**Town Planning of Indus Valley/Harrapa**   
  
**Geography:**

-Pak & North West India, between Indus River & Ghaghar Hakra River   
-Harappa Civilzation, Sahraswardi/Sindhu Civilization  
  
**It's Town Planning Concepts:**

•Sophisticated and advanced urban culture   
•streets in perfect grid patterns in both mohenjodoro & harappa  
• world’s world s first sanitation system  
• individual wells and separate covered drains along the streets for waste water  
• houses opened to inner courtyards & smaller lanes  
• impressive dockyards, graneries, warehouses, brick platforms & protective walls  
• massive citadels protected the city from floods & attackers  
• city dwellers – traders & artisans  
• all the houses had access to water & drainage facilities  
  
**Development of Cities:**  
• grew in size & density and surrounded by numerous towns & villages  
• cities interlinked by trade & economic activities, relegious beliefs, social relations, etc  
• vast agricultural lands, rivers & forests by pastoral communities , fisher folk and hunters surrounded each city  
  
**Classification of Towns:**  
-Small villages-0-10 hectares  
-Large towns-10-50 hectares   
-Cities-50 hectares  
  
**Areas:**  
Mohenjodaro~200 Hectares  
Harappa~150 Hectares  
  
**Populations:**  
Mohenjodaro~35‐41000  
Harappa~23500

**Town Planning of Moen Jo Daro**  
  
**-Excavation showed:**  
The most striking feature of the Harappan cities is their town planning. The Harappan City was divided into the upper town called the Citadel and the lower town. The various features of the Harappan town Planning is given below:  
  
**Granaries**: The granary was the largest structure in Mohenjodaro, in Harappa there were about six granaries or storehouses. These were used for storing grain.  
  
**Great Bath** This was another important structure in Mohenjodaro. The floor of the bath had five layers. It was so watertight that even today it holds water. There were changing rooms. People probably used it during festivals and religious ceremoies.  
  
**Town Hall**A palace-like building that looked like an assembly hall for the city government of for people to meet.  
  
**Lower Hall**:[/COLOR][/B] This was the residential area where the common people lived.  
  
**Streets**: The roads and streets intersected at right angles. There were covered drains along the road. Houses were built on either side of the roads and streets.  
  
**Drainage System** The drainage system of the Harappan cities was the best known to the world in ancient times. The brickwork prevented the dirty water from leaking. Wooden screens stopped the solid wastes from being washed away with the water. Drains were built either side of the roads. They were covered with stones which could be removed in order to clean them.  
  
**Houses**: The houses varied in size. Some might have been two storeyed. The houses were made of burnt bricks. Most of the houses had central courtyard, well, bathing area and kitchen.

**Kot Diji**  
**-Excavated in 1955-67, 22 km away from Khairpur   
-Kot Diji fort-1790 by Talpurs  
-Rani Kot/Fort Ahmadabad**  
  
Hundreds of years ago, at the edge of a desert in Sindh, the Talpurs constructed a pompous fort atop a hill. This emblematic fort, dominating the town of Kot Diji in Khairpur district and known as Kot Diji Fort, was built between 1785 to 1795.  
  
Driving towards Khairpur district from the National Highway, it is hard to miss this fort’s opulence, breaking the monotony of the skyline.  
  
I remember my excitement and disbelief all at once when I first saw this mammoth construction. I could not wait to get a closer look and to step inside to explore it properly.  
  
It took us approximately eight hours to reach Khairpur district from Karachi. On our way we made pitstops for tea and food. By the time we got to Kot Diji fort, I knew I had very little time to explore this place and that I had to rush since the sun was about to set soon, leaving us with very little light for shooting photos.  
  
When I got off the car, right by the entrance I noticed this place with a cafeteria with traditional handmade items from Sindh decorated along the entrance.  
  
This was the brave Sadiqa Salahuddin's 'khazana,' an off-shoot of the Indus Resource Centre (IRC). Khazana employs local women and showcases various handicrafts made by them such as patchwork, hand embroideries, table-mats, coasters and ceramics, all for sale. I took a quick look and then made my way to the fort.  
  
I had only heard about Kot Diji fort and seen photos online; but no photos can do justice to being in direct audience to this marvel.  
  
History suggests that this fort was built on a strategic location since it provided an edge over enemies marching from the east. A fatigued army could be encountered before trooping towards irrigated lands in search of water.  
  
The fort was apportioned into three parts among the Talpurs. One of the parts came under the rule of the Mirs in Hyderabad; the second portion went to the Talpurs of Mirpur Khas while the Talpurs of Khairpur Mirs held the third portion under control.  
  
It is recorded in history that the first Talpur ruler of Khairpur Mirs, Mir Sohrab Khan (founder of the Kingdom of Upper Sindh), founded a number of forts in order to safeguard the frontiers of his rule. He is accredited for constructing forts such as Imam Garh in the Thar region, Shah Garh towards Jodhpur, Jaisalmer and Ahmad Abad at Diji.  
  
The fort has only one main entrance on the east, saving it against any raiding enemy. The gate known as Shahi Darwaza or the royal gate in itself is a work of engineering genius. Built on the plan of a curved entrance, the fort has a small courtyard, which is accessible only from outside.  
  
The space is further guarded by two heavy bastions keeping space to trap any proceeding army aiming to destroy the fort by attacking from the musketry holes and battlements on the top. The access through the bastions is from the east, while the wooden gate with heavy iron spikes totalling 234, stands towards the western corner of the northern wall.  
  
These spikes ensured that no heavy contingent, or elephants, could be employed to break open the wooden gates. And through its history the fort has never been attacked.  
  
Kot Diji is constructed on a limestone hill with kiln-baked bricks. Apparently the bricks were used since they were locally accessible and limestone rocks were believed to be very brittle and would have shattered easily upon impact with a canon ball.  
  
The hill is about 110 feet high, above which the walls of the fort rise another 30 feet. It has three strategically placed towers about 50 feet tall.  
  
The fort was built at a time when cannons had become common and its design and position reveal that. It includes several stations for cannons and because it is positioned high on a narrow ridge, enemy cannons would have had to fire at a massive distance and with little accuracy.  
  
Cannonballs could either hit the hill or would end up flying over the fort and fall on the enemies' own forces on the other side.  
  
In addition to the main entrance through Shahi Gate, the fort has as many as three secret small passages, which were used in case of emergency.  
  
After crossing the Shahi Gate we entered a small semi-circular open space with high walls on three sides. These provide a climbing access to the main fort.  
  
After crossing the second gate a tunnel-like access leads to the top through a third gate. The main portion of the fort is beyond this point.  
  
This military fort is designed to be fully equipped to offer defence and to withstand an invasion. In addition to this it houses heavy bastions, towers, an ammunition depot, water reservoir, the Mirs’ harem, a prison, a place of holding court and cells to accommodate guards and sepoys.  
  
These burjs were also used to mount the cannons at their tops. These cannons were of different sizes, but since there was sufficient space on each bastion, these could be aimed in different directions.  
  
Almost facing the third gate are some roofless rooms beside the ghulam gardish. These were used as ammunition depot or what is locally known as barood khano.  
  
Mir Sohrab Khan made this fort his abode a few years before his death, but soon handed over the power to his sons.  
  
In January 1843, British troops also stayed here at a time when Charles Napier was on his military adventure to invade and conquer Imam Garh.  
  
If any of you ever plan to visit Khairpur, do make it a point to make this your first stop. And if you live in Sindh, you must explore this fort at least once.

**Mehrgarh**  
~Dhadhar, Balouchistan/Bolan Pass, 2nd Oldest after Bhirra (India)  
-Neolithic age-6500-2500 BC~farming, sheeps   
-Size-495 acre old village has been founded   
-Excavated in 1974 by Jean Francisco & Catherine   
Townplanning: Mud Bricks, Metal using,   
**Period I**- (7000-5500) Neolithic: Stone, Bone tools, farming, ornaments, shells   
**Period II**-(5500-4800) Ceramic Neolithic: Woman decoratings, pottery, human figures etc   
  
Mehrgarh (Balochi: Mehrgaŕh; Pashto: مهرګړ‎; Urdu: مہرگڑھ‎http://www.cssforum.com.pk/images/smilies/wink.gif, sometimes anglicized as Mehergarh or Mehrgar, near the capital of the Kachi District Dadhar, is one of the most important Neolithic (6500 BCE to c. 2500 BCE) sites in archaeology It lies on the Kacchi Plain of Balochistan, Pakistan.[1] It is one of the earliest sites with evidence of farming and herding in South Asia.[2][3]  
  
Map of Pakistan showing Mehrgarh in relation to the cities of Quetta, Kalat, and Sibi and the Kachi Plain of Balochistan.  
Mehrgarh is located near the Bolan Pass, to the west of the Indus River valley and between the Pakistani cities of Quetta, Kalat and Sibi. The site was discovered in 1974 by an archaeological team directed by French archaeologists Jean-François Jarrige and Catherine Jarrige, and was excavated continuously between 1974 and 1986, and again from 1997 to 2000. The earliest settlement at Mehrgarh, in the northeast corner of the 495-acre (2.00 km2) site, was a small farming village that has been dated to between 6500 BCE to 5500 BCE. The whole area covers a number of successive settlements. Archaeological material has been found in six mounds, and about 32,000 artifacts have been collected.[4]  
  
**Mehrgarh Period I**  
Mehrgarh Period I 7000 BCE–5500 BCE, was Neolithic and aceramic (i.e., without the use of pottery). The earliest farming in the area was developed by semi-nomadic people using plants such as wheat and barley and animals such as sheep, goats and cattle. The settlement was established with simple mud buildings and most of them had four internal subdivisions. Numerous burials have been found, many with elaborate goods such as baskets, stone and bone tools, beads, bangles, pendants and occasionally animal sacrifices, with more goods left with burials of males. Ornaments of sea shell, limestone, turquoise, lapis lazuli and sandstone have been found, along with simple figurines of women and animals. Sea shells from far sea shore and lapis lazuli found as far away as present-day Badakshan, Afghanistan shows good contact with those areas. A single ground stone axe was discovered in a burial, and several more were obtained from the surface. These ground stone axes are the earliest to come from a stratified context in the South Asia. Periods I, II and III are contemporaneous with another site called Kili Gul Mohammed.  
  
In 2001, archaeologists studying the remains of two men from Mehrgarh made the discovery that the people of the Indus Valley Civilization, from the early Harappan periods, had knowledge of proto-dentistry. Later, in April 2006, it was announced in the scientific journal Nature that the oldest (and first early Neolithic) evidence for the drilling of human teeth in vivo (i.e. in a living person) was found in Mehrgarh. According to the authors, their discoveries point to a tradition of proto-dentistry in the early farming cultures of that region. "Here we describe eleven drilled molar crowns from nine adults discovered in a Neolithic graveyard in Pakistan that dates from 7,500 to 9,000 years ago. These findings provide evidence for a long tradition of a type of proto-dentistry in an early farming culture."[8]  
  
[**Period II and Period III**  
Mehrgarh Period II 5500 BCE–4800 BCE and Merhgarh Period III 4800 BCE–3500 BCE were ceramic Neolithic (i.e., pottery was now in use) and later chalcolithic. Period II is at site MR4 and period III is at MR2.[4] Much evidence of manufacturing activity has been found and more advanced techniques were used. Glazed faience beads were produced and terracotta figurines became more detailed. Figurines of females were decorated with paint and had diverse hairstyles and ornaments. Two flexed burials were found in period II with a covering of red ochre on the body. The amount of burial goods decreased over time, becoming limited to ornaments and with more goods left with burials of females. The first button seals were produced from terracotta and bone and had geometric designs. Technologies included stone and copper drills, updraft kilns, large pit kilns and copper melting crucibles. There is further evidence of long-distance trade in period II: important as an indication of this is the discovery of several beads of lapis lazuli, once again from Badakshan. Mehrgarh Periods II and III are also contemporaneous with an expansion of the settled populations of the borderlands at the western edge of South Asia, including the establishment of settlements like Rana Ghundai, Sheri Khan Tarakai, Sarai Kala, Jalilpur and Ghaligai.

**Gandhara Civilization**  
**Location**: Northern Pakistan and Afghanistan, in vale of Peshawar, Potohar Plateau on the Kabul River   
  
**Cities**: Pushapura (Peshawar) “city of man”, Varmayana “modern Bamayan”, Takshahila “Taxila”.   
  
**Period**: 1st millennium BC to 11th century AD.   
  
**Rulers**: Alberuni, Ghaznavi & then Gandhara name disappeared   
  
**Texila**: The Gandharan city of Taxila was an important Buddhist and Hindu [11] centre of learning from the 5th century BC[11] to the 2nd century. Sawat+Dir+Peshawar+Taxila was called Gandhara.   
  
**Evidences**: of Stone Age (Cave), Bronze Age , Gandhara script writings etc , Budhist art  
  
This civilization is symbol of human, religious, art and history development.