supervised by the master builders Ustad Hamid and Ustad Ahmed. The fort measures 80 feet by 40 ft. A recess of 21 ft wide occupies the centre of the east wall. Pietra dura is inlaid with exquisite designs representing trees, flowers and birds. Naubat Khana was the entrance to the hall of public audience and it was reached by Lahore gate through a vaulted arcade. (Williams, 115) Delhi gate and Lahore Gate are the two main entrances. The surrounding walls are high crenelated and on the landward side is enclosed within a moat. The private rooms inside the fort consists of rigidly geometric arrangement of gardens and pavilions. The ornamentation is exceptionally elegant and well made. Paintings, gilding, stone inlay, and shallow relief carvings of the white marble are the techniques used. (Petersen, 245-6)

Rang Mahal or the 'painted palace' is of the dimensions 153 ft by 69 ft having a main central hall with smaller compartments at each end. Often regarded as the crowning jewel of Shah Jahan's seraglio, it is richly ornated and is considered to be far superior than other palaces in terms of colour and lustre. Originally it had triple arches of lattice

work across the centre of each side to ensure privacy and its outside arches seem to be filled up with perforated marble screens.

Diwan-e-Khas constitutes one large hall of 90 by 67 ft and the facade has 5 arcades of equal arches and there are other arcades too of different sizes disposed on its shorter sides. This setup provides a cool and breezy interior. This is further divided into 15 wide bays by engrailed arches, supported on square marble piers. Arched window openings and refined perforated tracery occupies the eastern side overhanging the parapet. The interior is illuminated by a soft mellowness by a textural effect caused by the pavement of polished marble which reflects the massive piers, enriched with inlaid flowers and the foliated arches are picked out in gold and colours. (Brown, 104) It was in this marble pavilion that Shah Jahan used to sit on his famous Peacock Throne. Silver work on ceiling, polished marble on pavement and blended decoration of precious and semi-precious stones and gems, gold and marble truly justifies the engraved inscription on its wall, which is— “*Agar firdaus ber ru-yi zameen ast, Hamin ast, hamin ast, u hamin ast.*”—meaning, if on earth be a heaven of ecstasy, it is this, it is this, none but this. (Luniya, 528)

Diwan-e-Aam consists of a hypostyle hall, 9 bays wide and 3 bays deep, which is supported by 12-sided columns spanned by cusped arches. The throne is a raised platform with a dome over it, supported by columns and has a unique place in the centre of the rear wall. Italian imported panels adorn the space behind the throne. To ensure that the visitors were amazed by the time they arrived at the central hall, this room was accessed from the main gate via an arcaded tunnel, a sizable courtyard, another gateway, and an even larger courtyard. The interior of the hall consists of three aisles of pillars with engrailed arches accumulating around 40 pillars and the plain back wall consists of a spacious oblong recess. (Petersen, 202) European artist Austin de Bordeaux is said to be the designer of the pietra dura on one of the panels representing Orpheus with his lute.

Apart from these buildings, others are **Mumtaz Mahal, Khwabagh, Hammam** and the **Mussaman Burj**. (Desai, 53-4) All of these palaces were fronted with the garden which is divided into parterres by watercourses having ornamental fountain in the centre. Towards the outer side they capped the sandstone parapet having a sequence of minarets, *chhatri*, golden domes, *jharokas*, oriel windows, galleries and porticos, *jalies*, which were excellently scenic. Water supply was ensured from river Yamuna and bringing the water from the canal to the fort where the Nahr-i-Bihisht (Stream of Paradise), which was entered by a scalloped marble cascade in the open central arcade by Shah Burj (King's Tower) distributed it in all needed directions through marble channels. (Haig, 557)

Jama Masjid, Delhi

Built around 1650, the mosque is on an elevated pedestal and is located outside the Fort. Its construction was supervised by the Prime Minister Sadullah Khan and Mirza Saman Fazil Khan and took 6 years to build. It employed 5000 workers daily and costed 10 lakh rupees. (Williams, 115) Its quadrangle is of 325 square feet area having two fine cylindrical minarets. The angled pavilions are Indian in style, domes and minarets are in Persian whereas the rest of the elements had a general hybrid effect. In combination with red sandstone, marble is used. (Basham, 323-4) Hindu elements can be seen in 2 *chhatris* on the roof. Islamic features of central iwan and cusped arches are prominent. Domes have a taller pointed appearance similar to Islamic buildings. The use of three domes over the sanctuary conjoined with the iwan and minarets had a major influence over later Indian mosque. (Petersen, 203) It is designed ‘to attract the eye of the faithful form afar and proclaim the glory of Islam.’ Interior of the mosque is simple and austere otherwise the artwork and decoration would disturb the praying people. (Prasad, 471)

Besides these major buildings, several other monuments were constructed by Shah Jahan. **Tomb of Nizamuddin Auliya** deserves mention. Build purely in white marble, it is located in a quiet area far from the hustle and bustle of the city of Delhi. In Ajmer, Shahjahan build a marble platform of 1240 feet length, 5 pavilions (Baradari) of polished marble and a Hammam (Turkish bath) on the embankment of Anasagar lake in 1637. He showed devotion to Khwaja Moinuddin Chishti by erecting a magnificent dome and a Jama Mosque towards the east of the tomb in 1638. It is an ornamentally beautiful inclusion to the mausoleum. (Prasad, 377) It is popularly known as **Shah Jahani Mosque**, and is built of white marble. In Agra stands an ornate and richly decorated **Chini-ka-Rauza**; in Ahmedabad is a striking Carvanserai of Azam Khan built in 1637; and in Gaur is this spectacular **Lukochuri Gateway** of 1655. (Desai, 54)

CONCLUSION

Mughal architecture is a significant part of India's cultural identity and it showcases the magnificence of the Mughal Empire through iconic structures built under the patronage of Akbar, Jahangir and Shah Jahan. The blend of artistic traditions inspire modern architects, which showcases the power of cultural exchange. Mughal monuments like Taj Mahal, Fatehpur Sikri, and the Red Fort are not just historical remnants but living evidences to a rich architectural heritage. Today the site attract millions of visitors annually, contributing to the cultural tourism industry, economic growth and national pride. Architectural principles such as symmetry, balance and harmony with nature are relevant in sustainable designs with urban planning. Elements of Mughal architecture like intricate designs, marble embellishment, stones and decorative motifs have significantly impacted the architectural styles across the globe.

Thus, by researching, appreciating and preserving these monuments, we honour the past and it will inspire a future where diversity and creativity shall continue to flourish.

REFERENCES

- [1] Asher, Catherine B. The New Cambridge history of India: Architecture of Mughal India, Cambridge University Press, New York, 1992. [archive.org](#)
- [2] Basham, A.L. A cultural history of India, Oxford University Press, New Delhi, 1983
- [3] Brown, Percy, Indian Architecture Islamic period, Taraporewala Sons and Co. Limited, Bombay, 1964
- [4] Chandra, Satish, History of architecture and ancient building materials in India part 1 and 2, Tech Books International, New Delhi, 2003. [archive.org](#)
- [5] Chandra, Satish, History of mediaeval India, Orient Blackswan, Hyderabad, 2020
- [6] Desai, Ziauddin, Indo-Islamic architecture, Publications division Ministry of Information and Broadcasting Government of India, 1970. [archive.org](#)
- [7] Haig, Wolseley, The Cambridge history of India the Mughal period, Volume 4, Cambridge University Press, New Delhi, 1937. [archive.org](#)
- [8] Havells, E.B. Indian architecture its psychology structure and history, John Murray publishers, London, 1927. [archive.org](#)
- [9] Javid, Ali and Javeed, Tabassum, World heritage monuments and related edifices in India, Algora publishers, New York, 2008. [google.co.in](#)
- [10] Luniya, B.N. Evolution of Indian Culture, Lakshmi Narayan Agarwal Edu Publishers, Agra, 1960.
- [11] Majumdar, R.C, Raychoudhury, H.C. and Datta, K. An advanced history of India part 2, Macmillan and Co Limited, London, 1951. [archive.org](#)
- [12] Mehta, J.L. Advanced study in the history of mediaeval India, Volume 3, Sterling publishers, Delhi, 1987
- [13] Nath, R. History of Mughal architecture, Volume 1, Abhinav publications, New Delhi, 1982
- [14] Peterson, Andrew, Dictionary of Islamic architecture, Routledge, London, 1996. [archive.org](#)
- [15] Prasad, Ishwari, A short history of Muslim rule in India, Surjit publications, Delhi, 2014
- [16] Rizvi, S.A.A. The Wonder that was India, Volume 2, Sidgwick and Jackson, London, 1987
- [17] Smith, V.A. The Oxford History of India, Oxford Clarendon Press, London, 1923. [archive.org](#)
- [18] Thapar, Bindia, Introduction to Indian architecture, Periplus, Singapore, 2004. [books.google.co.in](#)
- [19] Williams, L.F.R. The Great Rulers of India, Nidhi Book Centre, Delhi, 2013
- [20] Banerjee, A. et. al. (Ed), Encyclopaedia of Indian History, Parragon publishing house, Noida, 2016
- [21] Beveridge, H. A Comprehensive history of India, Volume 1, Associated publishing house, New Delhi, 1862. [archive.org](#)
- [22] Koch, Ebba, Mughal architecture: outline of its history and development (1526-1858), Primus books, Delhi, 1990. [archive.org](#)
- [23] Mansingh, S. Historical dictionary of India, Vision books, New Delhi, 1998
- [24] Nath, R. Taj Mahal: Evolution of tomb in Mughal architecture, Taraporewala Sons and Co, Bombay, 1972. [archive.org](#)
- [25] Nath, R. History of Mughal architecture, Volume 3:Jahangir (1605 to 1627), Abhinav publishers, Delhi, 1982. [archive.org](#)
- [26] Sharma, S.R. Mughal Empire in India, Karnatak publishing house, Bombay, 1940
- [27] Singhanian, Nitin, Indian art and culture, McGraw Hill education India Private Limited, New Delhi, 2019.
- [28] Spear, Percival, A history of India, Volume 2, Penguin books, New Delhi, 1979. [archive.org](#)