1. Regarding the diagnosis of osteoporosis
   a) Bone mineral density (BMD) is measured using dual-energy X-ray absorptiometry (DXA) scan
   b) The hip bone is always the preferred site for determining BMD
   c) A BMD that is more than 2.5 standard deviations above the average for a young adult indicates osteoporosis
   d) Carrying out blanket screening of all patients of a particular age is not recommended for identifying susceptible individuals
   e) Patients who have been taking oral corticosteroids for more than three months should have their BMD measured to confirm or exclude diagnosis

2. The following substances can promote bone growth
   a) Thyroxine
   b) Oestrogen
   c) Glucocorticoids (at physiologically normal levels)
   d) Alendronate
   e) Somatomedins

3. Concerning the bones in the human skeleton
   a) There are 206 of them
   b) They can be subdivided into long bones and flat bones
   c) All contain yellow bone marrow
   d) They are resorbed by osteoclasts
   e) They contain 99.9% of the body's total calcium content

4. Regarding the regulation of calcium levels and bone metabolism in the body
   a) Calcitonin inhibits bone resorption by osteoclasts
   b) Parathyroid hormone increases bone resorption, leading to a release of calcium
   c) Vitamin D increases the absorption of calcium from the gut
   d) Calcitonin is the most significant regulator
   e) Renal handling of calcium is regulated solely by parathyroid hormone

5. The following increase the risk of osteoporosis
   a) Treatment with phenytoin
   b) Regular exercise
   c) Cushing's syndrome
   d) Early menopause
   e) A body mass index above 19

6. Concerning the treatment of osteoporosis
   a) Guidance has been produced by the National Institute for Health and Clinical Excellence and the National Osteoporosis Guideline Group (NOGG)
   b) Calcium and vitamin D should be prescribed for all osteoporotic patients (unless sufficient dietary intake is assured)
   c) Strontium ranelate increases bone formation and reduces bone resorption
   d) Bisphosphonates have poor oral bioavailability
   e) Teriparatide reduces the effect of alendronate

7. NICE technology appraisals of osteoporosis treatments
   a) Advise on how to treat both men and women
   b) Offer specific advice regarding second-line treatment
   c) Recommend alendronate as first-line treatment
   d) Suggest that treatment should be started for all women aged 75 years and over (regardless of BMD)
   e) Do not recommend the use of teriparatide for any patients

8. Regarding the use of bisphosphonates to treat osteoporosis
   a) Zoledronic acid infusions should be administered every three months
   b) Ibandronic acid is available as oral and parenteral formulations
   c) Risedronate is cheaper than alendronate
   d) Orally administered drugs can cause oesophageal ulceration
   e) Oral formulations should be taken 30 minutes after food

9. Secondary causes of osteoporosis listed in the NOGG guideline include
   a) Alcohol intake ≥4 units per day
   b) Rheumatoid arthritis
   c) Prolonged immobility
   d) Type 1 diabetes mellitus
   e) Hypothyroidism

10. Osteoporosis
    a) Costs the NHS £1.73m per year
    b) Accounts for some 200,000 fractures per year in the UK
    c) Increases the likelihood of falls
    d) Is responsible for 20% of hip fractures
    e) Is more likely to develop in smokers than non-smokers