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## MANIPAL UNIVERSITY

### MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2014

#### SUBJECT: PATHOLOGY – I (ESSAY)

Saturday, February 08, 2014

Time: 09:00 – 11:00 Hrs.

Max. Marks: 60

1. Explain the process of 3 reversible cell adaptations with an example for each. (5 marks)
  
2. Describe the role of chemical mediators in acute inflammation. (5 marks)
  
3. 40 year-old Mrs. Clara visits her physician with complaints of tiredness and weakness since one month. Of late, she also has difficulty in climbing the stairs with breathlessness and palpitations. On examination, she is pale with ulcers at the angles of the mouth. On further enquiring, she reveals that she has been having excessive bleeding during menstruation since 1 year, but has not consulted any gynaecologist.
  - 3A. What is the diagnosis?
  - 3B. Mention the investigations and their findings which would help in the diagnosis.
  - 3C. What are the bone marrow changes in this condition? (1+2+2 = 5 marks)
  
4. Describe the multistep theory of neoplasia with a suitable diagram. (5 marks)
  
5. Discuss the role of helicobacter pylori in the pathogenesis of gastric carcinoma. Add a note on the histological types of gastric carcinoma. (2½+2½ = 5 marks)
  
6. Explain the pathogenesis and morphology of alcoholic liver disease. (2+3 = 5 marks)
  
7. Describe the aetiopathogenesis and morphology of osteomyelitis. (3+2 = 5 marks)
  
8. A 7 year-old boy was admitted with fever and neck stiffness. His spinal tap revealed a turbid fluid with high neutrophil and protein content.
  - 8A. What is the diagnosis?
  - 8B. Describe the aetiopathogenesis and complications of his condition. (1+4 = 5 marks)

9. Describe the vascular changes in hypertension and diabetes mellitus.  
( $2\frac{1}{2}+2\frac{1}{2} = 5$  marks)
10. A 45 year-old businessman is admitted to the hospital with a bout of massive haemoptysis. He has smoked 5-7 packets of cigarettes daily for the last 15 years. He also gives history of chronic cough and significant weight loss in the past 3 months. His chest X-ray showed a mass in the lung near the hilar region.
- 10A. What are the additional investigations you would suggest for further evaluation?
- 10B. Describe the possible morphological features of the lung mass.  
( $2+3 = 5$  marks)
11. A 30 year old female presents with a pelvic adenexal mass diagnosed to be an ovarian tumour.
- 11A. Classify ovarian tumours.
- 11B. Describe the morphological features of a common possible tumour in this patient.  
( $2\frac{1}{2}+2\frac{1}{2} = 5$  marks)
12. Describe the aetiology, clinical features, morphology and grading of transitional cell carcinoma of urinary bladder.  
( $1+1+2+1 = 5$  marks)



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**MANIPAL UNIVERSITY****MBBS PHASE I STAGE II DEGREE EXAMINATION – FEBRUARY 2014****SUBJECT: PATHOLOGY – II (MCQs)**

Saturday, February 08, 2014

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	<b>1</b> mark is awarded
For every <b>Wrong</b> response	<b>0.5</b> mark is deducted
For every <b>Don't Know</b> response	<b>No</b> 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.

### Regarding gangrene

101. There is pallor of the affected tissue grossly
102. Gas gangrene is due to infection with clostridium perfringens
103. It is colliquative necrosis with infection
104. It can be a complication of diabetes mellitus

### The following terms are correctly matched with the meaning

105. Pathognomonic: pathological features characteristic of a disease
106. Eponym: the evolution and progression of a disease
107. Remission: period of good health prior to reappearance of disease

### Barr body is

108. Seen attached to the cytoplasmic membrane
109. Absent in Turner's syndrome
110. Also known as sex chromatin

### Causes of immediate and sustained increase in vascular permeability include

111. Bradykinin
112. Trauma
113. X-rays
114. Bacterial toxins

### Macrophages

115. Move by amoeboid movement
116. Have a limited life-span of about 3 days
117. Participate in delayed type hypersensitivity reaction

### Conditions favouring resolution include

118. Presence of excessive exudate
119. Persistence of the causal agent
120. Good regenerative capacity of the involved organ

### Regarding chronic myeloid leukaemia

121. The karyotypic abnormality seen is t(9;21)
122. Massive splenomegaly is a feature
123. Peripheral blood smear will show basophilia
124. Leukocyte alkaline phosphatase is increased in neoplastic leukocytes

### The following are features of vitamin B<sub>12</sub> deficiency

125. Giant metamyelocyte / bands in the bone marrow
126. Koilonychia

### 127. Oesophageal web formation

### Regarding autoimmune thrombocytopenic purpura

128. The acute childhood variety follows a viral infection
129. Iron deficiency anaemia may be a feature
130. Megakaryocytes are reduced in the bone marrow

### Regarding oncogenic viruses

131. Tumours associated with viruses are more common in youth
132. Immunosuppression favours viral oncogenesis
133. Oncogenic RNA viral genome is directly incorporated into host cell DNA
134. Epstein-Barr virus is implicated in Burkitt's lymphoma

### With reference to the stroma of tumours

135. A fibrous stroma is also called a desmoplastic reaction
136. Tumour angiogenesis is induced by angiostatin and endostatin
137. A dense stromal lymphocytic infiltrate is associated with a poor prognosis

### Regarding tumour suppressor genes

138. Germline mutation of p53 gene can lead to Li-Fraumeni syndrome
139. Mutation of BRCA1 gene is associated with cancers of breast and ovary
140. Mutation in APC gene can lead to familial adenomatous polyposis

### Barrett's oesophagus is

141. Due to long term consequence of reflux
142. Characterised by metaplasia from columnar to squamous epithelium
143. Associated with increased risk of squamous cell carcinoma

### Crohn's disease is

144. A chronic inflammatory disorder of unknown aetiology
145. Usually characterised by caseating granulomas
146. Usually associated with fistulation

### Regarding adenomatous polyps of the large intestine

147. Tubular adenomas are usually sessile

### **Atopic asthma is**

- 238. Associated with exposure to allergens like pollen
- 239. A type II hypersensitivity reaction
- 240. Associated with eosinophilia in peripheral blood

### **Regarding carcinoma of prostate**

- 241. It can result in osteolytic bony metastasis
- 242. It is commonly seen in the lateral lobes of the prostate
- 243. Per rectal examination shows obliteration of the median lobe

### **Regarding prognosis of cervical carcinoma**

- 244. Involvement of para-aortic nodes is associated with a poor prognosis
- 245. A well differentiated squamous cell carcinoma has a poor prognosis
- 246. The size and depth of invasion of primary tumour is an important determining factor

### **Favorable prognostic factors in carcinoma breast include**

- 247. Presence of oestrogen receptors
- 248. Staging of carcinoma being T<sub>3</sub> N<sub>2</sub> M<sub>1</sub> instead of the T<sub>1</sub> N<sub>0</sub> M<sub>0</sub>
- 249. Infiltrating ductal carcinoma being the histological type
- 250. HER-2 positivity

### **Histological features of membranous glomerulopathy include**

- 251. Capillary wall thickening
- 252. Mesangial proliferation
- 253. Crescent formation

### **Regarding hydronephrosis**

- 254. It is due to prolonged back pressure
- 255. Grossly, the kidney is shrunken
- 256. Benign prostatic hyperplasia can cause bilateral hydronephrosis

### **Regarding autosomal dominant polycystic kidney disease**

- 257. Most cases are due to gene mutations in chromosome 6
- 258. The condition is always bilateral
- 259. The cysts are dilated collecting ducts
- 260. It is associated with pancreatic duct proliferation

