

MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

MBBS PHASE I STAGE I DEGREE EXAMINATION – FEBRUARY 2006

SUBJECT: ANATOMY – I (ESSAY)

Saturday, February 11, 2006

Time: 2 Hours

Max. Marks: 60

- ✗ Answer ALL questions.
- ✗ Write brief, relevant and legible answers.
- ✗ Draw diagram, flow charts wherever appropriate.

1. Explain the structure of a typical synovial joint with the help of a labelled diagram. (5 marks)
2. Name the foramina of greater wing of sphenoid bone in the middle cranial fossa. Enumerate the structures passing through each of them. (5 marks)
3. A 15 year old boy, slips in the bathroom and comes to the casualty complaining that he cannot invert his foot.
 - 3A. Name the muscles which bring about the inversion of foot
 - 3B. Name the nerves which supply these muscles
 - 3C. At what joints do the movements of inversion and eversion take place
 - 3D. Give the attachments of one of the invertors of the foot. (1+1+1+2 = 5 marks)
4. Describe the development, functions and fate of amnion. (5 marks)
5. Mention the extent and the branches of each part of axillary artery. (4 marks)
6. Explain the formation, course and termination of inferior vena cava. Name its tributaries. ($\frac{1}{2}+1+\frac{1}{2}+2 = 4$ marks)
7. A junior doctor aspirated a pleural fluid from a patient by inserting the needle, close to the lower border of the eighth rib, at the anterior axillary line. On the following day, the patient complained of altered skin sensation in an area below the eighth rib. The senior doctor immediately realised that the aspiration of the pleural fluid was done wrongly.
 - 7A. What is the correct site for the aspiration of fluid? Why?
 - 7B. What is the reason for the altered sensation in the patient? (3+1 = 4 marks)

8. At operation for treatment of a chronic gastric ulcer, it was found that the posterior wall of patient's stomach was stuck down to the posterior abdominal wall.
- 8A. Name a large artery that runs behind the stomach, which may become eroded, by a chronic ulcer.
- 8B. Which other structures lie behind the stomach and were likely to be involved in the disease process?
- 8C. What is the lymphatic drainage of the stomach?
(1+2+1 = 4 marks)
9. Describe the internal features of anal canal. Give its nerve supply and blood supply.
(2+1+1 = 4 marks)
10. A 55 year old woman was found rolling on her kitchen floor, crying out from agonizing pain in her abdomen. The pain came in waves and extended from right loin to the groin and to the front of the right thigh. An anteroposterior radiograph of the abdomen revealed a calculus in the right ureter.
- 10A. What causes the pain when a ureteral calculus is present?
- 10B. Why is the pain felt in such an extensive area?
- 10C. Where does one look for the course of the ureter in a radiograph?
- 10D. Where along the ureter is a calculus likely to be held up?
(1+1+1+1 = 4 marks)
11. Draw a labelled diagram of the transverse section of the midbrain at the level of superior colliculus.
(4 marks)
12. Describe the boundaries and communications of third ventricle of the brain.
(3+1 = 4 marks)
13. Describe the relations, development and arterial supply of left suprarenal gland.
(2+1+1 = 4 marks)
14. Give the origin, course, termination, development and blood supply of vas deferens.
($\frac{1}{2}$ +1+ $\frac{1}{2}$ +1+1 = 4 marks)



Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION

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MBBS PHASE I STAGE I DEGREE EXAMINATION – FEBRUARY 2006

SUBJECT: ANATOMY – II (MCQs)

Saturday, February 11, 2006

Time: 1 Hour

Max. Marks: 120

INSTRUCTIONS

1. For each statement, select **T** (True) or **F** (False) as your choice.
2. Indicate your choice by darkening the appropriate circle in the answer sheet provided.
3. Use only HB or 2B pencils to darken the circle.
4. Leave blank for Don't Know response.
5. Scoring systems is as follows:

For every Correct response	1 mark is awarded
For every Wrong response	0.5 mark is deducted
For every Don't' Know response	No mark is deducted
6. Indicate your roll number (Registration Number) clearly and correctly.
7. Do not write anything in the question paper.
8. The true/false statements are numbered 101 to 160 and 201 to 260 (Total 120 statements).
9. This question paper contains **03** pages. Please make sure that the question paper provided to you has all the pages.

About the muscles and fasciae

101. Tendon of a muscle consists of collagen fibres
102. Retinaculum is the thickening of deep fascia
103. Origin is the more fixed attachment of the muscle
104. Antagonists are the muscle having opposite actions
105. Outermost connective tissue covering of muscle is called perimysium

About the bones

106. Haversian canals in a compact bone are connected by Volkman's canals
107. Part of long bone developing from the primary center of ossification is called diaphysis
108. Epiphysis is the part of long bone developed from secondary centre for ossification
109. Metaphysis is the epiphyseal end of diaphysis in a developing long bone
110. Epiphyseal plate of cartilage is responsible for growth in width of the bone

About the hip joint

111. It is a ball and socket joint
112. Pubofemoral is its strongest ligament
113. Psoas major extends this joint
114. It is supplied by obturator nerve
115. Its congenital dislocation is usually upwards

Regarding the lateral pterygoid muscle

116. Its lower head arises from the lateral pterygoid plate
117. It is inserted to the coronoid process of mandible
118. It elevates mandible at the temporomandibular joint
119. It is developed from the mesoderm of 2nd pharyngeal arch
120. Lingual nerve emerges between its 2 heads

About the muscles of shoulder region

121. Supraspinatus is attached to the greater tubercle of humerus
122. Infraspinatus abducts the shoulder joint
123. Teres major forms the upper boundary of quadrangular space
124. Subscapularis is a lateral rotator of shoulder joint
125. Teres minor is supplied by lower subscapular nerve

About the muscles of posterior compartment of forearm

126. All these muscles are supplied by posterior interosseous nerve
127. Extensor pollicis longus tendon forms the lateral boundary of anatomical snuff box
128. Brachioradialis forms the lateral boundary of cubital fossa
129. Anconeus muscle is attached to the ulna
130. Posterior interosseous nerve passes through the supinator muscle

Derivatives of mesonephric duct include

131. Vas deferens
132. Trigone of bladder
133. Prostatic utricle
134. Appendix of testis
135. Seminal vesicle

About the heart

136. Sinus venarum of right atrium is developed from the primitive atrium
137. Rough walled part of the ventricles contain musculi pectinati
138. Coronary sinus is developed from the right horn of sinus venosus
139. Coronary arteries arise from ascending aorta
140. Floor of fossa ovalis is developed from septum primum

The external jugular vein

141. Is formed by the union of posterior branch of retromandibular vein and posterior auricular vein
142. Descends deep to sternocleidomastoid muscle
143. Joins the subclavian vein
144. Receives the suprascapular vein
145. Descends behind the clavicle

About the arteries of lower limb

146. Profunda femoris is the largest branch of femoral artery
147. Popliteal artery ends at the upper border of popliteus muscle
148. Anterior tibial artery gives rise to medial and lateral plantar arteries
149. Posterior tibial artery continues as dorsalis pedis artery
150. Inferior gluteal artery is a branch of external iliac artery

The nasal septum

151. Contains the perpendicular plate of palatine bone
152. Is supplied by olfactory nerves
153. Derives its arterial supply from sphenopalatine and anterior ethmoidal arteries
154. Is covered by stratified squamous epithelium in its greater part
155. Is developed from lateral nasal process

About the larynx

156. Its cricoid cartilage is present at the level of 6th cervical vertebra
157. All of its muscles are supplied by recurrent laryngeal nerve
158. Internal laryngeal nerve supplies mucous membrane of its upper part
159. Lower part of its cavity is called the vestibule
160. Cricothyroid muscle relaxes its vocal fold

The esophagus

201. Begins at the level of C6 vertebra
202. Pierces the diaphragm at the level of T8 vertebra
203. Contains mucous glands in its lamina propria
204. Is crossed by left principal bronchus
205. Is supplied by branches of aorta and left gastric arteries

Structures forming the posterior relations of duodenum include

206. Superior mesenteric vessels
207. Inferior vena cava
208. Gall bladder
209. Right kidney
210. Gonadal arteries

About the peritoneum

211. The greater omentum has right and left gastric arteries
212. Lesser omentum forms the posterior wall of lesser sac
213. Lienorenal ligament contains the short gastric vessels
214. Epiploic foramen connects the greater and lesser sacs
215. Falciform ligament is developed from ventral mesogastrium

About the liver

216. Its ligamentum teres is developed from left umbilical vein
217. Hepatic veins emerge from its porta hepatis
218. Its bare area is related to right suprarenal gland
219. Its parenchyma is developed from endoderm
220. Its caudate process forms the roof of epiploic foramen

About the lymphoid organs

221. Spleen is developed in the dorsal mesogastrium
222. Palatine tonsil is developed from the 3rd pharyngeal pouch
223. Hassall's corpuscles are present in the cortex of the thymus
224. Lymphoid follicles are aggregated in the medulla of lymph node
225. Peyer's patches are found in the submucous coat of jejunum

Branches of glossopharyngeal nerve include

226. Chorda tympani
227. Tonsillar
228. Pharyngeal
229. Superior laryngeal
230. Palatine

About the eyeball

231. Its posterior chamber lies posterior to the lens and its suspensory ligament
232. The lens is developed from mesoderm
233. Its fovea centralis contains only rods
234. Axons of ganglion cells form the optic nerve fibres
235. Interference with resorption of aqueous humour into sinus venosus sclerae results in glaucoma

About the autonomic nervous system

236. Their ganglia contain pseudounipolar nerve cells
237. Grey rami communicantes carry preganglionic sympathetic fibres to the ganglia
238. Otic ganglion receives the preganglionic fibres through the facial nerve
239. Secretomotor fibres to the lacrimal gland are derived from ciliary ganglion
240. Pterygopalatine ganglion is suspended from the maxillary nerve

About the corpus callosum

241. Posterior surface of genu forms the anterior wall of anterior horn of lateral ventricle
242. Its inferior surface gives attachment to the septum pellucidum
243. Its tapetum forms the medial wall of posterior horn of lateral ventricle
244. Fibres of forceps major are derived from splenium
245. Superior surface of trunk is covered by ependyma

About the pituitary gland

246. Pars distalis (anterior lobe) has cells arranged in irregular cords or clumps
247. Its chromophobes are large cells with deeply (dark) staining cytoplasm
248. Pituicytes of its posterior lobe secrete oxytocin
249. Chromophils consist of acidophils and basophils
250. Its anterior lobe is developed from Rathke's pouch

The prostate

251. Is laterally related to obturator internus muscle
252. Has follicles (acini) lined by columnar cells
253. Consists of a median lobe more prone to benign hypertrophy
254. Is separated from rectum by rectovesical pouch
255. Has a base on which apex of urinary bladder is situated

The fallopian tube

256. Is present in the upper margin of broad ligament
257. Is lined by stratified columnar cells
258. Has a wide and thin walled part called isthmus
259. Develops from para mesonephric duct
260. Is supplied by ovarian artery

