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A. Mention **five (5)** possible risk factors for type 2 diabetes mellitus. 15 marks

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B. Discuss in brief how to differentiate type 1 diabetes from type 2 diabetes mellitus. 30 marks

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C. Mention **three (3)** diagnostic tests with their cutoff values that can be used to diagnose diabetes mellitus. 15 marks

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A 48-year old man visits the out patient department (OPD) with a suspicion of having diabetes. His BMI is 28 kg/m<sup>2</sup> and his blood pressure is 120/72 mmHg. Fasting blood glucose -167 mg /dL , total cholesterol -172 mg/dL, urine micro albumin-negative

D. Briefly describe the glycaemic management of this patient. 25 marks

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E. Discuss briefly the place of following therapies in the management of this patient. 15 marks

a. Aspirin.....  
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b. Statin.....  
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c. Angiotensin converting enzyme –inhibitor  
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A 65-year old man is admitted complaining of one-month history of cough, shortness of breath and weight loss. He has been a smoker for 20 years.

A. List **three (3)** likely diagnoses. 15 marks

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B. List **five (5)** features in the general examination, stating their importance in supporting the diagnoses mentioned above. 20 marks

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C. List **three (3)** findings of respiratory system examination that support the above diagnoses stating their relevance. 30 marks

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D. List **five (5)** investigations that you would perform with their expected findings. 25 marks

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E. Briefly state the treatment of **one (1)** of the above illnesses. 10 marks

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A 68-year old man seen in the medical clinic gives a history of recurrent palpitations for the last two months. Examination shows irregularly irregular pulse of 124 beats per min.

A. What is the most likely reason for the abnormal pulse? 10 marks

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B. List **three (3)** features you would elicit in the history and indicate how they would help to find out the cause of his abnormal pulse. 20marks

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C. List **four (4)** physical signs you would look for to find out the cause of his abnormal pulse. 20 marks

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D. List **three (3)** abnormalities you would expect to see in his ECG. 20 marks

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E. List **three (3)** different classes of drugs that are used to treat the condition mentioned in A and name one drug from each class. 30 marks

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A 48-year old woman presents with involuntary movements of the hands for three months. She complains of fatigue, loss of appetite and recent change in her speech. On examination she is icteric and has dysarthria and chorioathetoid movements involving upper limbs. Abdominal examination reveals a splenomegaly.

Haemoglobin – 10.2 g/dL (11.5-15.5)  
Platelets – 132,000/uL (150,000-450,000)  
WBC – 4100/ uL (3500-7500)  
ALT – 56 u/L (<40)  
AST – 65 u/L (<42)  
Serum bilirubin – 3 mg/dL (0.1 - 1.2) , direct bilirubin – 1.5 mg/dL

A. List **five (5)** problems seen in this patient. 25 marks

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B. What is the complete diagnosis? 20 marks

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C. Mention **two (2)** other features in her history or physical examination that are useful in arriving at the diagnosis mentioned in B. 15 marks

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D. List **five (5)** other investigations you would perform in this patient, stating the reasons for your choice and their expected results. 40 marks

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A 58-year old farmer is admitted to medical casualty with breathlessness, vomiting, and loose stools. There is no history of fever, headache or chest pain. The family members have noticed an empty bottle of agrochemical in his room. On examination there is profuse sweating, with a pulse rate of 56/min, and blood pressure of 100/60 mmHg. Auscultation reveals bilateral rhonchi and crepitations in all three zones bilaterally.

A. What is the most likely diagnosis? 15 marks

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B. List **four (4)** further features in the history or examination that would help to arrive at the diagnosis mentioned in A. 20 marks

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C. Outline the steps in the acute management of this patient.

40 marks

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D. His condition improves gradually with treatment; however, on the fourth day of hospital admission, he complains of difficulty in breathing and weakness of both shoulders. There is no fever or cough. On auscultation of lung he has vesicular breathing with no added sounds.

a. What is the most likely explanation for his deterioration now? 10 marks

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b. Briefly outline the management of the condition mentioned in (D-a) ?

15 marks

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A 27-year old woman presents with painful swelling of small joints of hands for eight weeks duration.

A. List **three (3)** possible causes for above presentation. 15 marks

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B. Mention **two (2)** features in the history or examination that would support each of the conditions listed in (A) with the expected findings. 30 marks

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C. List **five (5)** investigations that you would perform in this patient giving the expected results.

25 marks

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D. Outline the steps in the management of one of the conditions mentioned in (A).  
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A 20-year old woman presents to hospital with fatigue and weakness. Physical examination reveals pallor, jaundice and moderate splenomegaly.

Investigations shows

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|---|-------------------|
| Haemoglobin 8 g/dL                      | (11.5-16.5),      |
| White blood cells 7,000/mm <sup>3</sup> | (3500-7500)       |
| Platelets 200,000/mm <sup>3</sup>       | (150,000-450,000) |

A. What is the most likely hematological disorder that you would suspect in this patient? 10 marks

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B. List **two (2)** investigations that confirm your clinical suspicion mentioned in (A). 15 marks

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C. List **three (3)** possible causes for the condition mentioned in (A). 15 marks

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D. List **one (1)** supportive clinical finding (from the history or examination) for each of the causes mentioned in (C). 20 marks

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E. List **four (4)** investigations to confirm the three causes listed in ( C ) giving the expected results for each.

40 marks

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A 72-year old man with hypertension and diabetes mellitus presents with sudden onset right-sided weakness and deviation of mouth for two-hour duration. On examination, he is conscious, GCS-15/15, pulse rate 102bpm, and blood pressure 195/115mmHg. He has dense right hemiplegia with motor power of 0/5 in upper limbs and 2/5 in lower limbs with diminished right-sided reflexes and an equivocal right plantar response.

A. List **four (4)** other important neurological signs you should elicit in this patient.

20 marks

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B. Non-contrast CT brain done immediately after admission is normal. What is the most likely diagnosis? 10 marks

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C. List five (5) investigations that are needed for the management of this patient over next 24 hours. 20 marks

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D. Discuss the management of this patient during the first 24 hours. 50 marks

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