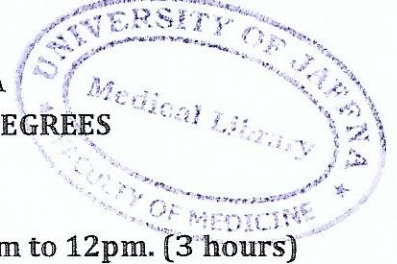




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SECOND EXAMINATION FOR MEDICAL DEGREES  
Part II (2<sup>nd</sup>) 2015/2016 (39<sup>th</sup> batch)  
Pathology-Paper II



Date: 15.12.2021

9 am to 12pm. (3 hours)

Index number: .....

.....  
ANSWER ALL THE 10 QUESTIONS

Write the answers in the given space below each question.

1. A 55- year- old diabetic female admitted with fever and right loin pain. She was diagnosed as having right side pyelonephritis.

- 1.1. List 5 investigations you will do in this patient. (15 Marks)

1.....  
2.....  
3.....  
4.....  
5.....

- 1.2. List 5 possible risk factors to develop above condition. (15 Marks)

1.....  
2.....  
3.....  
4.....  
5.....

- 1.3. State the most likely microorganism causing this condition. (10 Marks)

.....

- 1.4. List 3 clinical features to differentiate this condition from lower urinary tract infection (Cystitis). (15 Marks)

1.....  
2.....  
3.....

- 1.5. List 3 complications of acute pyelonephritis. (15 Marks)

1.....  
2.....  
3.....

- 1.6. Briefly describe the macroscopic and microscopic changes of acute pyelonephritis.

(30 marks)

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2. Answer all the following questions

- 2.1. A 45- year- old obese woman presented to the surgical clinic with retro-sternal pain for 2 months. Upper gastro intestinal (GI) endoscopy revealed abnormal red mucosa at the distal oesophagus and surgeon has told that it is a premalignant condition. (25 Marks)

1. The most likely diagnosis (05 marks):

.....

2. One risk factor (05 marks):

.....

3. One complication (05 marks):

.....

4. The pathological changes (macroscopic and microscopic) (10 marks):

.....

.....

.....

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.....

- 2.2. A 65 –year- old farmer admitted to surgical ward with progressive dysphagia with loss of weight. His upper GI endoscopy revealed growth at mid oesophagus (30cm from incisor teeth). (25 Marks)

1. The most likely diagnosis (05 marks):

.....

2. One risk factor (05 marks):

.....

3. One complication (05 marks):

.....

4. The pathological changes (macroscopic and microscopic) (10 marks):

.....

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- 2.3. A 55 -year -old banker presented with epigastric pain for 3 months and melaena (25 Marks) for 2 days. His upper GI endoscopy revealed an ulcer at first part of the duodenum.

1. The most likely diagnosis (05 marks):

.....

2. One aetiology (05 marks): .....

.....

3. One complication (05 marks):

.....

4. The pathological changes (macroscopic and microscopic) (10 marks):

.....

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- 2.4. A 65 -year- old retired teacher admitted with loss of weight, loss of appetite and (25 Marks) epigastric discomfort for 2 months. Upper GI endoscopy revealed a 4 cm growth at lesser curvature of stomach.

1. The most likely diagnosis (05 marks):

.....

2. One aetiology (05 marks): .....

.....

3. One complication (05 marks):

.....

4. The pathological changes (macroscopic and microscopic) (10 marks):

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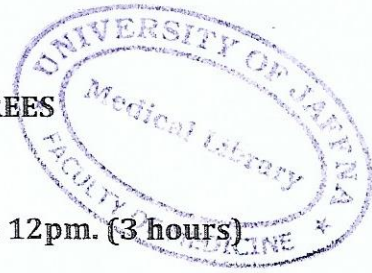
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3. A 37-year-old woman presented with acute onset of a productive cough, fever, chills, and pleuritic chest pain. A chest x-ray revealed consolidation of the entire lower lobe of her right lung.

3.1. Mention the most likely diagnosis.

(05 marks)

.....

- 3.2. List four (04) laboratory investigations you will perform in this patient and indicate the expected findings. (20 Marks)

Investigations	Expected findings
1.....	.....
2.....	.....
3.....	.....
4.....	.....

- 3.3. List five (05) predisposing factors for the occurrence of the condition mentioned in 3.1. (20 Marks)

1.....  
2.....  
3.....  
4.....  
5.....

- 3.4. Mention the gross appearance of the lung of this patient. (30 Marks)

(30 Marks)

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3.5. Mention five (05) complications of the condition mentioned in 3.1.

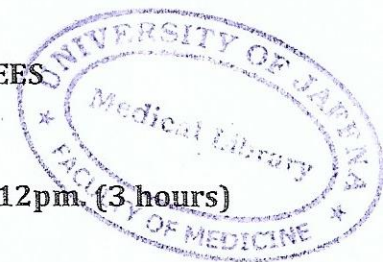
(25 Marks)

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....





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4. A 28-year- old female presented with a solitary thyroid nodule. Investigations revealed thyroid cancer. She has undergone a total thyroidectomy.

4.1. Mention the most possible type of thyroid cancer in this patient. (05 Marks)

.....

4.2. List different types of thyroid cancer and mention their cell of origin. (25 Marks)

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.....  
.....  
.....  
.....  
.....

4.3. List five risk factors for thyroid cancer. (15 Marks)

1.....  
2.....  
3.....  
4.....  
5.....

4.4. Outline the standard mode and sites of metastasis of each thyroid cancer. (25 Marks)

.....  
.....  
.....  
.....

4.5. Mention the investigations that helped to arrive at a diagnosis in this patient. (10Marks)

.....  
.....



4.6. Briefly explain the classification system to describe the thyroid cellular analysis? (10Marks)

.....

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.....

4.7. Give two tumour markers that will help to assess thyroid cancer? (10Marks)

1.....

2.....







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5. A 53-year-old man with the past history of abdominal surgery 10 years back, presented to the accident and emergency unit with a history of sudden onset of central abdominal pain and abdominal distension of three (3) days duration. He also complained of bilious vomiting and did not open bowel for last 2 days. On examination, he was found to have dehydration with heart rate of 108 beats / min. and blood pressure of 80/50 mmHg; grossly distended abdomen with tenderness mostly in the central abdomen; absence of bowel sounds and empty rectum on digital rectal examination. 'X' - ray abdomen showed features of small bowel obstruction. As he had clinical features of strangulation of bowel it was decided to do emergency laparotomy.

5.1. Mention the most possible cause for intestinal obstruction in this patient? (10 Marks)

.....

5.2. List four (04) causes for intestinal obstruction in adults other than mentioned in 5.1. (20 Marks)

1.....

2.....

3.....

4.....

5.3. Mention the sequence of events occurs in intestinal obstruction, which leads to the above clinical presentation. (40 Marks)

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5.4. Define gangrene. (10 Marks)

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5.5. During the follow up he was found to have short bowel syndrome. (10 marks)  
Define short bowel syndrome?

.....

.....

5.6. Mention the features of short bowel syndrome. (10 marks)

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6. A 25-year-old man was hit by a truck when he was riding a motor-cycle and he died after 12 hours. The following were found at the autopsy: multiple rib fractures and lacerations of the lungs and heart, and a 1.2-cm clot was found within a branch of the left pulmonary artery.

6.1. Mention the features that differentiate the clot as an ante-mortem (20 Marks) thrombus or postmortem clot.

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6.2. Define thrombosis. (10 Marks)

.....  
.....  
.....

6.3. Mention the fate of a thrombus. (20 Marks)

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.....  
.....

6.4. Mention the three (03) key factors and three (03) predisposing conditions (30 Marks) for each key factors involved in the process of thrombosis.

<u>Key factors</u>	<u>Predisposing conditions for key factors</u>
1.....	1.....
.....	2.....
.....	3.....
2.....	1.....
.....	2.....

.....	3.....
3.....	1.....
.....	2.....
.....	3.....

6.5. Mention two (02) factors which affect the healing of fracture. (10 Marks)

.....  
 .....

6.6. Mention two (02) complications of fracture. (05 Marks)

.....  
 .....

6.7. Mention the type of healing which may occur following a laceration. (05Marks)

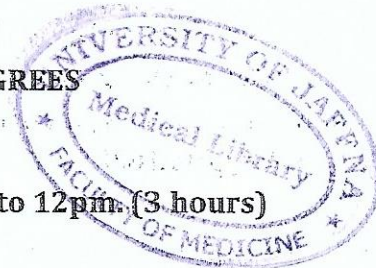
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7. A 45 - year-old man presented to the hospital with altered level of consciousness. His wife informed that he was a chronic alcoholic and recently had loss of appetite, weight loss, nausea, occasional vomiting and getting tired easily. On examination he was found to have lowered level of consciousness, jaundice and distended abdomen.

- 7.1. List three (03) possible differential diagnosis. (15 Marks)

1.....  
2.....  
3.....

- 7.2. List five (05) blood tests to be done in this patient and indicate the changes.. (30 Marks)

1.....  
2.....  
3.....  
4.....  
5.....

- 7.3. List two (02) possible radiological investigations that can help in the diagnosis. (10 Marks)

1.....  
2.....

- 7.4. Briefly explain the macroscopic and microscopic features of the liver that is expected in this patient. (45 Marks)

**Macroscopic features:**

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**Microscopic features:**

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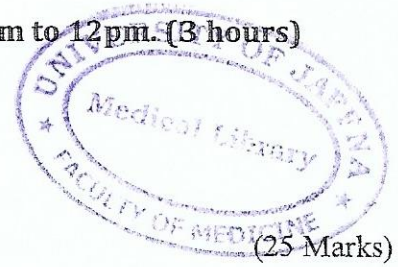


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9 am to 12 pm. (3 hours)



8. Answer all the following questions

8.1. **Fibrocystic change of the breast.**

(25 Marks)

1. Two (02) clinical features (05 marks):

.....  
.....

2. Two (02) gross and two (02) microscopic features (16 marks):

.....  
.....  
.....  
.....  
.....

3. Two (02) diagnostic methods (04 marks):

.....  
.....

8.2. **Invasive Ductal carcinoma of breast.**

(25 Marks)

1. Two (02) clinical features (05 marks):

.....  
.....

2. Two (02) gross and two (02) microscopic features (16 marks):

.....  
.....  
.....  
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.....  
.....

3. Two (02) diagnostic methods (04 marks):

.....  
.....

8.3. **Leiomyoma of the uterus.**

(25 Marks)

1. Two (02) clinical features (05 marks):

.....  
.....

2. Two (02) gross and two (02) microscopic features (16 marks):

.....  
.....  
.....  
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.....  
.....

3. Two (02) diagnostic methods (04 marks):

.....  
.....

8.4. **Acute rheumatic fever**

(25 Marks)

1. Two (02) clinical features (05 marks):

.....  
.....

2. Two (02) gross and two (02) microscopic features (16 marks):

.....  
.....  
.....  
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.....  
.....

3. Two (02) diagnostic methods (04 marks):

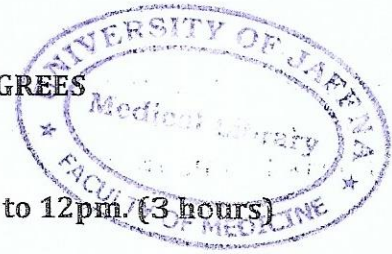
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9. An adult male was suspected to have Vitamin B 12 deficiency anaemia.

9.1. State two (02) questions you would ask from this patient to support the diagnosis of vitamin B 12 deficiency and indicate the reasons to ask those questions. (15 Marks)

1.....

.....

2.....

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9.2. State the findings of the following tests which favour the diagnosis of vitamin B 12 deficiency. (20 Marks)

1. Full Blood Count.

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2. Blood picture

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9.3. Outline the pathological basis of anaemia in Vitamin B 12 deficiency. (30Marks)

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9.4. Compare and contrast the Vitamin B12 deficiency with folate deficiency. (20 Marks)

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9.5. Describe Vitamin B 12 absorption.

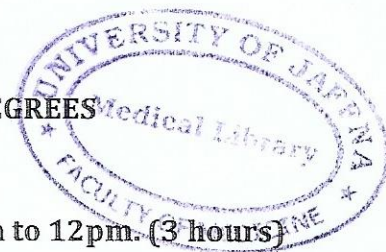
(15Marks)

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10. Haemolytic anaemia is a heterogenous group of disorders.

10.1. Outline the classification of haemolytic anaemia with examples. (20 Marks)

.....  
.....  
.....

10.2. Describe the pathological basis of haemolysis in one type of haemolytic anaemia . (15 Marks)

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.....  
.....  
.....  
.....

10.3. Briefly explain the pathological basis of jaundice in haemolytic anaemia (20 Marks)

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.....  
.....  
.....

10.4. Briefly explain the pathological basis of organomegaly in haemolytic anaemia. (15Marks)

.....  
.....  
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.....

- 10.5. State three (03) key laboratory tests and expected findings in haemolytic anaemia. (15Marks)

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- 10.6. Outline how you will confirm the diagnosis of one type of haemolytic anemia. (15Marks)

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