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MANIPAL UNIVERSITY

MBBS PHASE I STAGE II DEGREE EXAMINATION – MARCH 2016

SUBJECT: PATHOLOGY – I (ESSAY)

Wednesday, March 09, 2016

Time: 09:00 – 11:00 Hrs.

Max. Marks: 60

1. Describe wound healing by second intention with the help of a diagram. Mention the systemic factors influencing wound healing.
(4+1 = 5 marks)

2. Explain briefly the cellular events in acute inflammation.
(5 marks)

3. Describe the clinical features, blood and bone marrow findings in chronic myeloid leukaemia. What is the chromosomal abnormality seen.
(1¹/₂+3+1¹/₂ = 5 marks)

4. In a tabular form list the differences between benign and malignant tumours with suitable examples.
(5 marks)

5. Describe the role of Helicobacter pylori in the causation of gastritis and gastric neoplasms.
(5 marks)

6. A 50 year old chronic alcoholic was admitted in the hospital in a state of coma. He also had features of liver cell failure.
- 6A. In a tabular form, list the clinical features of liver cell failure and the pathophysiological basis of each.
- 6B. What is the morphology of the liver in alcoholic cirrhosis?
(3+2 = 5 marks)

7. A 45 year old man presented with a rapidly growing nodular exophytic tumour with black discolouration over the right foot, along with enlarged inguinal lymph nodes. What is your diagnosis? Describe the clinicopathological features and prognostic factors of this lesion.
(½+4½ = 5 marks)

8. A 4 years old boy suddenly fell down while playing in the evening, after 2 bouts of projectile vomiting. Clinical examination showed fever, neck rigidity and altered sensorium. The child was rushed to the hospital.
- 8A. What is the immediate laboratory / clinical investigation required in this patient?
- 8B. What is the aetiology of this disease?
- 8C. What laboratory findings would help in making the diagnosis?

(1+1+3 = 5 marks)

9. Mr. Sam a 50 year old gentleman complains of chest pain on walking and climbing steps, which he says is relieved on taking rest. An angiogram reveals partial occlusion of the left and right coronary artery. Describe the aetiopathogenesis and the morphology of this lesion seen in Mr. Sam's coronary arteries.

(3+2 = 5 marks)

10. Mention the major histologic types and etiology of primary lung carcinoma. Describe the morphology of one common type of lung carcinoma.

(3+2 = 5 marks)

11. Describe the role of human papilloma virus in cervical cancer. Explain cervical intraepithelial neoplasia with the help of a suitable diagram.

(2+3 = 5 marks)

12. Compare and contrast the aetiopathogenesis and microscopic features of two causes of nephrotic syndrome.

(5 marks)



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MANIPAL UNIVERSITY
MBBS PHASE I STAGE II DEGREE EXAMINATION – MARCH 2016
SUBJECT: PATHOLOGY – I (MCQs)

Wednesday, March 09, 2016

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.

Features of Turner's syndrome include

- 101. Male gender with female habitus
- 102. Webbed neck
- 103. Mental retardation
- 104. Broad chest

Metaplasia is

- 105. Reversible
- 106. Seen in both epithelial and mesenchymal cells
- 107. Characterized by presence of cellular atypia

With reference to terms used in pathology

- 108. Prognosis refers to the fate of the patient
- 109. Relapse is the reappearance of signs and symptoms
- 110. Eponymous refers to a disease named after a person or place associated with it

A granuloma is composed of

- 111. Epithelioid cells
- 112. Proliferating capillaries
- 113. Histiocytic giant cells

Cytokines cause

- 114. Recruitment of macrophages
- 115. Destruction of target cells
- 116. Interferon production

Tissue macrophages in

- 117. The liver are Kupffer cells
- 118. Adipose tissue are melanophages
- 119. The brain are microglial cells
- 120. Bone are osteoblasts

The following findings are correctly matched with the haematological condition

- 121. Heinz bodies: G6PD deficiency
- 122. Schistocyte: Disseminated intravascular coagulation
- 123. Purpura: Haemophilia
- 124. Spherocytes: Iron deficiency anaemia

Pernicious anaemia is

- 125. Due to folic acid deficiency
- 126. Detected by Schilling's test
- 127. An autoimmune disorder

Regarding autoimmune thrombocytopenic purpura

- 128. Platelets are destroyed in the spleen

- 129. Iron deficiency anaemia may be present
- 130. It may follow viral infection

p53 tumour suppressor gene

- 131. Arrests cell cycle in G1 phase
- 132. Promotes apoptosis if there is extensive DNA damage
- 133. Is a caretaker gene

Premalignant lesions / conditions include

- 134. Hepatic cirrhosis
- 135. Cervical intraepithelial neoplasia
- 136. Hyperplastic polyps of the colon

The following chemicals match the tumours they cause

- 137. Nitrosamines: Skin cancer
- 138. Arsenic: Gastrointestinal cancer
- 139. Benzpyrene: Bladder cancer
- 140. Aflatoxin: Hepatoma

Regarding oesophageal carcinoma

- 141. Adenocarcinomas usually arise from a Barrett's oesophagus
- 142. Squamous cell carcinoma is associated with a good prognosis
- 143. Dysphagia is a late manifestation of the disease

In comparison with ulcerative colitis, Crohn's disease shows

- 144. Transmural inflammation
- 145. Skip lesions
- 146. Non-caseating granulomas

Regarding colorectal carcinoma

- 147. Dietary risk factors include high protein, high fat and low fibre diet
- 148. Carcinoma of ascending colon are commonly of the stenosing type
- 149. Adenomatous polyps are precursor lesions
- 150. Duke's stage C has a 70% five year survival rate

The following diseases and the serological markers are correctly matched

- 151. Primary biliary cirrhosis: Anti-smooth muscle antibody
- 152. Hemochromatosis: Ferritin
- 153. Hepatocellular carcinoma: Alpha-feto protein

Complications of gall stones include

- 154. Pancreatitis
- 155. Mucocele
- 156. Carcinoma of gall bladder

Regarding hepatitis A

- 157. Transmission is by faecal-oral route
- 158. It is a single-stranded DNA virus
- 159. It has no carrier state
- 160. Incubation period is relatively short

Squamous cell carcinoma of skin

- 201. Shows malignant cells with keratin pearls if well differentiated microscopically
- 202. Is more common in the younger age group
- 203. Never metastasizes

Duchenne muscular dystrophy

- 204. Shows autosomal dominant inheritance
- 205. Is due to deficiency of dystrophin in muscle cell membrane
- 206. Affects females more than males

Ewing's sarcoma

- 207. Arises from primitive neuroectodermal elements
- 208. Shows sunburst appearance on x ray
- 209. Shows malignant osteoblasts and osteoid
- 210. Is a cause of pathological fracture

Regarding the fate of a thrombus

- 211. Recanalisation results from capillary proliferation and fusion in the thrombus
- 212. Resolution involves dissolving of the clot by fibrinolysis
- 213. Embolism is narrowing of the vessel due to formation of scar tissue

Regarding amniotic fluid embolism

- 214. It is seen in the foetus subsequent to delivery
- 215. Patient develops features of pulmonary embolism
- 216. The pulmonary artery on microscopy shows cholesterol clefts in the lumen of the vessel

Regarding CNS tumors

- 217. Meningioma is a well circumscribed tumour of the meninges
- 218. Astrocytoma is a common cerebellar tumour in adults

- 219. Glioblastoma multiforme is a less aggressive form of glioma
- 220. They metastasize early to other organs

The cardiovascular changes due to benign hypertension include

- 221. Left ventricular hypertrophy
- 222. Capillary microangiopathy
- 223. Fibrinoid necrosis of small arteries and arterioles

Regarding infective endocarditis

- 224. The causative organisms originate from the normal flora of the body surfaces
- 225. It is characterized by the presence of Aschoff bodies in the valve leaflets
- 226. It can cause splenic infarction as a complication
- 227. Echocardiography does not play a role in the diagnosis

Regarding cardiac failure

- 228. Systemic hypertension is one of the common causes
- 229. Pulmonary oedema is more pronounced in right heart failure
- 230. Cardiac failure secondary to pulmonary disease is called cor pulmonale

Regarding pneumoconiosis

- 231. Silicosis predisposes to reactivation of tuberculosis
- 232. Asbestosis is generally associated with a high incidence of pleural and peritoneal mesothelioma
- 233. Anthracosis is the presence of coal dust pigment in lung

Regarding emphysema

- 234. The centrilobular type involves all airspaces distal to the terminal bronchioles
- 235. The panlobular type is associated with α 1-antitrypsin deficiency
- 236. Clinically patients are called "blue bloaters"

Lobar pneumonia

- 237. Reveals patchy consolidation of lungs
- 238. In the stage of grey hepatization shows exudation of red cells
- 239. If untreated, leads to amyloidosis
- 240. Is most frequently caused by mycoplasma pneumoniae

Regarding ovarian tumours

- 241. Risk is increased with BRCA1 mutation
- 242. CA125 is a tumour marker
- 243. Borderline epithelial tumours show features of invasion
- 244. Tumour grade and stage is important in prognosis

Regarding prognostic factors of breast carcinoma

- 245. Mucinous and tubular carcinomas behave less aggressively
- 246. Presence of estrogen receptors indicates better survival
- 247. Amplification of c-erbB-2/HER-2 is associated with good prognosis

Phaeochromocytoma is

- 248. Derived from adrenal medullary chromaffin cells
- 249. Most often malignant
- 250. A curable cause of secondary hypertension

Regarding autosomal dominant polycystic kidney disease

- 251. It is associated with polycystin gene mutation
- 252. The condition is unilateral
- 253. The cysts are formed at all the levels of the nephron

Histological features of diabetic glomerulopathy include

- 254. Capillary wall thickening
- 255. Kimmelsteil- Wilson lesion
- 256. Arteriolar hyalinosis
- 257. Diffuse glomerulosclerosis

Wilm's tumor

- 258. Is usually seen in the elderly
- 259. Shows large areas of necrosis and haemorrhage on gross appearance
- 260. Usually arises at the upper pole of the kidney

