

Ear 1.

1- the Ear consists of :- External, middle inner parts

↳ which contains organs of hearing and balance

2- parts of External Ear:- 1- Pinna (Auricle) → Elastic cartilage

collect air vibration

conduct sounds waves

2- External Auditory meatus →

3- Nerve supply of the Auricle → upper part of outer surface → Auriculo temporal. N

upper part of inner surface → lesser occipital. N

lower part inner + outer surface → Great Auricular N

4- Deeper part of the Auricle supply by → Branches of vagus + facial Nerve

5- External Auditory meatus → outer third made of :- cartilage

inner two third made of :- Bony

↳ lined by :- Skin, the outer third is provided by

hair + sebaceous + ceruminous Glands. (modified Gland)

6- Ceruminous Gland → modified sweat Gland that secrete yellowish brown wax that contain bactericidal Enzyme

7- Outer third directed → up ward, Back ward

inner 2/3 directed → down ward, Forward

8- Tympanic mem is a → thin, fibrous membran

↳ Formed of 3 layers → outer :- Skin, middle :- Fibrous tissue, inner :- mucous

↳ small depression produced by the tip of the handle of malleus → Umbo

↳ The inner surface of tympanic mem. Fixed by → handle of Malleus

9- middle layer is present in the major part of ear drum called → pars tensa

↳ absent in the upper part of the Ear drum called → pars flaccida

10- pars tensa + pars flaccida separated from each other by → Anterior + Posterior malleolar Folds

11- The tympanic mem. → thin connective tissue, Translucency, Concave laterally.

12- The Antero-inferior quadrant of the Ear drum called → Cone of the light

13- The middle Ear (tympanic cavity) → lined by :- mucous membrane

↳ Air containing cavity in petrous part of temporal Bone.

↳ contain Auditory ossicles → its Function :- Transmit vibration

14- walls of middle Ear:-

① Roof (tegmen wall) → separates middle Ear from middle cranial Fossa + thin temporal lobe

② Floor (jugular wall) → separates tympanic cavity from jugular v.

③ Anterior (carotid wall) → " " " From I.C.A / contain Auditory tube + tensor Tympani

④ posterior (mastoid wall) → aditus + vertical part of Facial N. + Chorda tympani

⑤ medial (Labyrinth wall) → promontory + oval + Round window + horizontal facial N. / + pyramid

⑥ lateral (membranous wall) → Tympanic membrane

Ear 1

- 15 - Eustachian tube → connect :- Tympanic cavity with Naso pharynx
↳ serves to Equalize air pressures in → tympanic cavity + Naso pharynx
↳ posterior inner third is → Bony
↳ Anterior two third is → cartilaginous
- 16 - promontory → Rounded projection From First turn of cochlea.
- 17 - oval window → completely closed window by the base of stapes → Fenestra vestibuli
- 18 - Round window → closed by secondary tympanic membrane → Fenestra Cochlea.
- 19 - The oval window closed by → stapes, located above + behind promontory
- 20 - two opening of Anterior wall →
1 - Auditory tube 2 - canal for tensor tympani

Note: 21 - usually Eustachian tube is collapsed, but opens with swallowing

Note: 22 - in post. wall (Mastoid wall) → pyramid from its Apex Emerges the tendon of stapedius ms.

23 - which structure lies behind the middle Ear in the petrous part and communicate with the middle Ear by Aditus? → Mastoid antrum.