



CNS

1.Organizer that induces formation of nervous system is

- A. Primitive streak
- B. Notochord
- C. Neural plate
- D. Neural folds

2.Stem cells of nervous system is

- A. Ependymal layer
- B. Mantle cell Layer
- C. Marginal layer
- D. Alar plate

3.Gray Matter is derived from

- A. Ependymal layer
- B. Mantle cell Layer
- C. Marginal layer
- D. somites

4.white matter of spinal cord is derived from

- A. Ependymal layer
- B. Mantle cell Layer
- C. Marginal layer
- D. Somites

5.Basal plates give rise to

- A. anterior motor horn cells.
- B. posterior sensory horn cells
- C. autonomic nervous system
- D. white matter

6.alar plates give rise to

- A. anterior motor horn cells.
- B. posterior sensory horn cells
- C. autonomic nervous system
- D. white matter

7.intermediate horn give rise to

- A. anterior motor horn cells.
- B. posterior sensory horn cells
- C. autonomic nervous system
- D. white matter

match Age related changes In the position of the spinal cord

<p>8.During the 3rd month intrauterine</p>	<p>A) the spinal cord ends at the level of the 1st sacral</p>
<p>9.Later intrauterine</p>	<p>B) extends through the entire length of the vertebral canal.</p>
<p>10.At birth</p>	<p>C) spinal cord terminates at the level of the lower border of the first lumbar vertebra</p>
<p>11.In the adult</p>	<p>D) is located at the level of the third lumbar vertebra</p>

12.The most common type of spina bifida is

- A. Occulta
- B. With meningocele
- C. With meningomyelocele
- D. With myelocele

13.Spina bifida with no clinical symptoms

- A. Occulta
- B. With meningocele
- C. With meningomyelocele
- D. With myelocele

14.Commonest site of spina bifida is

- A. Cervical
- B. Thoracic
- C. Lumbosacral
- D. Coccygeal

15.Spina bifida which contains meninges and cerebrospinal fluid is

- A. Occulta
- B. With meningocele
- C. With meningomyelocele
- D. With myelocele

16.Spina bifida that contains meninges, cerebrospinal fluid, spinal cord and/or spinal nerves and Shows severe neurological deficit

- A. Occulta
- B. With meningocele
- C. With meningomyelocele
- D. With myelocele

17.Type of spina bifida where The spinal cord is widely exposed to the surface is

- A. Occulta
- B. With meningocele
- C. With meningomyelocele
- D. With myelocele

18. Neural tube defects mostly diagnosed by

- A. Fetal serum alpha-fetoprotein (AFP).
- B. maternal serum alpha-fetoprotein (AFP).
- C. 4D scan
- D. Postnatal heel brick test

19. Prevention of neural tube defects done by

- A. Progesterone during pregnancy
- B. Estrogen during pregnancy
- C. Folic acid during pregnancy
- D. Vitamin D during pregnancy

20. Regarding meninges:

- A. Filum terminalis is an extension from arachnoid
- B. Lower part of Filum terminalis lies in lumbar cisterna
- C. Denticulate ligament has 21 processes
- D. Denticulate ligament anchors arachnoid to dura
- E. The lower end of Filum terminalis is attached to sacral canal

21. Number of cervical nerves is:

- A. 5
- B. 6
- C. 7
- D. 8
- E. 9

22. Regarding the spinal cord and spinal nerves:

- A. The spinal cord passes through the jugular foramen.

- B. The first cervical nerve emerges below the atlas vertebra
- C. The first thoracic nerve emerges above the 1st thoracic vertebra.
- D. radicular arteries are the main supply to lower 2/3 of spinal spinal cord.
- E. The spinal cord end at the level of L3 in adult.

23.Regarding the spinal nerves:

- A. Usually, the dorsal nerve roots contain motor fibers.
- B. All the ventral nerve roots contain preganglionic autonomic fibers.
- C. C6 spinal nerve exits below C6 vertebra.
- D. T6 spinal nerve exits below T6 vertebra.
- E. The sacral nerve roots are shorter than the cervical nerve roots

24.Regarding the spinal cord and its meninges:

- A. The spinal cord is the continuation of the medulla oblongata
- B. In the adult, the dura mater ends at the level of S2 vertebra.
- C. The ventral 2/3 are supplied by the anterior spinal artery.
- D The conus medullaris is fixed to the coccyx by the filum terminale
- E. All of the above

25.Conus medullaris of the spinal cord is located opposite the:

- A. 10th thoracic vertebra in the adult.
- B. 3rd lumbar vertebra in the newborn
- C. 5th lumbar vertebra in the newborn.
- D. 2nd sacral vertebra in the old age
- E. None of the above is correct.

26.Regarding the spinal cord:

- A. It is anchored to the dura by filum terminale
- B. The conus medullaris is anchored to the coccyx by denticulate ligament.
- C. The dura and arachnoid terminate at the same level as the spinal cord
- D. The posterior spinal artery supplies the posterior 1/3 of spinal cord
- E. The anterior spinal artery supplies the cuneate tract.

27.Regarding pia, which is wrong*

- A. It is strongly attached to spinal cord
- B. It gives denticulate ligament
- C. It is the inner layer of meninges
- D. It gives filum terminale
- E. It ends at S2

28.Dura ends at*

- A. L1
- B. L2
- C. S1
- D. S2
- E. S3

29.Spinal cord in newborn ends at lower border of *

- A. L1
- B. L2
- C. L3
- D. L4

E. L5

1	B
2	A
3	B
4	C
5	A
6	B
7	C
8	B
9	A
10	D
11	C
12	A
13	A
14	C
15	B
16	C
17	D
18	B
19	C
20	C
21	D
22	D
23	D
24	E
25	B
26	D
27	E
28	D
29	C

What are layers of The neural tube

1. Ependymal layer: The original neuroepithelium (stem cells of nervous system).
2. Mantle cell Layer: neuroblast cells. (The Gray Matter).
- 3) Marginal layer: neuroblast fibers (The white matter).

What are Features of spina bifida occulta

- Occurs in L5 or S1
- Occurs in 10% of normal people.
- Produces no clinical symptoms.
- The only evidence of its presence may be a small dimple with a tuft of hair arising from it in the lower lumbar or sacral regions.

What are types of spina bifida

- A. Spina bifida occulta
- B. Spina bifida with meningocele
- C. Spina bifida with meningocele
- D. Spina bifid with myelocele (Rachischisis)

How can Neural tube defects (NTD) be diagnosed?

1. Detecting increase in the maternal serum alpha-fetoprotein (AFP).
2. Abdominal ultrasound.

Define:

Conus medullaris	lower end of spinal cord
Cauda equina	individual spinal nerves within spinal canal
Filum terminale	Part of pia mater that extend from the conus medullaris to the back of the coccyx

As regard lumbar cistern enumerate its:

Definition	sac of subarachnoid space filed with CSF
Extension	From L2 to S2 vertebrae
Contents	1-CSF 2-Cauda equina 3-Filum terminale interna
Importance	for lumber puncture

Enumerate Arterial supply of the spinal cord

- 1-Anterior spinal artery: supply the anterior 2/3 of spinal cord
- 2-Posterior spinal artery: supply the posterior 1/3 of spinal cord
- 3-Radicular arteries:
 - A. in the neck: from the vertebral & ascending cervical
 - B. In the thorax: from the intercostal arteries
 - C. In the abdomen: from lumber arteries
 - D. In the pelvis: from lateral sacral arteries