

PARUL UNIVERSITY
FACULTY OF MEDICINE
M.B.B.S Regular Exam Dec 2021 EXAMINATION

Year: 1
Subject Code: 19100181
Subject Name: Human Anatomy I

Date: 16.12.2021
Time: 10:00am to 1:00 pm
Total Marks: 100

Instructions:

1. Attempt each section in separate answer books.
2. Figures to the right indicate marks.
3. Draw diagrams wherever necessary.

SECTION – A

Q.1 Structured Essay Questions: (No choice) 2x10 (20)

1. After asking a 38-yr-old patient to open his mouth wide and say "Ahh", the physician notes deviation of the uvula to left side and asymmetry in the elevation of the soft palate, with the right side of the palate sagging.

- a. Which nerve is tested in the given examination? Which side is most likely affected? (01)
- b. Explain the anatomical basis of this condition. (1.5)
- c. Enumerate the muscles of soft palate. These muscles are derived from which branchial arch / arches? (3.5)
- d. Describe all the functional components of various nuclei related to the affected nerve. (04)

2. A 54-year-old female consulted her family physician with complain of a swelling in her right mammary gland, which had increased in size over the last few days. On examination, the swelling was palpable in the upper outer quadrant of her right breast. Biopsy revealed carcinoma of the mammary gland.

- a. What are the different changes seen in the overlying skin and nipple in case of carcinoma of the breast? Explain their anatomical basis. (03)
- b. Describe the blood supply of the mammary gland. (03)
- c. Explain the importance of lymphatic drainage of the breast in this patient. (04)

Q.2 Short notes: (any Four out of Five) 4x5 (20)

1. A patient has loss of unconscious proprioceptive sensations from the left lower limb. Which tract(s) is/are most likely affected? Describe the pathway in brief. (1+4)
2. An MRI reveals some pathology in the cavity which is situated between cerebral aqueduct (of Sylvius) and central canal. Name this cavity. Draw its floor with a neat and labeled diagram. (1+4)
3. Classify the basal nuclei. Add a note on their functions and applied anatomy. (1+2+2)
4. Explain the anatomical basis of Medial medullary syndrome. (05)
5. Enumerate the commissural fibers of the cerebrum. Describe the anatomy of the largest commissural fibers out of these. (2+3)

SECTION – B

- Q.3 Short notes: (any Three out of Four) 3x6 (18)**
1. Explain the anatomical basis of differentiating supranuclear from infranuclear facial palsy. Write in brief about Bell's palsy. (3+3)
 2. Describe the attachments and actions of the muscles producing movements at the temporo-mandibular joint. (1.5+1.5+1.5+1.5)
 3. Describe the Carotid triangle under the following headings – boundaries, roof, floor and contents. (1.5+1+1+2.5)
 4. Name the peripheral parasympathetic ganglion located in the orbit. Write in detail about its roots, branches and functions. (1+5)
- Q.4 Short notes: (any Three out of Four) 3x4 (12)**
1. Which nerve supplies the muscles of the anterior compartment of arm? Write its root value, origin, course and termination, and applied anatomy. (0.5+0.5+0.5+1.5+1)
 2. Enumerate the structures passing superficial and deep to flexor retinaculum of wrist. (2+2)
 3. Describe the ligaments of Shoulder joint. (04)
 4. Name the only muscle which connects the pelvic girdle and vertebral column to upper limb. Write its origin and insertion, nerve supply and actions. (0.5+1.5+0.5+1.5)

SECTION – C

- Q.5 Short notes: (any Five out of Six) 5x5 (25)**
1. Explain the process of fertilization. Add a note on in-vitro fertilization. (3+2)
 2. Describe various congenital anomalies in the development of brain and spinal cord. (05)
 3. Classify exocrine glands in various ways. Give examples of each. (05)
 4. Compare and contrast the microscopic structures of sensory and autonomic ganglia with neat and labeled diagrams. (2.5+2.5)
 5. Define sesamoid bones. Write their characteristics and functions. Give 2 examples. (1+3+1)
 6. Describe the Superficial fascia. Mention the sites of subcutaneous injections. (4+1)
- Q.6 MCQs: (all compulsory) 5x1 (05)**
1. Danger layer of the scalp is:
 - a. Loose connective tissue
 - b. Skin
 - c. Pericranium
 - d. Galea aponeurotica
 2. Which of the following cranial venous sinuses is not a part of confluence of sinuses?
 - a. Transverse sinus
 - b. Inferior sagittal sinus
 - c. Straight sinus
 - d. Occipital sinus
 3. Charcot's artery of cerebral hemorrhage is a branch of:
 - a. Posterior cerebral artery
 - b. Basilar artery
 - c. Middle cerebral artery
 - d. Anterior cerebral artery
 4. Lateral extension / thickening of pia mater of the spinal cord is called:
 - a. Linea splendens
 - b. Filum terminale
 - c. Cauda equina
 - d. Ligamentum denticulatum
 5. 1st carpo-metacarpal joint is which type of joint?
 - a. Saddle
 - b. Hinge
 - c. Pivot
 - d. Condylar