

Syllabus	
Topic	Parkinson's Disease (PD)

A 68 year old man attends pre-operative clinic. He is listed for a laparoscopic sigmoid colectomy for cancer. He has Parkinson's disease (PD).

a)
 What are the three motor symptoms that make up the classic triad of parkinsonism?
 (3 marks)

- 1)
- 2)
- 3)

b)
 What is the pathophysiology of Parkinson's disease? (2 marks)

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c)
 He is taking selegiline, levodopa, entacapone and pramipexole. Complete the table by identifying which of his drugs belong to which category. (2 marks)

Drug category	Drug name
1. Dopamine agonist	
2. Dopamine precursor	
3. Monoamine oxidase B inhibitor (MAOBIs)	
4. Catechol-O-methyl transferase inhibitor (COMTIs)	

d)

List 2 reasons why ECG monitoring may be difficult in a patient with Parkinson's Disease? (2 marks)

1.
2.

e)

The patient will be nil by mouth (NBM) for a period of time following surgery. His current drug regime can only be given enterally. Which other two anti-parkinsonian drugs can be administered via another route? For each drug, specify the route and give ONE disadvantage of each drug. (6 marks)

Drug 1:

Route:

Disadvantage:

Drug 2:

Route:

Disadvantage:

f)

List 3 antiemetics that are contraindicated in Parkinson's disease. (3 marks)

1.
2.
3.

g)

The patient develops postoperative delirium. List 2 pharmacological agents that could be used for troubling symptoms of psychosis in Parkinson's Disease. (2 marks)

1.
2.

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Q	Answer	Mark	Guidance
a)	1. Bradykinesia 2. Asymmetric resting tremor 3. Muscle rigidity	3	
b)	<ul style="list-style-type: none"> Loss of dopaminergic neurons From region of substantia nigra 	1 1	
c)	1. Pramipexole 2. Levodopa 3. Selegiline 4. Entacapone	2	No half marks so 1 mark for 2 correct answers
d)	1. Tremor – significant artefact and mimic AF/VF 2. Excessive sweating due to autonomic dysfunction – poor ECG electrode contact	1 1	1 mark for each (have to include symptom AND consequence with respect to ECG monitoring only)
e)	<u>Drug 1: Apomorphine</u> <ul style="list-style-type: none"> Route: subcutaneous infusion Disadvantage: profound hypotension, highly emetogenic <u>Drug 2: Rotigotine</u> <ul style="list-style-type: none"> Route: Transdermal Disadvantage: not sufficiently potent enough to manage patients on higher dose anti-PD drug regimes 	1 1 1 1 1 1	Need one disadvantage only for 1 mark
f)	<ul style="list-style-type: none"> Droperidol Metoclopramide Prochlorperazine Haloperidol 	3	1 mark for each one
g)	<ul style="list-style-type: none"> Quetiapine Lorazepam 	2	NOT haloperidol

References:

1) Chambers DJ, Sebastien J, Ahearn DJ. Parkinson's disease. BJA Education (2017) 17(4)145-149 <https://academic.oup.com/bjaed/article/17/4/145/2907855>

2) See very similar question in 'CRQs for the Final FRCA' by Akuji, Martin, Chambers and Thomas

3) Anaesthesia in Parkinson's Disease question also in 'The Final FRCA Structured Oral Examination: A Complete Guide' by Krishnachetty and Sethi