Concerning the material that I will present on the Temporal Bone and Ear, I would recommend that everyone work the following questions from Head to Toe 2006: #7, #10, #65, #88, #97, #100, #104, #118, #121, #157, and #164. By working the questions, I mean that you should read and understand the hints and explanations, even if you get a question correct on your first attempt.
**Inferior View of Skull showing Temporal Bone (in dark pink)**

- Carotid canal
- Petrous portion of temporal bone
- Jugular foramen

**The Cartilagenous Auditory Tube Opens into the Nasopharynx**
(air can exchange between nasopharynx and the middle ear cavity)

- Nasopharynx (space above the soft palate)
- Soft palate
- Opening of auditory tube (Eustachian tube)
- Torus tubarius

**Grant’s Atlas, 12th Ed., Fig. 7.61, page 694**

**Muscles of Pharynx: Median (Sagittal) Section**

- Tensor veli palatini muscle
- Cartilagenous auditory tube
- Levator veli palatini muscle
- Salpingopharyngeus muscle
- Palatopharyngeus muscle
- Superior pharyngeal constrictor muscle
- Pterygomandibular raphe

**Muscles of Pharynx: Lateral View**

- Buccinator muscle
- Superior pharyngeal constrictor muscle
- Pterygomandibular raphe
Superior View of Cranial Fossae shows Petrous Part of Temporal Bone

Superior face of petrous pyramid (also called anterior face)

Posterior face of petrous pyramid

Grant’s Atlas, 12th Ed. Fig. 7.6A, page 618

Superior View of Petrous Pyramid (drilled out)

Greater petrosal nerve

Lesser petrosal nerve

Geniculate ganglion

Malleus

Incus

Middle ear cavity

Grant’s Atlas, 12th Ed. Fig. 7.74, page 709

Anterior (superior) semicircular canal raises arcuate eminence

Grant’s Atlas, 12th Ed. Fig. 7.77A, page 714
**Posterior View of Petrous Parts of Temporal Bones**

- Internally auditory meatus
- Posterior face of petrous pyramid

Grant's Atlas, 12th Ed.  
Fig. 7.4C, page 615

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**Structures seen on Posterior Face of Petrous Pyramid**

- Groove for inferior petrosal sinus
- Groove for superior petrosal sinus
- Groove for sigmoid sinus
- Opening of vestibular aqueduct
- Opening of cochlear canalicus

Grant's Atlas, 11th Ed.  
Fig. 7.5B, page 706

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**Auricle**  
Lateral view

- Scaphoid fossa
- Triangular fossa
- Tubercle
- Helix
- Antitragus
- Helix
- Antitragus
- Concha
- Tragus
- Ear lobe

Grant's Atlas, 12th Ed.  
Fig. 7.68A, page 703

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**Cutaneous Innervation of Auricle**

- Concha (green area)- Auricular branch of vagus (Arnold's nerve)
- Lateral surface of blue area- Great auricular nerve
- Medial surface of blue area- Great auricular nerve
- Lateral surface of red area- Auriculotemporal nerve
- Free medial surface of red area- Lesser occipital nerve

Syllabus, page 466, topic e
Middle Ear Cavity
Horizontal section

- Facial nerve (in facial canal)
- Malleus
- Incus
- Chorda tympani
- Stapes
- Middle ear cavity (Tympanic cavity)
- External auditory meatus
- Tympanic membrane (Eardrum)

Similar to: Grant's Atlas, 12th ed. Figure 7.72A, p. 707

Diagram of Middle Ear Cavity
Anterior wall removed

- Tympanic membrane
- Lesser petrosal nerve
- Facial nerve in facial canal
- Tympanic plexus
- Facial nerve beyond stylomastoid foramen

Similar to: Grant's Atlas, 12th Ed. Figure 7.73A, page 708
Detailed Diagram of Lateral Wall of Middle Ear Cavity
(Inside the cavity looking out)

Lateral Wall of Middle Ear Cavity
(Inside the cavity looking out)

Internal jugular vein
Internal carotid artery
Bony auditory tube
Facial nerve
Aditus ad antrum
Tympanic canaliculus
Tensor tympani
Chorda tympani
Mastoid air cells
Tegmen tympani

Medial Wall of Middle Ear Cavity
(Inside the cavity looking in)

Epitympanic recess (attic)
Malleus
Incus
Stapes
Vestibule

Parts of the Bony Labyrinth (in inner ear) that form the Medial Wall of the Middle Ear

Horizontal or lateral semicircular canal
Facial canal (for facial nerve)

Tympanic Plexus is on the Medial Wall of Middle Ear

Tympanic plexus lies on the medial wall of the middle ear (i.e. on the promontory)
Diagrammatic Review of Glossopharyngeal Nerve (CN IX)

Glossopharyngeal nerve
Lesser petrosal nerve
Otic ganglion
Parotid gland
Auriculotemporal nerve
Tympanic nerve (branch of glossopharyngeal)

Grant's Atlas, 12th Ed.
Page 835

Superior View of Petrous Pyramid (drilled out)

Internal auditory meatus
Greater petrosal nerve
Geniculate ganglion
Lesser petrosal nerve
Malleus
Incus
Middle ear cavity
Facial nerve (before genu)
Facial nerve (after genu)

Grant's Atlas, 12th Ed.
Fig. 7.74, page 709

Diagrammatic Review of Facial Nerve

Review of Facial Nerve

Grant's Atlas, 12th Ed.
page 831

End of Part 1

Radiologic Anatomy Practice Questions Head and Neck 2008

Here are the practice questions.
You can look up the answers in the Radiologic Anatomy Program.
For confirmation of the answers, come to Dr. Sholley’s Review.
43. B. The bony structures indicated by the yellow arrows are the _______.

44. B. Identify the bony structure indicated by the red arrow.

A. Identify the black area indicated by the red arrow.

45. A. Identify the black area indicated by the arrow.

B. The yellow arrows indicate the _______.

46. A. Identify the structure indicated by the red arrow.

B. Identify the bony structure indicated by the red arrow.

47. A. Identify the soft tissue structure indicated by the red arrow.

B. The yellow arrow indicates the ________.