Reg. No.										

MANIPAL UNIVERSITY

MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2012

SUBJECT: PATHOLOGY – I (ESSAY)

Saturday, February 11, 2012

Time: 09:00 – 11:00 Hrs. Max. Marks: 60

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

1. Describe **five** types of necrosis giving suitable clinical examples.

(5 marks)

2. Explain the role of neutrophils in acute inflammation.

(5 marks)

3. In a tabular format compare the aetiopathogenesis, blood and bone marrow changes of iron deficiency anaemia and vitamin B12 deficiency anaemia.

(2+3 = 5 marks)

4. Define neoplasia. Explain the metastatic cascade with a suitable diagram.

(1+4 = 5 marks)

5. Briefly discuss the role of *Helicobacter pylori* in the pathogenesis of gastritis and gastric tumours.

(2+3 = 5 marks)

6. Mention **four** important aetiologies of acute pancreatitis. Discuss the morphology of the disease.

(2+3 = 5 marks)

7. A 10 year old boy came to the OPD with history of fever and pain in the right leg. On examination of the right leg, it was tender and revealed discharging sinuses. He was treated with antibiotics.

   Give your diagnosis. Discuss the aetiopathogenesis and morphology of this bone pathology with a labelled diagram.

(½+2½+2 = 5 marks)

8. Classify tumours of the central nervous system. Describe the morphological features of any **two** tumours.

(2+3 = 5 marks)

9. Describe the macroscopic and microscopic features of myocardial infarction.

(3+2 = 5 marks)

10. A 13 year old boy came to the ER with shortness of breath, tachypnoea and he could barely talk. His father told the on-duty medical officer that his son developed such attacks whenever he went to play in the garden. His family doctor had prescribed an inhaler and had advised him to use it regularly.

What is the boy suffering from? Discuss the pathogenesis and morphology of the lung in this condition.

(½+2½+2 = 5 marks)

11. Classify diabetes according to aetiopathogenesis. Briefly mention the complications of diabetes mellitus.

(2+3 = 5 marks)

12. Compare **two** types of polycystic kidney disease with special reference to inheritance, morphological features and clinical course.

(1+2+2 = 5 marks)

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MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2012

SUBJECT: PATHOLOGY – II (MCQs)

Saturday, February 11, 2012

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.

Klinefelter's syndrome

101. Is an autosomal dominant disease
102. Results in male habitus in a female
103. Is characterised by 44 autosomes, two X chromosomes and one Y chromosome
104. Is associated with testicular atrophy and mental retardation

Endotoxins

105. Are lipopolysaccharides from the cell walls of Gram positive bacteria
106. Are secreted by Escherichia coli
107. Cause septic shock

Metaplasia

108. Is characterised by increased cell growth
109. Is an irreversible process
110. Predisposes to neoplasia

An epithelioid cell

111. Has abundant pink cytoplasm
112. Originates from an epithelial cell
113. Is more phagocytic than a macrophage

The type of inflammation is correctly matched with the pathology

114. Catarrhal: Proteolytic digestion of the vascular wall
115. Serous: Plenty of fibrinogen
116. Suppurative: Pus formation
117. Membraneous: Mucus hypersecretion

Stages in leukocyte emigration include

118. Margination into plasmatic zone
119. Adhesion to endothelial cells
120. Migration into adventitia

The consequences of haemolysis include

121. Raised serum conjugated bilirubin
122. Raised urine urobilinogen
123. Reticulocytosis
124. Splenomegaly

Sickle cell disease

125. Occurs due to decreased haemoglobin β chain synthesis
126. Is complicated by episodes of tissue infarction
127. Is characterised by increased aggregation and polymerization of HbS in high oxygen tension

Multiple myeloma is characterised by

128. Bone pain
129. Osteosclerotic lesions on X-ray
130. M-component composed of IgG immunoglobulins

Benign tumours include

131. Mesothelioma
132. Melanoma
133. Lipoma
134. Angioma

Tumour grade

135. Is assessed by mitotic activity
136. Indicates the extent of spread of tumour
137. Is inferred from histology

In cellular and molecular events of chemical carcinogenesis

138. Tumours have a stage of latency
139. Stage of initiation follows stage of promotion
140. Stage of persistence requires the presence of a promoter

Barrett's oesophagus

141. Results from long standing gastro-oesophageal reflux
142. Is associated with an increased risk of squamous cell carcinoma of the oesophagus
143. Is a premalignant condition

Causes of microcytic hypochromic anaemia include

144. β thalassaemia major
145. Acute blood loss
146. Folic acid deficiency

Features of ulcerative colitis include

147. Transmural inflammation
148. Diffuse involvement of the colon
149. A chronic relapsing course
150. Erythema marginatum

Acute cholecystitis

151. Is caused by gall stones
152. Histologically shows Aschoff-Rokitansky sinuses
153. Leads to fat necrosis

Chronic hepatitis

154. Is caused by Hepatitis A virus
155. Of higher grade and stage is more likely to progress to cirrhosis
156. Is characterised by bridging necrosis
157. Due to alcoholism is characterised by Mallory's hyalin

Wilson's disease

158. Is a disorder of iron metabolism
159. Results in hepatolenticular degeneration
160. Is confirmed by low serum caeruloplasmin levels

Regarding osteoporosis

201. There is a reduction in total bone mass
202. It is a complication of steroid therapy
203. It is characterised by inappropriate secretion of parathyroid hormone related peptide
204. There is inadequate mineralisation of organic bone matrix

Increased osteoclastic bone activity is seen in

205. Primary hyperparathyroidism
206. Paget's disease
207. Osteomalacia

Regarding clinicopathological features of gout, it

208. Typically affects weight bearing big joints
209. Is more common in females than in males
210. Is characterised by deposition of monosodium urate crystals in joints

Cerebral infarction

211. Is characterised by coagulative necrosis
212. Can be caused by cerebral hypoperfusion
213. Eventually heals, leaving behind a cystic cavity
214. Is common in the territory of the middle cerebral artery

In bacterial meningitis, the CSF findings are

215. Raised glucose content
216. Marked increase in polymorphs
217. Opalescent fluid with cob-web formation

Multiple sclerosis

218. Is characterised by the presence of neurofibrillary tangles in the brain
219. Primarily affects the central nervous system
220. Has a relapsing and remitting course

Rheumatic fever

221. Is an immune-mediated multisystem inflammatory disease
222. Is accompanied by raised ASO titres
223. Causes pancarditis

Patent ductus arteriosus is characterised by

224. Increased pulmonary arterial blood flow
225. Right to left shunt
226. Continuous machinery murmur

Aneurysms

227. Are localized, permanent abnormal dilatations of blood vessels
228. In the intracerebral capillaries are called Charcot Bouchard aneurysms
229. In the circle of Willis cause subarchanoid haemorrhage
230. Due to atherosclerosis most often affects the root of the aorta

Secondary tuberculosis of the lung

231. Typically shows midzone subpleural lesions
232. Is more extensive than primary tuberculosis
233. Can lead to miliary tuberculosis

Pulmonary venous congestion

234. Occurs in mitral incompetence
235. Leads to brown induration of lung
236. Results in pulmonary oedema

Chronic bronchitis

237. Is cough with sputum for 3 months in 2 consecutive years
238. Is caused by smoking
239. Predisposes to squamous cell carcinoma of lung
240. Causes mucous hypersecretion

Tumour markers in seminoma include

241. Carcino-embryonic antigen
242. Placenta like iso-enzyme of alkaline phosphatase
243. Human chorionic gonadotrophin

Regarding prognosis of carcinoma of breast

244. Duke's system is commonly used for staging
245. Presence of oestrogen receptors is associated with a good prognosis
246. Medullary carcinoma has a better prognosis compared to infiltrating duct carcinoma

Regarding Hydatidiform Mole

247. Complete mole shows hydropic change and trophoblastic hyperplasia of few villi
248. Complete mole shows absence of stromal blood vessels
249. A triploid zygote is seen in partial mole
250. Grape like clusters are seen in the uterus macroscopically

With regard to tumours of the urinary bladder

251. Most of the tumours are squamous cell carcinomas
252. Aetiological factors that predispose to transitional cell carcinoma are smoking and occupational exposure to dyes
253. Schistosomiasis is an aetiological factor in transitional cell carcinoma

Acute tubular necrosis

254. Is a cause of acute renal failure
255. Initially presents with polyuria
256. Shows necrotic glomeruli
257. Is fully reversible if adequately treated

The mediators of glomerular damage in glomerulonephritis include

258. Clotting factors
259. Reactive oxygen species (ROS)
260. Complement