

MANIPAL UNIVERSITY
MBBS PHASE I STAGE I DEGREE EXAMINATION – SEPTEMBER 2015

SUBJECT: ANATOMY – I (ESSAY)

Wednesday, September 09, 2015

Time: 09:00 – 11:00 Hrs.

Max. Marks: 60

1. With the help of a diagram, describe the histology of thin skin. Name the appendages of the skin.
(4+1 = 5 marks)

2. Describe the temporomandibular joint under the following headings:
 - 2A. Articular surfaces
 - 2B. Movements possible
 - 2C. Muscles producing each of these movements
 - 2D. Nerve supply(1+1+2+1 = 5 marks)

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

4. Enumerate the structures derived from the first pharyngeal arch.
(5 marks)

5. Explain the formation, course and termination of portal vein. Name its tributaries. Mention any two sites of porta-caval anastomosis.
($\frac{1}{2}+1+\frac{1}{2}+1+1 = 4$ marks)

6. Describe the internal features of right ventricle of heart.
(4 marks)

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

8. A 50-year-old man complained that he had passed blood stained stools for the last 4 years. On proctoscopic examination, the mucous membrane at the level of the anal valves was found to bulging downward, when the patient strained. The swellings were found at 3, 7 and 11 O'clock positions when observed in lithotomy position.
 - 8A. What is this condition called?
 - 8B. Write a note on the blood supply, nerve supply and lymphatic drainage of the anal canal.(1+1+1+1 = 4 marks)

9. List the differences between the jejunum and ileum. (4 marks)
10. A 45-year-old lady, suffering from progressive jaundice since 3 months, was admitted to the hospital. On examination, a soft swelling could be felt in the abdomen at the tip of the right 9th costal cartilage.
- 10A. Swelling of which organ was felt at the tip of the right 9th costal cartilage?
- 10B. Mention the parts, relations and blood supply of that organ. (1+3 = 4 marks)
11. A person walking on the roadside in the hot sun, saw an iron rod lying on the road. He picked it but since it was very hot he dropped it immediately.
- 11A. Name the tract in the spinal cord carrying this sensation.
- 11B. Explain the pathway of this sensation from the receptor to the higher centre in the cortex. (1+3 = 4 marks)
12. Describe the inferior horn of lateral ventricle. (4 marks)
13. On examination, a patient is found to have bitemporal hemianopia. An enlargement of which gland is likely to compress the optic chiasma and cause this condition? Describe the relations and development of that gland. (1+2+1 = 4 marks)
14. Mention the coverings of testis. Give its arterial supply and lymphatic drainage. (2+1+1 = 4 marks)



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MANIPAL UNIVERSITY

MBBS PHASE I STAGE I DEGREE EXAMINATION – SEPTEMBER 2015

SUBJECT: ANATOMY – II (MCQs)

Wednesday, September 09, 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 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 bones

101. All the long bones of body are developed in cartilage
102. Periosteum accounts for the growth in thickness of the long bones
103. Epiphyseal plate of cartilage is responsible for the growth in length of long bones
104. Sesamoid bones are developed in membrane
105. Nutrient arteries of long bones are directed towards the growing ends of the bones

About the joints of head and neck

106. Median atlanto-axial joint is a plane synovial joint
107. Lateral atlanto-axial joints are of condylar type
108. Rotatory movements occur in the atlanto-occipital joints
109. Joint between the two parietal bones is of fibrous type
110. Joints between the bodies of vertebrae are of symphyseal type

Regarding the bones of lower limb

111. Rectus femoris muscle is attached to the anterior superior iliac spine
112. Lesser trochanter of femur gives insertion to iliopsoas tendon
113. Tendon of biceps femoris is attached to the upper end of tibia
114. Peroneus longus takes origin from fibula
115. Talus gives insertion to tibialis anterior

The deltoid muscle

116. Arises from clavicle and scapula
117. Is supplied by axillary nerve
118. Brings about flexion and extension of shoulder joint
119. Forms the rotator cuff of shoulder joint
120. Covers the insertion of pectoralis major

Levator ani muscle

121. Takes origin from ischial tuberosity
122. Is inserted into the pubis
123. Contributes to the formation of pelvic diaphragm
124. Is supplied by pudendal nerve
125. Elevates the anal canal

The hamstring muscles

126. Take origin from sacrum
127. Are inserted to one of the bones of leg

128. Flex the hip joint
129. Extend the knee joint
130. Are supplied by sciatic nerve

During the development

131. Connecting stalk develops into umbilical cord
132. Allantois forms the vitello-intestinal duct
133. Part of yolk sac within the head fold forms the foregut
134. Intraembryonic coelom develops in the lateral plate mesoderm
135. Urogenital organs develop in the intermediate mesoderm

Branches of basilar artery include

136. Posterior inferior cerebellar artery
137. Labyrinthine artery
138. Anterior spinal artery
139. Posterior communicating artery
140. Superior cerebellar artery

The brachial artery

141. Begins at the lower border of pectoralis major tendon
142. Ends at the level of neck of radius
143. Is crossed anteriorly by ulnar nerve
144. Gives superior ulnar collateral branch
145. Is separated from median cubital vein by bicipital aponeurosis

About the arteries of lower limb

146. Femoral artery is lateral to femoral vein within the femoral sheath
147. Popliteal artery is crossed anteriorly by tibial nerve
148. Anterior tibial artery runs lateral to the deep peroneal nerve
149. Peroneal artery is a branch of popliteal artery
150. Posterior tibial artery divides into medial and lateral plantar branches

About the diaphragm

151. Its right crus arises from upper 3 lumbar vertebrae
152. Its esophageal opening is present at the level of T8 vertebra
153. Vagi nerves pass through its aortic opening
154. It is supplied by phrenic nerves
155. It is developed from septum transversum

About the larynx

- 156. Epiglottis is made up of hyaline cartilage
- 157. Vestibule is the part of its cavity above the level of vocal folds
- 158. Cricothyroid muscle increases the tension of its vocal fold
- 159. All the muscles are supplied by recurrent laryngeal nerve
- 160. Its mucous membrane is supplied by branches of vagus nerve

About the parotid gland

- 201. Its true capsule is formed by investing layer of deep fascia
- 202. Deepest structure within it is the facial nerve
- 203. Nuclei of its acinar cells are flattened
- 204. It derives its parasympathetic supply from otic ganglion
- 205. Its duct opens into the vestibule of mouth

The rectum

- 206. Begins at the level of S2 vertebral segment
- 207. Is covered by peritoneum throughout its anterior surface
- 208. Is anteriorly separated from prostate by rectovesical pouch
- 209. Has taeniae coli in its wall
- 210. Is supplied by superior mesenteric artery

About the pancreas

- 211. Its head lies in front of inferior vena cava
- 212. Superior mesenteric vessels pass in front of its uncinat process
- 213. Its anterior border gives attachment to the root of transverse mesocolon
- 214. Its tail develops from ventral pancreatic bud
- 215. Posterior aspect of its neck is related to abdominal aorta

The ureter

- 216. Develops from mesonephric duct
- 217. Descends in front of the gonadal artery
- 218. Presents a constriction as it crosses the pelvic brim
- 219. Runs in front of vas deferens
- 220. Is lined by stratified squamous epithelium

The liver

- 221. Has a falciform ligament which develops from dorsal mesogastrium
- 222. Contains the ligamentum venosum which is the obliterated left umbilical vein

- 223. Presents a bare area which is related to the right suprarenal gland
- 224. Has Kupffer's cells in the portal canal
- 225. Is drained by hepatic veins that emerge from porta hepatis

Branches of the posterior cord of brachial plexus include

- 226. Dorsal scapular nerve
- 227. Musculocutaneous nerve
- 228. Axillary nerve
- 229. Thoracodorsal nerve
- 230. Subscapular nerves

About the cerebellum

- 231. Dentate nucleus is the largest intra-cerebellar nucleus
- 232. Anterior spinocerebellar tract enters the cerebellum through the inferior cerebellar peduncle
- 233. Flocculonodular lobe is concerned with equilibrium
- 234. Its tonsil belongs to paleocerebellum
- 235. Inferior medullary velum forms the floor of lateral dorsal recess of 4th ventricle

About the autonomic nervous system

- 236. Preganglionic sympathetic fibres arise from the lateral horn cells of spinal cord
- 237. Preganglionic parasympathetic fibres from inferior salivary nucleus relay in the otic ganglion
- 238. Postganglionic sympathetic fibres supply the medulla of suprarenal gland
- 239. Preganglionic sympathetic fibres to the cervical sympathetic ganglia arise from upper 2 or 3 thoracic segments of spinal cord
- 240. Pterygopalatine ganglion supplies the lacrimal gland

About the orbit and eyeball

- 241. Superior oblique muscle elevates eyeball
- 242. Ciliary processes of eyeball secrete aqueous humour
- 243. Interference with the drainage of aqueous humour leads to glaucoma
- 244. Medial rectus muscle is supplied by oculomotor nerve
- 245. Contraction of ciliary muscle results in the increased convexity of lens

Thyroid gland

- 246. Develops from the endodermal floor of primitive pharynx
- 247. Is covered by the pretracheal fascia
- 248. Has lateral lobes that lie in front of internal carotid arteries
- 249. Contains follicles lined by cuboidal epithelium
- 250. Is superficially covered by sternothyroid muscle

About the female reproductive system

- 251. Uterine tube is developed from the paramesonephric duct
- 252. Ovary is connected to the broad ligament by mesovarium
- 253. Anteversion is the angle between the body and cervix of uterus
- 254. Internal os is the opening of the uterine tube into the uterus
- 255. Uterus is lined by simple columnar epithelium

The prostate

- 256. Lies medial to levator ani muscle
- 257. Lies in front of the rectum
- 258. Has a base on which the apex of the bladder rests
- 259. Is traversed by urethra into which ejaculatory ducts open
- 260. Has a median lobe which is prone for benign hypertrophy

