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MANIPAL UNIVERSITY

MBBS PHASE I STAGE I DEGREE EXAMINATION – FEBRUARY 2013

SUBJECT: ANATOMY – I (ESSAY)

Saturday, February 09, 2013

Time: 09:00 – 11:00 Hrs.

Max. Marks: 60

1. Classify the epithelia. Give one example for each type. (5 marks)

2. Mention the type and subtype of the knee joint. Name the bones articulating at the knee joint and name its ligaments. (1+1½+2½ = 5 marks)

3. Name the muscles involved in the formation of tendocalcaneus. Mention the attachments and nerve supply of any one of them. (2+3 = 5 marks)

4. Describe the formation of the somites and name the structures developing from them. (2+3 = 5 marks)

5. With a neat labelled diagram, describe the lateral wall of the nasopharynx. (4 marks)

6. Describe the origin, termination and relations of arch of the aorta. Name its branches. (½+½+2+1 = 4 marks)

7. Describe the nerve supply and blood supply of the pericardium. Add a note on the sinuses of the pericardium. (2+2 = 4 marks)

8. A 20 year old female had high fever, vomiting and tenderness at Mc Burney's point. The surgeon performed a surgery to remove the diseased organ.
 - 8A. Name the organ that is diseased in the above patient.
 - 8B. Mention its positions.
 - 8C. Describe its blood supply.(1+2+1 = 4 marks)

9. Write a note on epiploic foramen. (4 marks)

10. Name the structures related to the anterior and posterior surfaces of the right kidney. (4 marks)

11. Describe the boundaries of the third ventricle of the brain. (4 marks)

12. Following a right radical mastoid operation, a 7-year-old boy's face was distorted on the left side. He was unable to close his right eye. Saliva tended to accumulate in his right cheek and dribble from the right corner of mouth. With the knowledge of anatomy, name the structure damaged during the operation. Describe the course and distribution of that structure.

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

13. Describe the histology of suprarenal gland.

(4 marks)

14. Mention the extent and coverings of the spermatic cord. Name its contents.

($1+1+2 = 4$ marks)



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MANIPAL UNIVERSITY
MBBS PHASE I STAGE I DEGREE EXAMINATION – FEBRUARY 2013

SUBJECT: ANATOMY – II (MCQs)

Saturday, February 09, 2013

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.

About the cartilages

101. Elastic cartilages cover the articular surfaces of the long bones
102. In hyaline cartilage, freshly formed matrix is called territorial matrix
103. Hyaline cartilage consists of collagen fibres
104. Nasal cartilages are examples for elastic cartilages
105. White fibrocartilage is covered by perichondrium

About the joints of the vertebral column

106. Median atlanto-axial joint is supported by the transverse ligament of atlas
107. Joint between the bodies of 12th thoracic and 1st lumbar vertebrae is a secondary cartilaginous joint
108. Intervertebral joints are strengthened by posterior longitudinal ligament
109. Lateral atlanto-axial joints are pivot variety of synovial joints
110. Joints between the articular processes of adjacent vertebrae are primary cartilaginous joints

About the bones of the upper limb

111. Medial epicondyle of the humerus is related to the ulnar nerve
112. Olecranon process of the ulna gives attachment to the triceps brachii muscle
113. Tip of the styloid process of the radius gives insertion to the brachioradialis muscle
114. Triquetral bone articulates with the ulna to form the wrist joint
115. Anatomical neck of the humerus gives attachment to the capsule of the shoulder joint

About fertilization

116. Normally it takes place in the ampulla of the uterine tube
117. All capacitated spermatozoa penetrate corona radiata
118. Acrosomal enzymes help the sperm to penetrate zona pellucida
119. Cortical and zona reactions make zona pellucida impermeable to spermatozoa
120. Male pronucleus contains haploid number of chromosomes

Regarding rotator cuff muscles of the shoulder

121. All of them are medial rotators of the humerus
122. All of them blend with the joint capsule

123. Degenerative tendonitis of the rotator cuff muscles is common in old age
124. All of them are supplied by suprascapular nerve
125. They give strength to the inferior aspect of the capsule

Muscles supplied by radial nerve include

126. Anconeus muscle
127. Flexor digitorum superficialis
128. Triceps brachii
129. Hypothenar muscles
130. Brachioradialis

Among the muscles of anterior compartment of leg, the

131. Tibialis anterior muscle is inserted to the medial surface of the lower end of tibia
132. Peroneus tertius muscle is supplied by the deep peroneal nerve
133. Extensor hallucis longus muscle passes beneath the sustentaculum tali
134. Peroneus tertius brings about the inversion of the foot
135. Extensor digitorum longus is inserted to the tarsal bones

Regarding the lateral wall of the nose

136. It contains three conchae
137. Its superior meatus has ethmoidal bulla
138. Its inferior meatus has opening of nasolacrimal duct
139. It is supplied by superficial temporal artery
140. It is drained by facial vein

The right lung

141. Has a part called lingula
142. Has three fissures
143. Has an impression formed by the superior vena cava
144. Is related to the arch of azygos vein
145. Has an apex, which extends above the level of neck of the first rib

Regarding the arteries of the abdomen

146. Abdominal aorta terminates at the level of L3 vertebra
147. Gonadal arteries are the branches of abdominal aorta
148. Middle suprarenal artery is a branch of renal artery
149. Splenic artery is closely related to the pancreas
150. Superior mesenteric artery supplies the derivatives of the hindgut

Regarding the external features of the heart

151. Anterior interventricular groove contains right coronary artery
152. Its apex is formed by right atrium
153. Left atrium contributes for the formation of its base
154. Its upper border is formed by both the atria
155. Its inferior surface rests on diaphragm

The contents of posterior mediastinum include

156. Trachea
157. Esophagus
158. Thoracic duct
159. Azygos vein
160. Descending thoracic aorta

Regarding the stomach

201. Its lesser curvature is related to right and left gastric vessels
202. Its posterior surface is related to the left suprarenal gland
203. Its fundus is related to the right lobe of the liver
204. Peptic ulcers are commonly formed along its greater curvature
205. Its muscularis externa is made up of smooth muscle fibres

About the folds of peritoneum

206. The right free margin of lesser omentum contains portal vein
207. The mesentery of small intestine contains inferior mesenteric vessels
208. Falciform ligament contains ligamentum venosum
209. Gastrosplenic ligament develops from dorsal mesogastrium
210. Broad ligament of uterus forms posterior boundary of recto-uterine pouch

About the anal canal

211. Its part below the level of pectinate line is insensitive to pain
212. Lymph from its part above the pectinate line is drained into superficial inguinal nodes
213. Its internal sphincter is supplied by autonomic nervous system
214. It has appendices epiploicae
215. It is situated above the pelvic diaphragm

About the pancreas

216. Surgical removal of pancreas may result in diabetes mellitus

217. Its neck is related to the portal vein
218. It develops from dorsal and ventral pancreatic buds
219. It is supplied by the branches of splenic artery
220. It is related to the anterior surface of the left kidney

About the male urethra

221. Its prostatic part receives the opening of ejaculatory ducts
222. Its spongy part is situated in the corpus cavernosum
223. Its membranous part is its weakest part
224. Duct of bulbourethral gland opens into its membranous part
225. Major part of it develops from ectoderm

About the cerebellum

226. Anterior spinocerebellar tract enters it through the inferior cerebellar peduncle
227. Olivocerebellar tract forms its mossy fibres
228. Injury to the archicerebellum leads to staggering gait
229. Afferents of its nuclei are the axons of the purkinje cells
230. Disidiadochokinesis is a feature of lesion of neocerebellum

In the orbit

231. The ciliary ganglion supplies the lacrimal gland
232. Paralysis of the superior rectus muscle leads to lateral strabismus
233. Removal of palpebral part of lacrimal gland is functionally equivalent to the removal of the whole gland
234. Long ciliary nerves carry the sympathetic fibres to the constrictor pupillae muscle
235. Anterior ciliary arteries arise from the ophthalmic artery near the apex of the orbital cavity

About the nerves of the lower limb

236. Sciatic nerve descends in front of the quadratus femoris muscle
237. Lesion of common peroneal nerve leads to foot drop
238. Posterior division of obturator nerve supplies the obturator internus muscle
239. Femoral nerve passes through the femoral canal
240. Lesion of superior gluteal nerve results in positive Trendelenberg's sign

Parts of the bony labyrinth include

- 241. Cochlea
- 242. Semicircular ducts
- 243. Utricle
- 244. Sacculle
- 245. Vestibule

About the lobe of the thyroid gland

- 246. It is superficially covered by the thyrohyoid muscle
- 247. Its medial surface is related to the internal laryngeal nerve
- 248. Its parafollicular cells develop from thyroid diverticulum
- 249. Its posterolateral surface is related to the internal carotid artery
- 250. Its follicles are lined by cuboidal epithelium

About the parts of male reproductive system

- 251. Seminal vesicles lie behind the prostate
- 252. Duct of epididymis forms the body and tail of epididymis
- 253. Vas deferens develops from the mesonephric duct
- 254. Median lobe of prostate lies in front of the prostatic urethra
- 255. Penis develops from the genital swelling

About the ovary

- 256. It lies in the ovarian fossa in nulliparous females
- 257. It is covered by germinal epithelium
- 258. Its medulla contains the developing ovarian follicles
- 259. Venous blood from both ovaries drains into internal iliac veins
- 260. Its mesentery is called mesosalpinx



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