Macro Module 19 Household savings practice exam questions

(The attached PDF file has better formatting.)

All cash flows occur on December 31. Values for years *t* and *t-1* are

Item	*Year t*	*Year t-1*
Real Government Spending	547	563
Real Government Transfers	311	389
Real Taxes	754	787
Price Level	138	138
Nominal Government Bonds at year-end	?	659
Nominal Interest Rate	4.39%	4.39%
Private Consumption	959	953
Private Capital	651	630
Utilization Rate of Capital	82.86%	84.98%
Depreciation Rate	8.73%	8.36%

The government owns no capital but purchases all goods and services from the private sector.

- The price level does not change from year *t-1* to year *t*.
- The money stock does not change from year *t-1* to year *t*, so $(M_t – M_{t-1}) = 0$.
- Inflation is zero, so the nominal interest rate equals the real interest rate.

Question 19.1: Nominal interest paid

What is the interest paid by the government in year *t* on its outstanding bonds?

Answer 19.1: 659 × 4.39% = 28.93

(bonds outstanding at end of previous year × nominal interest rate on those bonds)

Question 19.2: Real interest paid

What is the real value of interest paid by the government in year *t* on its outstanding bonds?

Answer 19.2: 659 × 4.39% / (138 / 100) = 20.96

(bonds outstanding at end of previous year × nominal interest rate on those bonds)

Question 19.3: Net cash expenditures

What are the net cash expenditures (in real terms) by the government in year *t*?

Answer 19.3: 547 + 311 – 754 + 20.96 = 124.96

(net cash expenditures in real terms = government spending + government transfers – taxes + interest paid)

Question 19.4: Government debt

What is B^{gt}, nominal government bonds in year *t*?

Answer 19.4: 659 + 124.96 × (138 / 100) = 831.44

(bonds values are in nominal terms, so bonds in year *t* = bonds in year *t-1* + real net government expenditures in year *t* × the price level)

Question 19.5: Household savings

What is real household savings in year *t*?

Answer 19.5: (651 – 630) + 831.44 / (138 / 100) – 659 / (138 / 100) = 145.96

(real household savings = increase in capital + increase in real value of bonds)