

Syllabus	AM_IK_08
Topic	Obstructive sleep apnoea

You review 52-year-old man who is listed for an elective inguinal hernia repair. He has type 2 diabetes, hypertension, is obese (BMI 41). The preassessment proforma suggests he may have obstructive sleep apnoea (OSA)

a)

List 5 risk factors for obstructive sleep apnoea (5 marks)

1.
2.
3.
4.
5.

b)

In the pathophysiology of an obese patient with OSA, what factors contribute to the following?

- Airway narrowing: (1 mark)
- Apnoea: (1 mark)
- Snoring: (1 mark)
- Why does breathing recommence after apnoea?
- (2 marks)

c)

Name 2 screening questionnaires which aid in the diagnosis of OSA (2 marks)

1.
2.

d)

What are the components of STOP-BANG score? (8 marks)

1.
2.
3.
4.
5.
6.
7.
8.

e)

What multi-parametric investigation is used to aid the diagnosis of OSA? (1 mark)

.....

List 4 measurements that are used in this multi-parametric investigation (4 marks)

1.
2.
3.
4.

f)

What are the values used in the apnoea / hypopnea index (AHI) to describe the OSA severity? (3 marks)

1.
2.
3.

Syllabus	AM_IK_08
Topic	Obstructive sleep apnoea

	Answer	Mark	Guidance
a)	<ul style="list-style-type: none"> • Obesity • Age 40–70 yr • Male gender • Excess alcohol intake • Smoking • Pregnancy • Low physical activity • Unemployment • Neck circumference >40 cm • Surgical patient • Tonsillar and adenoidal hypertrophy • Craniofacial abnormalities (e.g., Pierre Robin, Down's syndrome) • Neuromuscular disease 	1 mark for each (Max. 5 marks)	
b)	<ul style="list-style-type: none"> • <u>Airway narrowing</u>: Increased pharyngeal adipose tissue • <u>Apnoea</u>: Complete collapse of airway • <u>Snoring</u>: Partial collapse of airway • <u>Breathing retarts</u>: <ul style="list-style-type: none"> ○ Increased stimulation of chemoreceptors ○ Increased oropharyngeal muscle tone ○ Increased inspiratory effort 	1 mark 1 mark 1 mark 1 mark for each (Max 2)	
c)	<ul style="list-style-type: none"> • STOP-BANG • Epworth sleepy scale 	1 mark for each (Max. 2 marks)	
d)	<p>S (snore) Loud snoring</p> <p>T (tired) Daytime tiredness</p> <p>O (observed) Anyone observed cessation of breathing during sleep.</p> <p>P (blood pressure) Have or being treated for high blood pressure.</p> <p>B (body mass index) BMI .35 kg m²</p> <p>A (age) Age .50 yr</p> <p>N (neck) Neck circumference .40 cm</p> <p>G (gender) Male</p>	1 mark for each (Max. 8 marks)	<p>Values must be included for BMI, Age and neck circumference.</p> <p>½ mark awarded if no values added</p>

e)	<ul style="list-style-type: none"> • Polysomnography / sleep study • Heart rhythm (ECG) • Electroencephalography (EEG) • Eye movements • Electromyography (EMG) • Snoring volume • Oro-nasal airflow • Peripheral pulse oximetry 	<p>1 mark</p> <p>1 mark for each (Max. 4 marks)</p>	
f)	<p>The severity of OSA is categorized with an AHI</p> <ul style="list-style-type: none"> • ≥ 5 mild • ≥ 15 moderate • ≥ 30 severe 	<p>1 mark</p> <p>1 mark</p> <p>1 mark</p>	

References

- 1) Martinez G, Faber P. Obstructive sleep apnoea. CEACCP (2011) 11(1)5-8
<https://doi.org/10.1093/bjaceaccp/mkq042>