

**MANIPAL UNIVERSITY****MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2011****SUBJECT: PATHOLOGY – I (ESSAY)**

Saturday, February 12, 2011

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. In a tabular format, compare apoptosis and necrosis.  
(5 marks)
  2. Describe the role of macrophages in chronic inflammation.  
(5 marks)
  3. A 30 year old pregnant woman presents with easy fatigability and tiredness. On examination she was found to have pallor.  
Mention two possible causes of anaemia in this woman. Discuss the lab investigations of both.  
(1+4 = 5 marks)
  4. List two examples of DNA and RNA oncogenic viruses and the tumours caused by them. What are the steps involved in DNA and RNA viral oncogenesis.  
(1+4 = 5 marks)
  5. A 58 year old male presented with weight loss, malaena and altered bowel habits. Colonoscopy revealed a large irregular mass in the ascending colon with multiple small polyps in the surrounding mucosa.
    - a) Describe the morphology of the large irregular colonic mass.
    - b) Explain the relationship between the polyps and the mass in this case.(2+3 = 5 marks)
  6. Describe the aetiopathogenesis and morphology of hepatocellular carcinoma.  
(3+2 = 5 marks)
  7. Describe the aetiopathogenesis of rheumatoid disease.  
(5 marks)

8. A 42 years old lady presented with on and off, severe, one sided headache, which became continuous. CT scan revealed a parasagittal circumscribed tumour with overlying hyperostosis of skull bone. The patient recovered after operation.

- a) What is your diagnosis and describe the pathological features of this condition?
- b) Classify tumours of the central nervous system.

(2½+2½ = 5 marks)

9. A 75 year old lady with calcific valve disease develops high grade fever with chills. A murmur is heard on auscultation. Echocardiography reveals mass lesion on the valves. Describe the pathogenesis and morphology of the lesions on the cardiac valves. What are the complications of the above condition?

(3+2 = 5 marks)

10. A 45 year old man presented with chronic cough and copious amount of bad smelling sputum. Clinical examination showed finger clubbing and coarse basal crepitations.

- a) What is your diagnosis?
- b) Describe the aetiology and complications of this condition.

(½+4½ = 5 marks)

11. Describe the risk factors and prognostic factors of carcinoma breast.

(2½+2½ = 5 marks)

12. In a tabular format compare adult and childhood polycystic kidney disease.

(5 marks)



Sept 09/11

Reg. No.

## MANIPAL UNIVERSITY

MBBS PHASE I STAGE II DEGREE EXAMINATION – AUGUST 2011

SUBJECT: PATHOLOGY – II (MCQs)

Saturday, August 13 2011

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.

**Fracture healing is delayed when the fractured bone ends are**

101. Infected
102. Mobile
103. Avascular
104. Badly aligned

**The syndrome and karyotype are correctly matched**

105. Down's : 47,XXY
106. Turner's : 45, XX
107. Klinefelter's : 46, XYY

**Granulation tissue**

108. Is composed predominantly of epithelioid cells
109. Is characteristic of healing by second intention
110. Contains newly formed blood vessels

**Special macroscopic appearances of acute inflammation include**

111. Membranous inflammation
112. Fibrosis
113. Granulomatous inflammation
114. Haemorrhagic inflammation

**Beneficial effects of acute inflammation include**

115. Concentration of toxins
116. Delivery of nutrients and oxygen
117. Allergic inflammatory response

**Causes of granulomatous disease include**

118. Ulcerative colitis
119. Parasitic infection
120. Fungal infection

**G6PD deficiency**

121. Is precipitated by anti-malarial drugs
122. Is an autosomal dominant disorder
123. Renders the red cell susceptible to oxidative damage
124. Is a cause of intrauterine death

**Autoimmune thrombocytopenic purpura is characterised by**

125. Deficiency of coagulation factor VIII
126. Increased megakaryocytes in the bone marrow
127. Prolonged bleeding time

**Regarding classical Hodgkin's lymphoma**

128. Reed-Sternberg cell is the characteristic cell
129. Lymph nodes are enlarged, firm, rubbery and discrete
130. It is staged by the Ann Arbor staging system

**Regarding hamartoma**

131. It is a tumour like lesion
132. It displays autonomous growth
133. Pigmented naevus is an example
134. An association with tuberous sclerosis is seen

**Carcinoid tumours**

135. Arise from neural crest
136. Most commonly arise in the appendix
137. Are characterized by elevated Vanillyl Mandelic Acid (VMA)

**In situ- carcinoma**

138. Shows all the cytologic features of malignancy
139. Invades through the basement membrane
140. Can be preceded by dysplasia

**Carcinoma stomach**

141. Arises in the background of chronic gastritis and intestinal metaplasia
142. Is commonly an adenocarcinoma
143. Metastasising to the colon is called Krukenberg tumour
144. Can show signet-ring cells on histologic examination

**Ulcerative colitis**

145. Affects the entire gastrointestinal tract
146. Shows pseudopolyps on gross examination
147. Is a pre-malignant condition

**Barrett's oesophagus**

148. Results from longstanding gastroesophageal reflux
149. Is characterized by squamous cell metaplasia of lower oesophagus
150. Is a pre-malignant condition

**Causes of intrahepatic jaundice include**

151. Acute viral hepatitis
152. Decompensated cirrhosis
153. Autoimmune haemolytic anaemia
154. Stone in the common bile duct

### Regarding hepatitis B

155. Transmission is by fecal-oral route
156. Liver damage is due to antiviral immune reaction
157. Carrier state exists

### Regarding liver cell carcinoma (hepatocellular carcinoma)

158. It is more common than metastatic carcinoma of liver
159. CA 125 is a tumor marker produced by the malignant cells
160. In cirrhotic livers, liver cell carcinoma is often multifocal

### Osteoporosis

201. Follows abnormal mineralisation of bone
202. Occurs frequently in post-menopausal women
203. Histologically shows mosaic pattern
204. Predisposes to osteosarcoma

### Systemic lupus erythematosus

205. Presents with flitting arthralgia
206. On investigation reveals raised serum levels of gamma globulin
207. Can be provoked by hydralazine

### Ewing's sarcoma

208. Histologically shows multinucleate giant cells
209. Is seen in adults over 40 years of age
210. Is a primitive neuroectodermal tumour (PNET)

### Origins of systemic arterial emboli include

211. Mitral valve vegetation
212. Deep vein thrombosis
213. Right ventricular mural thrombus
214. Atheromatous plaque with thrombus

### Regarding pathologic calcification

215. Atheromatous plaques are common sites for dystrophic calcification
216. Metastatic calcification occurs in otherwise normal tissue
217. Dystrophic calcification is associated with hypercalcaemia

### Multiple sclerosis

218. Is a demyelinating disorder
219. On histology shows neurofibrillary tangles and amyloid plaques
220. Has a relapsing and remitting course

### Regarding myocardial infarction

221. Subendocardial layers are at the highest risk of ischaemia
222. Haemorrhage within an atheromatous plaque is a common cause
223. Left anterior descending artery is called the 'artery of sudden death'
224. It is an example of fat necrosis

### Causes for aortic incompetence include

225. Rheumatic fever
226. Syphilis
227. Age related dilatation of aortic root

### Risk factors of infective endocarditis include

228. Diabetes mellitus
229. Poor dental hygiene
230. Rheumatoid arthritis

### Chronic bronchitis

231. Shows mucus hypersecretion and chronic inflammation
232. Is characterised by bronchial smooth muscle hypertrophy
233. Associated with rheumatoid arthritis is referred to as Caplan's syndrome
234. Is complicated by cor pulmonale

### Regarding primary carcinoma of lung

235. Ectopic ACTH production is associated with small cell carcinoma
236. Adenocarcinoma arises from peripheral areas of lung
237. Large cell undifferentiated type is highly aggressive

### Pulmonary thromboembolism

238. Follows prophylactic anticoagulation
239. Clinically may mimic myocardial infarction
240. Arises from deep veins of lower limbs

### Papillary carcinoma of thyroid

241. Spreads through the lymphatics
242. Shows amyloid deposition in the stroma
243. Arises from the thyroid follicular cells
244. Shows presence of psammoma bodies

### Tumour markers in testicular tumours include

245. Carcino-embryonic antigen
246. Alpha feto protein
247. Placental like iso-enzyme of alkaline phosphatase

**Favourable prognostic factors in carcinoma of breast include**

- 248. Presence of estrogen receptors
- 249. Histological type of carcinoma being infiltrating ductal carcinoma
- 250. Stage of the tumour being T<sub>2</sub>N<sub>2</sub>M<sub>1</sub> instead of T<sub>1</sub>N<sub>0</sub>M<sub>0</sub>

**Renal cell carcinoma**

- 251. Is also known as Wilms' tumour
- 252. Has a higher incidence among tobacco smokers
- 253. Is associated with paraneoplastic syndrome
- 254. Occurs most frequently in persons over the age of 50 years

**Regarding renal calculi**

- 255. It is seen mostly in fat, fertile, females around forty years of age
- 256. Uric acid stones are the most frequent type
- 257. Staghorn calculi are calcium oxalate stones

**The type of glomerulonephritis is matched correctly with the histological finding**

- 258. Rapidly progressive glomerulonephritis: Epithelial crescent
- 259. Membranoproliferative glomerulonephritis: Lobular accentuation of glomeruli
- 260. Minimal change disease: Swelling and hypercellularity of glomeruli

