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**MANIPAL UNIVERSITY**  
**MELAKA MANIPAL MEDICAL COLLEGE (MANIPAL CAMPUS)**  
**MBBS PHASE - I STAGE - I DEGREE EXAMINATION - SEPTEMBER 2016**  
**SUBJECT : ANATOMY - PAPER I (ESSAY)**

Thursday, September 08, 2016

Time : 9.00 - 11.00 Hrs.

Max. Marks : 60

1. Name the different types of synovial joints based on the shape of their articular surfaces and give one example for each type.  

(2½+2½ = 5 marks)
  
2. Following a motorbike accident, a 25-year-old man had his upper limb hanging by the side of his trunk due to the dislocation of shoulder joint.
  - 2A. What is the commonest direction of dislocation of the shoulder joint?
  - 2B. Mention the movements taking place at the shoulder joint.
  - 2C. Name any one muscle responsible for each of the movements.  

(1+2+2 = 5 marks)
  
3. Mention the attachments, nerve supply and actions of sternocleidomastoid muscle  

(3+1+1 = 5 marks)
  
4. Describe the formation and fate of corpus luteum  

(4+1 = 5 marks)
  
5. Describe the formation and termination of inferior vena cava. Name its tributaries.  

(1+1+2=4 marks)
  
6. Describe the internal features of right atrium of the heart.  

(4 marks)
  
7. Describe the features of the lateral wall of the nasal cavity.  

(4 marks)
  
8. In a 40-year-old patient, the tongue deviated to the right side upon protrusion due to paralysis of its muscles of the same side.
  - 8A. Lesion of which cranial nerve results in above condition.
  - 8B. Name the muscles of the tongue supplied by it  

(1+3 = 4 marks)

- 9A. Mention the parts of large intestine.  
9B. Name the major arteries supplying large intestine  
9C. Mention the embryological origin (development) of large intestine

(2+1+1=4 marks)

10. Describe the formation, course and termination of the bile duct.

(1+1+2=4 marks)

11. Draw a neat labeled diagram of transverse section of midbrain at the level of inferior colliculus

(4 marks)

- 12A. Name the parts of internal capsule.

- 12B. Mention any 2 arteries supplying the internal capsule.

- 12C. Mention any 2 clinical conditions resulting from lesions of internal capsule

(2+1+1=4 marks)

13. Describe the microscopic (histological) structure of the thyroid gland

(4 marks)

- 14A. Mention the coverings of testis

- 14B. Name the artery supplying the testis

- 14C. Mention the venous drainage of the right and left testes

(2+1+1 = 4 marks)



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**MBBS PHASE – I STAGE – I DEGREE EXAMINATION – SEPTEMBER 2016**  
**SUBJECT : ANATOMY – PAPER II (MTF)**  
Thursday, September 08, 2016

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 **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 **04 pages**. Please make sure that the question paper provided to you has all the pages.

### **In the human body**

101. Blood vessels are lined by simple squamous epithelium
102. Medium sized artery has longitudinally running smooth muscle fibres in its tunica adventitia
103. Ganglion contains cell bodies of neurons
104. Connective tissue sheath covering the nerve is called epineurium
105. Skeletal muscle fibre is branched

### **About the foramina/openings of the skull**

106. Optic canal transmits ophthalmic artery
107. Carotid canal transmits the external carotid artery
108. Foramen rotundum transmits the middle meningeal artery
109. Foramen ovale transmits mandibular nerve
110. Foramen magnum transmits vertebral arteries

### **About the temporomandibular joint**

111. Head of the mandible is one of its articular surfaces
112. It has an articular disc
113. It is supplied by auriculotemporal nerve
114. Lateral pterygoid muscle elevates the mandible through this joint
115. Sphenomandibular ligament is on the lateral aspect of this joint

### **Muscles supplied by the tibial nerve include**

116. Peroneus brevis
117. Tibialis posterior
118. Flexor digitorum longus
119. Peroneus tertius
120. Soleus

### **About the knee joint**

121. Hamstring muscles flex the knee joint
122. It is supplied by common peroneal nerve
123. It is unlocked by popliteus muscle
124. Menisci are present within its capsule
125. It is formed between femur, tibia and fibula

### **Muscles supplied by radial nerve include**

126. Triceps brachii
127. Coracobrachialis
128. Flexor carpi radialis
129. Brachioradialis
130. Flexor carpi ulnaris

### **The derivatives of the neural crest include**

131. Dermis of the skin
132. Schwann cells
133. Suprarenal cortex
134. Grey matter of spinal cord
135. Neurons of sympathetic ganglia

### **Regarding the larynx**

136. All of its muscles are supplied by the pharyngeal plexus of nerves
137. Space between its vocal folds is called rima glottidis
138. Its thyroid cartilage is of hyaline type
139. Its infraglottic part is supplied by recurrent laryngeal nerve
140. Its vocal cord is tensed by the cricothyroid muscle

### **Branches of the external carotid artery include**

141. Inferior thyroid artery
142. Lingual artery
143. Occipital artery
144. Middle meningeal artery
145. Maxillary artery

### **Tributaries of portal vein include**

146. Splenic vein
147. Superior mesenteric vein
148. Left gastric vein
149. Renal vein
150. Azygos vein

### **Regarding the pharynx**

151. Palatine tonsil is present in the nasopharynx
152. Its constrictors are supplied by fibers of cranial part of accessory nerve
153. Auditory tube communicates it with the middle ear cavity
154. Pyriform fossa is in the laryngopharynx
155. It is partly lined by ciliated columnar epithelium

### **Regarding the pleura**

156. Diaphragmatic pleura is supplied by the phrenic nerve
157. Cervical pleura extends above the level of first rib
158. Visceral pleura is supplied by autonomic nerves
159. Parietal pleura is pain insensitive
160. Presence of air in the pleural cavity is called pneumothorax

### **The esophagus**

201. Begins at the level of lower border of thyroid cartilage
202. Pierces the diaphragm at the level of 12<sup>th</sup> thoracic vertebra
203. Contains mucous glands in its submucosa
204. Lies in front of the trachea
205. Passes through the superior mediastinum

### **Structures forming stomach bed include**

206. Pancreas
207. Right kidney
208. Splenic artery
209. Transverse mesocolon
210. Right suprarenal gland

### **About the duodenum**

211. Its first part is related to the liver
212. It has Brunner's glands in its wall
213. Its third part is crossed by the superior mesenteric artery
214. Its fourth part continues as the jejunum
215. It develops from hindgut

### **About the spleen**

216. It is the largest lymphoid organ
217. Its visceral surface is related to the left colic flexure
218. Its inferior border gives attachment to gastrosplenic ligament
219. It is related to the diaphragm
220. Normal spleen is palpable

### **Regarding the parts of urinary system**

221. Left kidney lies behind the pancreas
222. Abdominal part of the ureter lies in front of psoas major muscle
223. Prostatic urethra has the openings of ejaculatory ducts
224. Neck of the bladder rests on the prostate gland in males
225. Ureter develops from ureteric bud

### **Superior cerebellar peduncle contains**

226. Ventral (anterior) spinocerebellar tract
227. Cuneocerebellar tract
228. Dentatothalamic fibres
229. Olivocerebellar fibres
230. Pontocerebellar fibres

### **Regarding the glossopharyngeal nerve**

231. It carries secretomotor fibers to submandibular salivary gland
232. It passes through the jugular foramen
233. It carries general sensations from the posterior 1/3<sup>rd</sup> of the tongue
234. It supplies carotid sinus
235. Its rootlets are attached to the pontomedullary junction

### **About the corpus callosum**

236. It contains commissural fibers
237. Fibers of its splenium form the forceps major
238. Its posterior end is called genu
239. It forms the roof of central part of lateral ventricle
240. It lies below the falx cerebelli

### **The superolateral surface of the cerebral hemisphere has**

241. Precentral gyrus
242. Cingulate gyrus
243. Superior temporal gyrus
244. Parahippocampal gyrus
245. Lingual gyrus

### **About the pancreas**

246. Its head is related to the duodenum
247. Upper border of its body is related to the splenic artery
248. Its tail is in the lienorenal ligament
249. It lies in front of the aorta
250. Surgical removal of its tail may lead to diabetes mellitus

### **Structures in the spermatic cord include**

251. Vas deferens
252. Ilioinguinal nerve
253. Testicular artery
254. Femoral branch of genitofemoral nerve
255. Pampiniform plexus of veins

### **About the uterus**

256. It makes an angle of antivertion with the vagina
257. Its fundus is the common site of fertilization
258. It is supplied by uterine artery
259. Its cervix is related to the ureters
260. Its posterior surface is related to recto-uterine pouch

