

BMSH4302 Introduction to Chronic Disease

Mock Paper 2: Marking Guide

Exam structure

Section A: 20 MCQs at 1 mark each = 20 marks. Answer ALL.

Section B: 5 short answer questions at 15 marks each. Answer TWO. = 30 marks.

Total: 50 marks. Final percentage = total mark x 2.

Duration: 60 minutes.

Section A: MCQ Answer Key

Each question is worth 1 mark. Total: 20 marks.

Q1. Answer: c

Prevalence is a snapshot: total cases (new and existing) in a population at one point in time. Incidence measures new cases over time.

Q2. Answer: a

Aetiology refers to causes. Symptoms are how disease presents. Pathology is what disease does to tissues. Therapeutics covers treatment.

Q3. Answer: a

Physical activity is a behaviour that can be changed. Age, ethnicity and family history are non-modifiable risk factors.

Q4. Answer: c

The Dahlgren and Whitehead 'rainbow' (fan) model places the individual at the centre and shows widening layers of influence: lifestyle, social and community networks, living and working conditions, and broader socioeconomic, cultural and environmental conditions.

Q5. Answer: a

Hypertension is sustained raised blood pressure, which damages arterial walls over time and substantially raises the risk of stroke, MI and heart failure.

Q6. Answer: b

Women are more likely to present with symptoms such as fatigue, breathlessness, nausea or jaw pain. The classic 'central crushing chest pain' description was developed largely from male research populations, contributing to gender bias in diagnosis.

Q7. Answer: b

COPD is characterised by largely irreversible airflow obstruction that worsens over time. This contrasts with asthma, where the obstruction is reversible. The damage in COPD includes destruction of alveolar walls (emphysema) and chronic airway inflammation.

Q8. Answer: b

Bronchiectasis involves permanent dilatation of the bronchi, mucus pooling, and recurrent infection. The other options describe asthma, restrictive lung disease, and an unrelated mechanism.

Q9. Answer: a

Hashimoto's is the most common cause of hypothyroidism in the UK. Antibodies progressively damage thyroid tissue, reducing hormone output. Graves' is the autoimmune cause of hyperthyroidism.

Q10. Answer: b

Gestational diabetes arises during pregnancy because of placental hormones increasing insulin resistance. It usually resolves after birth, but it is a strong predictor of later Type 2 diabetes in the mother.

Q11. Answer: c

MASLD is fat accumulation in the liver linked to metabolic dysfunction. It is closely associated with obesity, Type 2 diabetes and insulin resistance. Viral hepatitis, biliary obstruction and autoimmune hepatitis are different conditions.

Q12. Answer: a

Osteoarthritis is degenerative, driven by progressive cartilage loss with changes to the underlying bone. It is not autoimmune (that is rheumatoid arthritis), not infective (that is septic arthritis), and not crystal-driven (that is gout).

Q13. Answer: b

A fragility fracture is one caused by trauma that would not normally break a healthy bone, indicating reduced bone strength. The classic definition is a fall from standing height or less. Age alone does not define it, and these fractures most commonly affect the hip, spine and wrist.

Q14. Answer: d

Sarcopenic obesity is the coexistence of sarcopenia and obesity. It carries higher metabolic and functional risk than either condition individually because the protective and metabolic functions of muscle are reduced while the burden of excess adipose tissue remains.

Q15. Answer: c

The pathological hallmarks of Alzheimer's disease are amyloid plaques and tau tangles, with progressive neurodegeneration. Dopamine loss describes Parkinson's; demyelination describes MS.

Q16. Answer: b

Anxiety disorders are clinically defined by persistent, excessive and disproportionate worry or fear that impairs functioning. Brief situational nervousness is not a disorder. Loss of interest is more characteristic of depression.

Q17. Answer: c

Mental health stigma operates at multiple levels (self-stigma, public stigma, structural stigma) and is associated with delayed help-seeking, lower treatment adherence, social isolation and worse outcomes. Reducing stigma is a recognised public health priority for improving mental health outcomes.

Q18. Answer: d

Adipose tissue is now understood as an active endocrine organ. It releases adipokines (such as leptin and adiponectin) and inflammatory mediators, which is why excess adiposity drives risk across multiple body systems.

Q19. Answer: d

HRQoL captures how health affects functioning and wellbeing across multiple domains. It is distinct from life expectancy (quantity of life) and from material measures of wealth.

Q20. Answer: d

Cancer is fundamentally a disease of accumulated genetic and epigenetic damage. The cancer 'hallmarks' include sustained proliferation, evasion of growth suppressors, resistance to cell death, and invasion/metastasis.

End of marking guide