

### Question 11 (18 marks) 6 minutes

A 17 year old male presents after an episode of syncope while out running. He is currently asymptomatic.

On examination you hear a systolic murmur. His observations are as follows:

HR	60	/min
BP	130/80	mmHg
Temp	36.8	°C
GCS	15	

- i. Complete the following stating what happens to the systolic murmurs in the table with the described manoeuvres. (12 marks)

Manoeuvre	Lesion			
	<b>Hypertrophic cardiomyopathy</b> (3 marks)	<b>Mitral valve prolapse</b> (3 marks)	<b>Aortic stenosis</b> (3 marks)	<b>Mitral regurgitation</b> (3 marks)
<b>Valsalva</b>	Increased	Earlier click, increased	Decreased	No change
<b>Squatting</b>	Decreased	Later click, decreased	Increased	No change
<b>Hand grip</b>	Decreased	Earlier click, increased	No change or decreased	Increased

- ii. You suspect Hypertrophic cardiomyopathy. List three (3) features that may be present on the ECG of a patient with Hypertrophic cardiomyopathy. (3 marks)

1 **LVH**

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2 **Left atrial hypertrophy (P mitrale)**

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3 **Deep narrow Q waves in lateral and inferior leads**

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4 **Conduction defects e.g. WPW**

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5 **Arrhythmias e.g. AF, SVT, VT**

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6 **Giant precordial T wave inversion in apical HOCM**

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I accepted any 3 from this list.

The books / websites (“Life in the Fastlane”) do not mention left axis deviation. Some candidates listed this. This is not correct

ST and T wave changes are part of the LVH changes so I did not pay them if you also wrote LVH, unless you listed number 6 above

### Question 11 continued

iii. In a patient with confirmed Hypertrophic Cardiomyopathy, list three (3) specific treatments that may prevent sudden death? (3 marks)

1 Beta blockers (or nondihydropyridine Calcium channel blockers e.g. Verapamil)

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2 ICD insertion

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3 Ventricular pacing

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4 Alcohol septal ablation

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5 Surgical myectomy

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6 Cardiac transplantation

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Please note that this question asks for a list of treatments. Some candidates listed not exercising. This is NOT a treatment. It is a preventive measure.

Again I accepted any 3 of the 6 items listed above.