

Class11, Hornbill

CH. 3 - DISCOVERING TUT: THE SAGA CONTINUES

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Introduction:

Written by A.R. Williams, this chapter is about the last heir of the powerful Pharaoh Dynasty, Tutankhamun, who died when he was a teenager after ruling for nine years. He died in a mysterious way, this chapter throws light over all the possible mysteries – the curse, where his tomb lies, his life and ultimately death. Egyptians believe that there is life after death and that is the reason why the Pharaohs were buried with wealth and everyday use items.

Summary – 1

It was 6 p.m. on January 5, 2005 when the mummy of Tutankhamun moved smoothly and quietly into CT scanner which had been carried to Tut's resting place. The aim was to probe the persisting medical mysteries of this young ruler who died more than 3,300 years ago. His dead body was embalmed and buried in a royal grave in the Valley of the Kings.

Howard Carter, a British archaeologist discovered Tut's tomb in 1922 after years of futile search. Its contents remain the richest royal collection ever found. They include extremely attractive artifacts in gold as well as everyday things like board games, a bronze razor, linen undergarments, cases of food and wine.

Carter first recorded the Pharaoh's funeral treasures. Then he began investigating his three nested coffins. The first one had a shroud covered with garlands of willow and olive trees, wild celery, lotus petals and cornflowers. These proved that he was buried in March or April. Carter ran into trouble when he reached the mummy. The ritual resins had hardened. These had cemented Tut to the bottom of his solid gold coffin. The solidified material was removed with the help of chisels. Then the mummy was cut free. Carter's men removed the mummy's head and severed nearly every major joint. Once they had finished, they reassembled the remains on a layer of sand in a wooden box with padding that concealed the damage. The team of scientists found it resting there. Zahi Hawass, Secretary General of Egypt's Supreme Council of Antiquities observed that the mummy was in very bad condition because of what Carter had done in the 1920s.

Archaeology has changed a lot during the last few decades. Now it pays less attention to treasure and more to the fascinating details of life and puzzling mysteries of death. It uses more sophisticated tools including medical technology. In 1968 an Anatomy Professor X-rayed the

mummy. He revealed a startling fact. The breast-bone and front ribs are missing. Now CT scanning was employed to answer two questions: (i) how did he die? and (ii) how old was he at the time of his death?

On the night of the scan, workmen carried Tut from the tomb in his box. They climbed a ramp and a flight of stairs into the swirling sand outside. Then they rose on a hydraulic lift into a trailer. This trailer held the scanner. Initially, there was some problem because of sand in a cooler fan. Then the technicians scanned the mummy head to toe. 1700 digital X-ray images in cross section were created. Tut's head was scanned in 0.62 millimetre slices to register its complicated structures. Tut's entire body was similarly recorded. Then a team of specialists in radiology, forensics and anatomy began to probe the secrets.

A technician displayed astonishing images of Tut on a computer screen. A gray head took shape from a scattering of pixels. The technician spanned and tilted it in every direction, Neck vertebrae appeared quite clearly. Other images revealed a hand, several views of the ribcage, and a narrow cross section of the skull. Zahi Hawass smiled. He felt relieved to see that nothing had gone seriously wrong.

Summary – 2:

Tutankhamun was the last leader of the great Pharaoh Dynasty. He was young when he died. According to some people, his death was a murder. In the year 1922, his tomb was exposed by Howard Carter, an Archaeologist. After 80 years, he was taken for the CT scan to solve the mystery of his life and death through a forensic reconstruction.

His father or grandfather, Amenhotep III, was a very powerful Pharaoh ruler over a period of 40 years. Moreover, his son, Amenhotep IV, succeeded him and initiated the strangest period in the history of Egypt. His name changed to Akhenaten which means servant of Athens. He changed the religious capital from Thebes to Amarna. Later he attacked Amun, a god, ruined his images and shut his temples. Another mysterious ruler thrived him who died very soon. Tutankhamun sat on the power and ruled for 9 years.

When Tut's mummified body was found, he had lots of gold and wealth. Carter got him after so many years. After conducting the research on the treasures, he planned to examine his 3 nested boxes. Many parts of the treasure in the tomb were already misplaced.

His tomb was found rock-cut, 26 feet under the ground, which also had some wall paintings. It reveals that he was suppressed in the months of March or April. One of the coffin put Carter into trouble. The gums used to paste Tut to the lowest of the solid gold. Coffin was toughening enough that made it impossible to displace. He put the box in the sun for numerous hours so that the resins lose up but that didn't work.

At last, he removed the adhesive with the chisel and hammer. Carter sensed he didn't have any other choice than cutting the mummy from limb to limb, thieves would have robbed the gold and the treasures. His men first removed the head of the mummy, then they cut off each and every joint. After the process of removing all the body parts, they placed it on the layer of sand. They kept the parts in a wooden box and placed it at the original place.

Later, in January 2009, the body was taken for a CT scan which takes hundreds of X-Rays and generates a 3D image. That night after the scan, the workmen passed his body from the tomb into a box. They went through the ramp and stairs and lifted the body on a hydraulic trailer that was holding the scanner. The scanner suddenly stopped working and the process of the CT scan stopped. After the use of a pair of spare fans, the scan was finally completed. After 3 hours, they transferred his body back to his tomb where his body is now resting in peace.

To conclude, Discovering tut: the saga continues summary tells you that Tutankhamun, also known as tut was a brave ruler who of the great Pharaoh Dynasty. He died a mysterious death and is resting in peace in his tomb now.

Text and Explanation:

He was just a teenager when he died. The last heir of a powerful family that had ruled Egypt and its empire for centuries, he was laid to rest laden with gold and eventually forgotten. Since the discovery of his tomb in 1922, the modern world has speculated about what happened to him, with murder being the most extreme possibility. Now, leaving his tomb for the first time in almost 80 years, Tut has undergone a CT scan that offers new clues about his life and death — and provides precise data for an accurate forensic reconstruction of the boyish pharaoh.

Heir – Inheritor, successor

Laden – loaded

Speculated- form a theory without evidence

Tomb- an enclosure to bury the dead

Forensic Reconstruction – the process of recreating the face of an individual

Pharaoh- a ruler in ancient Egypt

Tutankhamun, also known as Tut, was a teenager when he died. He was the last successor of his powerful Pharaoh Dynasty which ruled Egypt and its empire for centuries. He was laid on rest, heavily loaded with gold. His tomb was discovered in 1922 which made the world raise a question about what had happened to him and whether he had been murdered? After almost 80 years, his body was about to undergo a CT scan which would give new information and clues about his life and death. His face would be recreated with the help of a procedure called forensic reconstruction.

AN angry wind stirred up ghostly dust devils as King Tut was taken from his resting place in the ancient Egyptian cemetery known as the Valley of the Kings*. Dark-bellied clouds had scudded across the desert sky all day and now were veiling the stars in casket grey. It was 6

p.m. on 5 January 2005. The world's most famous mummy glided head first into a CT scanner brought here to probe the lingering medical mysteries of this little understood young ruler who died more than 3,300 years ago.

Stirred – move or cause to move slightly

Ghostly – eerie and unnatural; unreal

Resting place- here, the grave

Cemetery- a large burial ground

Dark-bellied – dark in colour

Scudded across – moving quickly; it refers to the movement of the dark-bellied clouds

Veiling – to cover something

Casket- a small ornamental box or chest for holding jewels, letters, or other valued objects.

Casket grey – It means that the grey clouds were like a grey coloured casket which contained the stars. The stars are like jewels which are kept in a casket.

Glided – quite, continuous motion

Probe – to investigate, find out

Lingering – long-lasting

A fast, strange and unnatural wind was blowing as King Tut's body was taken from his grave called 'Valleys of the Kings', an ancient Egyptian cemetery (The location of the Valley of the Kings is given in the image). Dark clouds moved quickly across the desert all day long and later, they covered the stars. On January 5, 2005, at 6 pm, King Tut's mummy which is the world's most famous mummy was placed in the CT scanner to investigate the mystery behind his death which had occurred more than 3300 years ago.

All afternoon the usual line of tourists from around the world had descended into the cramped, rock-cut tomb some 26 feet underground to pay their respects. They gazed at the murals on the walls of the burial chamber and peered at Tut's gilded face, the most striking feature of his mummy-shaped outer coffin lid. Some visitors read from guidebooks in a whisper. Others stood silently, perhaps pondering Tut's untimely death in his late teens, or wondering with a shiver if the pharaoh's curse — death or misfortune falling upon those who disturbed him — was really true.

Descended – moved or gathered

Cramped – very small to fit into

Rock-cut - made in a rock by cutting it

Gazed – to look in surprise or in admiration

Murals – a painting or other artwork executed directly on the wall

Gilded – covered with a thin sheet or coating of gold

Striking- prominent

Whisper- to speak in a low voice

Pondering – think about something carefully

All afternoon, tourists visited the 26 feet deep, underground rock-cut tomb to pay respect to the king. Many people stuffed into the small tomb and looked in admiration at the murals on the walls of the chamber and took a look at the face of Tut that had been painted with gold. While visitors read the guidebooks in a hushed tone, some stood silently, wondering about his

untimely death in his teen years. They might also be wondering if the curse of the pharaoh which leads to the descend of misfortune upon the person who disturbs him is true.

“The mummy is in very bad condition because of what Carter did in the 1920s,” said Zahi Hawass, Secretary General of Egypt’s Supreme Council of Antiquities, as he leaned over the body for a long first look. Carter—Howard Carter, that is — was the British archaeologist who in 1922 discovered Tut’s tomb after years of futile searching. Its contents, though hastily ransacked in antiquity, were surprisingly complete. They remain the richest royal collection ever found and have become part of the pharaoh’s legend. Stunning artefacts in gold, their eternal brilliance meant to guarantee resurrection, caused a sensation at the time of the discovery — and still get the most attention. But Tut was also buried with everyday things he’d want in the afterlife: board games, a bronze razor, linen undergarments, cases of food and wine.

Futile – pointless; incapable of producing the result of something

Hastily – fast; swiftly

Ransacked – raid; go through a place to steal or damage something

Antiquity – age, oldness

Resurrection – restoration to life

Afterlife- life after death, based on the belief that the essential part of an individual's identity continues to the next life after the death of the physical body

As Zahi Hawass, Secretary General of Egypt, leaned over the body to have a look, he said that the mummy was in a very bad condition because of what the British archaeologist Howard Carter did to it in the 1920s. He discovered King Tut’s tomb in 1922 after a long search. The valuable treasures of Tut had been explored earlier too but surprisingly, they were complete. The treasure found at Tut’s grave is the richest till date and has come to be known as the Pharaoh’s legend. It has artefacts in gold which are eternally beautiful and as good as new. Such artefacts still get attention. Tut was buried with things of daily use like a razor made of bronze, games, linen undergarments and boxes of food and wine which he could use in the next life.

After months of carefully recording the pharaoh’s funerary treasures, Carter began investigating his three nested coffins. Opening the first, he found a shroud adorned with garlands of willow and olive leaves, wild celery, lotus petals, and cornflowers, the faded evidence of a burial in March or April. When he finally reached the mummy, though, he ran into trouble. The ritual resins had hardened, cementing Tut to the bottom of his solid gold coffin. “No amount of legitimate force could move them,” Carter wrote later. “What was to be done?”

Funerary Treasures – the valuable things with which the king was buried

three nested coffin- three cofins placed one in another in order of decreasing size. The innermost coffin houses the body of the deceased.

Shroud – a length of cloth in which a dead person is wrapped

Adorned – decorated

Garlands of willow – a wreath of flowers and leaves

Mummy- a body of a human being or animal that has been ceremonially preserved by removal of the internal organs, treatment with natron and resin, and wrapping in bandages.

Ritual - here, the resins used in the ceremony of mummification

Resins – a sticky flammable substance that is insoluble in water

Legitimate - reasonable

Carter took a few months to record the treasures found in Tut's grave. Then he began investigating his three coffins which were nested one in another. In the first coffin, he found a piece of cloth with garlands of willow, olive leaves, wild celery, lotus petals and cornflower, which suggested that he had been buried in the months of March or April. When he reached the third coffin, he was in trouble. The body had hardened due to the resins which had cemented the body and it had stuck to the bottom of the coffin which was made of gold. Carter wondered what to do next because no amount of force could separate the two.

The sun can beat down like a hammer this far south in Egypt, and Carter tried to use it to loosen the resins. For several hours he set the mummy outside in blazing sunshine that heated it to 149 degrees Fahrenheit. Nothing budged. He reported with scientific detachment that “the consolidated material had to be chiselled away from beneath the limbs and trunk before it was possible to raise the king's remains.”

Blazing – very hot

Budged – moved or shifted; a slight movement

Chiselled away – to cut something with a chisel

Carter tried to loosen the resins by keeping the body in the hot sun. He kept the mummy in 149 degrees Fahrenheit heat for several hours but still, it remained stuck. He reported that a chisel could be used to cut down the mummy from the limbs and the trunk so that Tut's body could be taken out of the coffin.

In his defence, Carter really had little choice. If he hadn't cut the mummy free, thieves most certainly would have circumvented the guards and ripped it apart to remove the gold. In Tut's time the royals were fabulously wealthy, and they thought — or hoped — they could take their riches with them. For his journey to the great beyond, King Tut was lavished with glittering goods: precious collars, inlaid necklaces and bracelets, rings, amulets, a ceremonial apron, sandals, sheaths for his fingers and toes, and the now iconic inner coffin and mask — all of pure gold. To separate Tut from his adornments, Carter's men removed the mummy's head and severed nearly every major joint. Once they had finished, they reassembled the remains on a layer of sand in a wooden box with padding that concealed the damage, the bed where Tut now rests.

Circumvented – find a way around; thieves would have found a way to tackle the guards and remove the gold from the tomb

Inlaid - a decorative pattern on a surface

Amulet - an ornament or small piece of jewellery thought to give protection against evil, danger, or disease.

Apron - a protective garment worn over the front of one's clothes and tied at the back.

Sheaths – a close-fitting cover

Iconic - something or someone who is a symbol or it represents some other thing

Adornments – ornaments

Concealed- hid

According to Carter, he had no choice other than to cut the mummy. He believed that if he hadn't done that, thieves would have removed the gold from the tomb and would have looted it. During Tut's time, the royal people were very wealthy and they had a belief that after death, they could take the wealth along with them. For his life after death, he was given precious collars, necklaces with decorative patterns, bracelets, rings, amulets, ceremonial aprons, sandals, sheaths for fingers and toes and now, an iconic inner coffin and a mask. His men removed his head and every joint of his body. After they finished, they reassembled the remains in a wooden box with padding filled with a layer of sand to conceal the damage. It was his new resting place.

Archaeology has changed substantially in the intervening decades, focusing less on treasure and more on the fascinating details of life and intriguing mysteries of death. It also uses more sophisticated tools, including medical technology. In 1968, more than 40 years after Carter's discovery, an anatomy professor X-rayed the mummy and revealed a startling fact: beneath the resin that caked his chest, his breast-bone and front ribs are missing.

Intervening – occur in the time between events

Intriguing – to arouse one's curiosity

Startling – unexpected or surprising

In the past few decades, archaeology has changed as it now focuses on the details of life and the mysteries of death. Earlier, it was about focusing on the treasure. Now, it uses more advanced medical technologies and tools for research. In 1968, an anatomy professor X-rayed King Tut's mummy and revealed that the front limbs and breast bone were missing.

Today diagnostic imaging can be done with computed tomography, or CT, by which hundreds of X-rays in cross section are put together like slices of bread to create a three-dimensional virtual body. What more would a CT scan reveal of Tut than the X-ray? And could it answer two of the biggest questions still lingering about him — how did he die, and how old was he at the time of his death?

King Tut's demise was a big event, even by royal standards. He was the last of his family's line, and his funeral was the death rattle of a dynasty. But the particulars of his passing away and its aftermath are unclear.

Computed Tomography – Also called a CT scan, it is a three-dimensional scan of a body with the help of hundreds of X-Rays in cross-section together

Demise - death

death rattle - the gurgling sound produced in the throat of a person who is about to die

Aftermath – after-effects of an unpleasant event

Now with the advancement of technology, CT scan or Computed Tomography can give a virtual image of the whole body. With the help of this technology, King Tut's body would be scanned to find answers to two questions – How he died and how old was he at the time of his death. His death was a shock to the royals also as he was the last person of his family and his funeral indicated the diminishment of his dynasty. However, what happened after his death is still not clear.

Amenhotep III — Tut’s father or grandfather — was a powerful pharaoh who ruled for almost four decades at the height of the eighteenth dynasty’s golden age. His son Amenhotep IV succeeded him and initiated one of the strangest periods in the history of ancient Egypt. The new pharaoh promoted the worship of the Aten, the sun disk, changed his name to Akhenaten, or ‘servant of the Aten,’ and moved the religious capital from the old city of Thebes to the new city of Akhetaten, known now as Amarna. He further shocked the country by attacking Amun, a major god, smashing his images and closing his temples. “It must have been a horrific time,” said Ray Johnson, director of the University of Chicago’s research centre in Luxor, the site of ancient Thebes. “The family that had ruled for centuries was coming to an end, and then Akhenaten went a little wacky.”

Wacky –amusing in a slightly odd way

Tut’s father or grandfather, Amenhotep III, was a very powerful Pharaoh who ruled over a period of forty years. His son, Amenhotep IV, succeeded him and began the strangest period in the history of Egypt. He promoted the worship of Aten (the sun disk). He changed his name to Akhenaten meaning servant of the Atens. He also shifted the religious capital from Thebes to the new city of Akhenaten, called Amarna. Further, he attacked Amun, a god, smashed his images and closed his temples. Ray Johnson, director of the University of Chicago said it must have been a bad time for the empire as the family who ruled for centuries came to an end and Akhenaten moved in an odd direction.

After Akhenaten’s death, a mysterious ruler named Smenkhkare appeared briefly and exited with hardly a trace. And then a very young Tutankhaten took the throne — King Tut as he’s widely known today. The boy king soon changed his name to Tutankhamun, ‘living image of Amun,’ and oversaw a restoration of the old ways. He reigned for about nine years — and then died unexpectedly.

Regardless of his fame and the speculations about his fate, Tut is one mummy among many in Egypt. How many? No one knows. The Egyptian Mummy Project, which began an inventory in late 2003, has recorded almost 600 so far and is still counting. The next phase: scanning the mummies with a portable CT machine donated by the National Geographic Society and Siemens, its manufacturer. King Tut is one of the first mummies to be scanned — in death, as in life, moving regally ahead of his countrymen.

Another mysterious ruler, Smenkhkare, succeeded him and died soon. Next, Tutankhamun, also known as Tut, sat on the throne and ruled for nine years. He worshipped god Amun in the old ways. However, he died mysteriously.

Tut is one of the mummies in Egypt. Whereas, until now with the help of the Egyptian Mummy Project which started in 2003, almost 600 mummies have been recorded so far. King Tut’s mummy was the first one to be scanned by CT under the next phase of scanning the mummies with the machine donated by the National Geographic Society and Siemens.

A CT machine scanned the mummy head to toe, creating 1,700 digital X-ray images in cross-section. Tut’s head, scanned in 0.62-millimetre slices to register its intricate structures, takes on eerie detail in the resulting image. With Tut’s entire body similarly recorded, a team of specialists in radiology, forensics, and anatomy began to probe the secrets that the winged goddesses of a gilded burial shrine protected for so long.

Eerie detail – strange image of Tut’s head as visible with the help of CT scan

Forensics – the application of the scientific method to investigate a crime

Anatomy – the branch of science which deals with the bodily structure of humans, animals or other living beings

Burial – burying the dead

Shrine – holy place

The CT scan machine scanned the body by creating 1700 digital X-rays in cross-sections. Tut’s head was scanned in 0.62 mm slices to record the tiny details. The resulting image was very strange. A team of Radiology, Forensics and Anatomy experts started examining the secrets of the grave that had been protected by flying goddesses for a long time.

The night of the scan, workmen carried Tut from the tomb in his box. Like pallbearers they climbed a ramp and a flight of stairs into the swirling sand outside, then rose on a hydraulic lift into the trailer that held the scanner. Twenty minutes later two men emerged, sprinted for an office nearby, and returned with a pair of white plastic fans. The million-dollar scanner had quit because of sand in a cooler fan. “Curse of the pharaoh,” joked a guard nervously.

Eventually the substitute fans worked well enough to finish the procedure. After checking that no data had been lost, the technicians turned Tut over to the workmen, who carried him back to his tomb. Less than three hours after he was removed from his coffin, the pharaoh again rested in peace where the funerary priests had laid him so long ago.

Pallbearers – a person who helps to escort a coffin at a funeral

Swirling – to spin or twist

Hydraulic lift – a lift that uses a machine to lift or move heavy objects with a pressure

Sprinted – ran at a high speed

During the night, workmen climbed up on the ramp and the flight of stairs to carry the body from the tomb into the spinning sand outside. They rose the body onto a hydraulic lift, then into a trailer where the scanner was kept. After twenty minutes, two men ran towards the office nearby to bring two fans. The scanner was not working as the sand had entered a cooler fan. The guard joked that it was because of the curse of the pharaoh because they had removed his body.

Once the fans worked, the procedure was finished. The data was checked in case of any losses and then technicians returned the body to the pallbearers who carried him back to his tomb. In less than three hours, he was resting at the same place where the priests had laid him many years ago.

Back in the trailer a technician pulled up astonishing images of Tut on a computer screen. A grey head took shape from a scattering of pixels, and the technician spun and tilted it in every direction. Neck vertebrae appeared as clearly as in an anatomy class. Other images revealed a hand, several views of the rib cage, and a transection of the skull. But for now the pressure was off. Sitting back in his chair, Zahi Hawass smiled, visibly relieved that nothing had gone seriously wrong. “I didn’t sleep last night, not for a second,” he said. “I was so worried. But now I think I will go and sleep.”

By the time we left the trailer, descending metal stairs to the sandy ground, the wind had stopped. The winter air lay cold and still, like death itself, in this valley of the departed. Just above the entrance to Tut's tomb

stood Orion — the constellation that the ancient Egyptians knew as the soul of Osiris, the god of the afterlife — watching over the boy king.

Astonishing – amazing

Pixels - a pixel is a single point in a graphic image

Spun – to turn around

Vertebrae – series of small bones which form a backbone

In the trailer, the technician showed a beautiful image of Tut on a computer screen. He showed the grey head which was scattered in pixels and he spun it around. Next, the vertebrae, hand, rib cage, and transection of his skull were shown. As the work was done, the pressure was finally off from the shoulders of Zahi Hawass. While sitting in his chair, he smiled and said that he was relieved that nothing went wrong. He had not slept the previous night and now, as the work was done, he would go and sleep.

By the time they left the trailer, the wind had stopped and the winter air was like death itself. Just above the tomb the Orion constellation shone in the night sky, watching over the boy king.

After the CT Scan of Tut's body, the technician confirmed whether the CT Scan was done properly. It showed the grey head, vertebrae, hand, rib cage and transaction of his head. The work was done properly so now the pressure is released and all felt relaxed. Zahi Hawas said that he could not sleep the previous night due to anxiety and worries, now he could sleep. When they all had left the trailer, they noticed the constellation of Orion above the tomb of King Tut, as if it was taking care of King Tut's dead body. According to Egyptian beliefs, Orion constellation is connected to Osiris, the god of after-life.

Question and Answers:

(Answers are given for the idea. Students can have their own answers, following the line.)

Understanding the Text

1. Give reasons for the following.

(i) King Tut's body has been subjected to repeated scrutiny.

Ans: King Tut's body has been subjected to repeated scrutiny because of his history, his treasures which he was buried with and to know the reason behind his death.

(ii) Howard Carter's investigation was resented.

Ans: Howard Carter's investigation was resented because of his unscientific methods to cut off Tut's body from the tomb. He also focused more on Tut's wealth and less on to solve the mystery of Tut's life and death.

(iii) Carter had to chisel away the solidified resins to raise the king's remains.

Ans: Carter had to chisel away the solidified resins to raise the king's remains because the body was cemented to the bottom of the solid gold coffin as the resins had hardened. No force could move the body away and keeping the body in the sun, under 149 degrees Fahrenheit also did not help.

(iv) Tut's body was buried along with gilded treasures.

Ans: Tut's body was buried along with gilded treasures as the ancient Egyptian royals were extremely wealthy. They also believed that the royalty would take all the treasures with them in their afterlife.

(v) The boy king changed his name from Tutankhaten to Tutankhamun.

Ans: Tutankhamun means 'Living image of Amun'. Amun was a major god of ancient Egypt. Amenhotep III smashed and closed Amun's temples, later Tut restored his temples and beliefs back in his empire. That is why he changed his name from Tutankhaten to Tutankhamun to choose his belief in the god Amun.

2. (i) List the deeds that led Ray Johnson to describe Akhenaten as "wacky".

Ans: According to Ray Johnson, the Akhenaten was wacky because of the following reasons:

- i. He smashed and closed Amun's images.
- ii. He worshipped Aten, sun's disk
- iii. He moved the religious capital from the city of Thebes to the new city of Akhenaten, which is now called Amarna
- iv. He changed his name to Akhenaten

(ii) What were the results of the CT scan?

Ans: The results of the CT scan were astonishing which was 1700 digital X-rays cross-sectioning each other to make a three-dimensional image. A grey head appeared and his vertebrae were shown. The images of the hand, ribcage, and skull were shown which were so clear.

(iii) List the advances in technology that have improved forensic analysis.

Ans: With the advancement in technology, it has been made possible for many scientific tests to be carried out in a more accurate way to determine the cause of a crime. X-Ray, Digital X-Ray, Barium X-Ray, CT scan, MRI, Post mortem, biopsy, autopsy etc. are now possible.

(iv) Explain the statement, “King Tut is one of the first mummies to be scanned — in death, as in life...”

Ans: Tut’s mummy was the first one to be X-rayed in 1968 and later, in 2005, the first to be scanned through Computing Tomography (CT). CT scan revealed new three dimensional images of his body which answered many questions. As long as he lived, then too he was the first citizen of his country since he was the king. Therefore, he always remained first in his life and after death too.

Talking about the Text

Discuss the following in groups of two pairs, each pair in a group taking opposite points of view. (It can be done by the students in the form of debate as well.)

1. Scientific intervention is necessary to unearth buried mysteries.

Ans: For:

To understand the mysteries and history of the past, it is necessary to unearth certain buried mysteries. It can help get the answers to the questions and gives us an idea about past lives and how they used to live. Example – the scientific intervention of Indus Civilization.

Against:

There is no doubt that scientific intervention can be useful but it exploits with the valuable assets of the buried. We can utilize the money involved in the investigation of the mummies to help develop the resources. It is a wastage of money to spend it on the buried past.

2. Advanced technology gives us conclusive evidence of past events.

Ans: For:

With the advanced technology, it helps us to know about the past and those who were involved. Such as through CT scan, it was possible to get an idea about King Tut and his body. It helped solve mysteries about death. It provides data for forensic reconstruction and satellite images help find burial sites. Through different software, date and time of an event occurred in the past can be calculated.

Against:

After CT scan result images of Tut, still, no conclusion could be drawn. Instead of focusing and using the time, money and technology on past events, the government should focus on the present and future.

3. Traditions, rituals and funerary practices must be respected.

Ans:

For:

Every religion has its own tradition, rituals and funerary practices which must be respected. It should not be disturbed as Carter did with King Tut's tomb.

Against:

There are many speculations made for ancient history, traditions, rituals and funerary practices which should be cleared in order to know the truth. The people living in modern time should not follow anything which can danger their lives or make the conflict between communities.

4. Knowledge about the past is useful to complete our knowledge of the world we live in.

Ans: For:

Knowledge of past events and important personalities help us understand where our roots are from. It helps us to know how our modern world was formed gradually. From past experiences and lessons, we learn not to commit the same mistake or we are gradually more alert. Knowing about King Tut's life and getting answers to the questions helped us understand Pharaoh Dynasty and the Egypt Empire.

Against:

Always digging the past doesn't help as it only wastes the time and resources. No one can change the past and we cannot change what already has happened. It is not necessary what had happened in past in a particular situation, the same will happen in present and future too in the same situation, So, we should focus on what present and future will bring for us and we must work to make our tomorrow better. Ranting about what happened yesterday cannot help us.

Thinking about Language

2. What do you think are the reasons for the extinction of languages?

Ans: A language can become extinct due to many reasons. If the world adapts with technology and advancement, they make changes accordingly. Example, the Sanskrit language cannot be seen used on a daily basis by people. However, in ancient times, it was a language used both verbally and in writing. Also, if some level of restrictions is imposed on a certain class of people not to use a language. It can become extinct gradually. Foreign invasion, language imposition, language chauvinism, migration and modernization can be some other reasons.

3. Do you think it is important to preserve languages?

Ans: Yes, it is very important to preserve languages as it helps us to understand our culture and traditions. It helps in cultural development and it helps us to connect with the important past

events. It gives us knowledge about literature and the history of the language.

4. In what ways do you think we could help prevent the extinction of languages and dialects?

Ans: We could help prevent the extinction of languages and dialects in the following ways:

1. By including the teaching of languages and dialects in school and college curriculums
2. By promoting the use of language and dialects verbally.
3. By conducting seminars and plays to pass on the knowledge of the languages and dialects to normal people.
4. By inviting people to take a few months course of learning languages and dialects.

Working with Words

1. Given below are some interesting combinations of words. Explain why they have been used together.

- | | |
|---------------------------|---------------------------|
| (i) ghostly dust devils | (vi) dark-bellied clouds |
| (ii) desert sky | (vii) casket grey |
| (iii) stunning artefacts | (viii) eternal brilliance |
| (iv) funerary treasures | (ix) ritual resins |
| (v) scientific detachment | (x) virtual body |

Ans:

- (i) ghostly dust devils – It refers to the anger of the dusty winds by frightful movements on those people who tried to disturb the king.
- (ii) desert sky – it refers to the dusky sky of the desert.
- (iii) stunning artifacts – It refers to the beautiful items which were found in the tomb.
- (iv) funerary treasures – the gold items which were kept while burying the king because Egyptians believed that there is an afterlife.
- (v) scientific detachment – it refers to the indifference towards science.
- (vi) dark-bellied clouds – dark clouds containing rain.
- (vii) casket grey – It refers to the stars were covered by dark-bellied clouds the way jewels are kept in a casket box
- (viii) eternal brilliance – it refers to the timeless luster and shine of the gold and other valuable items of the king
- (ix) ritual resins – it is a customary duty in the process of burying a dead body
- (x) virtual body – three dimensional body created by CT scan.

2. Here are some commonly used medical terms. Find out their meanings.

CT Scan	MRI	Tomography	Autopsy	Dialysis	ECG	Post Mortem	Angiography	Biopsy
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CT scan - It is a three-dimensional scan of a body with the help of hundreds of X-Ray in cross-section together

MRI – Magnetic Resonance Imaging, a medical examination by the help of strong magnetic field and radio waves to create a detailed image of the organs of the body

Tomography – a technique used to display a cross-section of a human body using hundreds of X-rays or ultrasound

Autopsy – a post mortem examination used to discover the cause of death of the dead person

Dialysis – the process of purification of blood with the help of a machine which works as a substitute for kidney

ECG – Also known as Electrocardiography, it is a process to test the signs of heart disease by recording the electrical activity through small electrodes attached to the chest, arms and legs

Post Mortem – an examination of a dead body to know the cause of the death

Angiography – radiography of blood or lymph vessels

Biopsy – examination of tissue removed from a living being to know the reason for the disease

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