

Reg. No.

## MANIPAL UNIVERSITY

### MBBS PHASE I STAGE I DEGREE EXAMINATION – MARCH 2015

#### SUBJECT: ANATOMY – I (ESSAY)

Wednesday, March 11, 2015

Time: 09:00 – 11:00 Hrs.

Max. Marks: 60

1. With the help of a labeled diagram, describe a typical spinal nerve.  
(5 marks)
2. An old man was brought to the hospital after the dislocation of his left hip joint. His left lower limb appeared shorter than the right.
  - 2A. What is the commonest direction of hip dislocation?
  - 2B. Why was there shortening of the left lower limb?
  - 2C. Write a note on the relations of the hip joint.

( $\frac{1}{2}+1+3\frac{1}{2} = 5$  marks)
3. Write a note on hamstrings.  
(5 marks)
4. Explain the formation, function and fate of corpus luteum.  
(5 marks)
5. Describe the formation, course, termination and relations of external jugular vein. Name its tributaries.  
( $\frac{1}{2}+\frac{1}{2}+\frac{1}{2}+2+\frac{1}{2} = 4$  marks)
6. Describe the parts, arterial supply and development of interventricular septum. Add a note on its developmental anomalies.  
( $1+1+1+1 = 4$  marks)
7. With the help of a suitable diagram, describe the histology of trachea.  
(4 marks)
8. **Write short notes on:**
  - 8A. The mesentery of intestine
  - 8B. Parotid duct

( $2+2 = 4$  marks)
9. Describe the relations, blood supply and development of head of pancreas.  
( $2+1+1 = 4$  marks)

10. A 35 year old man complaining of pain on micturition went to his physician. He said the pain was worse towards the end of the act and was sometimes referred to the end of penis. He found that pain was aggravated by jolting movements and relieved by lying down. Occasionally he passed a few drops of blood at the end of micturition.

10A. Which pelvic organ is diseased?

10B. Why is the pain referred to penis?

10C. Why is the pain relieved by lying down?

10D. What are the relations of this organ?

( $\frac{1}{2} + \frac{1}{2} + 1 + 2 = 4$  marks)

11. With the help of a diagram, describe any four important functional areas of the cerebral cortex.

(4 marks)

12. Write a short note on cerebellar peduncles.

(4 marks)

13. Following a total thyroidectomy, patient had tingling and numbness of fingers, toes and lips, painful cramps of the hands and feet. There was strong muscle spasm producing adduction of thumb, flexion of wrist and plantar flexion of feet. Laboratory examination of blood revealed a blood calcium level of 4 mg per 100 ml.

13A. Name the organs damaged during total thyroidectomy.

13B. Describe the development, blood supply and histology of those organs.

(1+3 = 4 marks)

14. Describe the coverings and blood supply of testis.

(2+2 = 4 marks)



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MANIPAL UNIVERSITY  
MBBS PHASE I STAGE I DEGREE EXAMINATION – MARCH 2015  
SUBJECT: ANATOMY – II (MCQs)

Wednesday, March 11, 2015

Time: 11:30 – 12:30 Hrs.

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 <b>Correct</b> response    | 1 mark is awarded    |
| For every <b>Wrong</b> response      | 0.5 mark is deducted |
| For every <b>Don't Know</b> 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 **04** pages. Please make sure that the question paper provided to you has all the pages.



### Regarding cartilages

101. Hyaline cartilage has a perichondrium
102. Chondroblasts of fibro-cartilage form cell nests
103. Elastic cartilages usually ossify in old age
104. Cartilages are highly vascular
105. Matrix of hyaline cartilage is eosinophilic

### Regarding the bones of the skull

106. Suprameatal triangle is in the temporal bone
107. Bregma is bounded by the occipital bone
108. Mastoid process of temporal bone gives attachment to sternocleidomastoid muscle
109. Foramen ovale is found in the greater wing of the sphenoid bone
110. Ethmoid bone is one of the unpaired bones

### About the joints of the upper limb

111. Downward dislocation of shoulder is likely to damage axillary nerve
112. Interphalangeal joints are hinge joints
113. Pronation and supination movements occur at the elbow joint
114. Superior radioulnar joint is formed between the head of the ulna and ulnar notch of radius
115. Biceps brachii and brachialis muscles act on both shoulder and elbow joints

### Regarding the muscles of mastication

116. They are inserted to the mandible
117. They are supplied by branches of mandibular nerve
118. They develop from the second pharyngeal arch
119. Three of them depress the mandible
120. Buccinator is one among them

### About the intrinsic muscles of the hand

121. Lumbricals flex the interphalangeal joints
122. Palmar interossei abduct the fingers
123. Thenar muscles are mainly supplied by the median nerve
124. Radial artery passes between the two heads of first dorsal interosseous muscle
125. Dorsal interossei are unipennate muscles

### About the muscles of gluteal region

126. Gluteus maximus extends and laterally rotates the thigh
127. Piriformis muscle passes through the lesser sciatic foramen

128. Trendelenberg sign is positive when gluteus medius and minimus are paralyzed
129. Gemelli are supplied by the sciatic nerve
130. Sciatic nerve lies deep to the gluteus maximus muscle

### Graafian follicle

131. Is also known as secondary ovarian follicle
132. Has a layer of cells called theca externa which secrete hormones
133. Has a follicular antrum filled with follicular fluid
134. Is present in the cortex of the ovary
135. Ruptures around the middle of the menstrual cycle to release the primary oocyte

### About the axillary artery

136. It continues as brachial artery at the lower border of pectoralis minor
137. It lies on the medial side of axillary vein
138. Its first part is related to the trunks of brachial plexus
139. It gives lateral thoracic branch from its first part
140. Its third part lies lateral to median nerve

### About the pericardium

141. Fibrous pericardium is continuous above with prevertebral fascia
142. Parietal layer of serous pericardium is supplied by phrenic nerve
143. Transverse sinus of pericardium is developed by the rupture of dorsal mesocardium
144. Oblique sinus of pericardium is anteriorly bounded by right atrium
145. Visceral layer of serous pericardium is pain insensitive

### About the superior mesenteric artery

146. Its origin lies behind the neck of pancreas
147. Lies on the left side of superior mesenteric vein
148. Gives right and left colic branches
149. Crosses in front of third part of duodenum
150. Supplies whole of duodenum

### The maxillary air sinus

151. Has a floor formed by the alveolar process of maxilla
152. Is supplied by infra orbital nerve
153. Opens into the superior meatus of nose
154. Is almost of adult size at birth
155. Lies in front of pterygopalatine fossa

### About the larynx

156. Thyroid angle is less in females
157. Vocal folds are adducted by lateral cricoarytenoid muscles
158. Sinus of larynx lies between the vocal folds
159. Lower part of its mucous membrane is supplied by recurrent laryngeal nerve
160. Inlet of larynx lies between aryepiglottic folds

### The lesser omentum

201. Is attached above to the fissure for ligamentum teres
202. Lies behind the lesser sac
203. Is developed from ventral mesogastrium
204. Contains the portal vein in its free margin
205. Is attached to first two cm of duodenum

### The oesophagus

206. Has glands in its submucous coat
207. Pierces the diaphragm at the level of tenth thoracic vertebra
208. Is constricted in the region where it is crossed by arch of aorta
209. Is supplied by branches of inferior thyroid artery
210. Is crossed in front by hemiazygos vein

### The rectum

211. Begins at the level of S2 vertebra
212. Is separated from prostate by rectovesical pouch
213. Is laterally related to ischioanal fossae
214. Is drained by inferior rectal vein
215. Develops from cloaca

### The ureter

216. Develops from mesonephric duct
217. Descends in front of psoas major muscle
218. Presents a constriction as it crosses the pelvic brim
219. On the right side is crossed in front by right colic artery
220. Forms posterior relation of cecum on the right side

### The thoracic duct

221. Passes through the oesophageal opening of diaphragm
222. Ascends in front of right posterior intercostal arteries
223. Lies to the right of azygos vein
224. Crosses in front of arch of aorta

225. Forms anterior relation to left common carotid artery in the neck

### The ulnar nerve

226. Arises from medial cord of brachial plexus
227. Passes between the lateral and medial heads of triceps brachii
228. Supplies flexor digitorum superficialis muscle
229. Lies deep to flexor retinaculum
230. Injury results in wrist drop

### In the diencephalon

231. Ventral posterolateral nucleus of thalamus receives trigeminal lemniscus
232. Mamillary body receives the fibers of stria terminalis
233. Lateral geniculate body receives the fibres of lateral lemniscus
234. Medial geniculate body gives origin to fibres of auditory radiation
235. Anterior part of hypothalamus has sympathetic function

### The corpus callosum

236. Contains commissural fibres
237. Has tapetal part intersected by corona radiata
238. Forms roof of the third ventricle
239. Gives attachment to fornix
240. Forms the floor of longitudinal fissure

### The structures present on the medial wall of middle ear include

241. Pyramidal eminence
242. Oval window (fenestra vestibuli)
243. Fossa incudis
244. Opening of auditory tube
245. Promontary

### About the suprarenal glands

246. Right suprarenal gland is anteriorly covered by duodenum
247. Left suprarenal vein drains into left renal vein
248. Medulla of suprarenal is supplied by postganglionic sympathetic fibers from coeliac ganglion
249. Cortex of suprarenal is developed from neural crest
250. Superior suprarenal arteries arise from aorta



### The ovary

- 251. Lies in the ovarian fossa in the nulliparous female
- 252. Is anteriorly related to the ureter
- 253. Lies in front of obliterated umbilical artery
- 254. Has follicles in its medulla
- 255. Is connected to the uterus by the round ligament of uterus

### The seminal vesicle

- 256. Lies behind the prostate
- 257. Is developed from mesonephric duct
- 258. Present in front of the anal canal
- 259. Is supplied by inferior vesical artery
- 260. Lies medial to vas deferens

