MATHEMATICS APPLICATIONS

YEAR 11 UNIT 1

TEST 1
CONSUMER ARITHMETIC

TERM 1, 2022

SECTION TWO – CALCULATOR ASSUMED

TIME: 30 mins
MARKS: 24 marks

STUDENT'S NAME: _____

CIRCLE YOUR
TEACHER'S NAME: Miss Colquhoun Dr Duan Mr Galbraith

Mr Riemer Mr Stillitano

- A scientific calculator and a classpad are allowed.
- 1 x A4 sheet (single sided) of notes is allowed.
- Show all necessary working in order to obtain full marks.
- A formula sheet will be provided.

Question 6 **(4 marks)**

With 1 Australian Dollar (1 AUD$) being equal to 10 252.91 Rp (Indonesian Rupiah) :

(a) How many Indonesian Rupiah could be bought with AUD$ 300 ? (1 mark)

(b) How many AUD$ could be bought for $350 000 Rp ? (1 mark)

(c) If 1AUD$ can be exchanged for 82.41 Yen, how many Rp could you get for 30 000 Yen ?
Round your answer to the nearest Rp. (2 marks)

Question 7 **(4 marks)**

Determine how much interest would need to be paid with each of the following savings accounts.

(a) $250 000 invested at 2.5% pa simple interest for 6 years. (2 marks)

(c) $250 000 invested at 1.9% pa compounding monthly for 6 years. (2 marks)

Question 8 **(7 marks)**

The table below shows the credits and debits for a bank savings account for the month of March.

Date	**Transaction Details**	**Credit**	**Debit**	**Balance**
01 March	Opening balance			$2 500.00
04 March	Coles purchase		$245.00	$2 255.00
18 March	Caltex petrol		$95.00	$2 160.00
22 March	Cash deposit	$305.00		**A**

(a) Determine the value of **A** (1 mark)

(b) An interest rate of 1.6% per annum is calculated on the minimum monthly balance in the account, show how the interest is calculated for the March statement, given that March has 31 days, and no more transactions were made for the rest of March, other than what is given in the table above. (2 marks)

(c) If the interest of 1.6% per annum was instead calculated on the daily balance, show how the interest would have been calculated for the month of March. (4 marks)

Question 9 **(4 marks)**

The table below lists the amount of hours that a staff member 'Kevin Nguyen' has worked during a week at a pizza shop.

Name	**Kevin Nguyen**	
Normal rate	**$18.50 / hour**	
Mon	0 hours	
Tues	5 hours	
Wed	7 hours	
Thurs	11 hours	
Fri	8.5 hours	
Sat	4 hours	
Sun	3.5 hours	

The following payment rules are used to calculate the wages earned by a staff member :

The first 8 hours worked on any weekday are paid at the normal hourly rate.

If the staff member works more than 8 hours on any one day during the week, then the next two hours are paid at 'time and a half' and any hours after that are to be paid at 'double time'.

Any Saturday hours are to be paid at 'time and a half'

Any Sunday hours are to be paid at 'double time'

Calculate the amount that Kevin earns for working the week as shown above. You may use the table above to show your working, or show your calculations below.

Question 10 **(5 marks)**

The pension for a single person is $967.50 per fortnight.

The assets test and the income test are applied to a pensioner, and the one that results in the pensioner receiving the lower level of government pension is then applied.

The Assets Test :

Situation	Homeowners	Non Homeowners
Single	$250 000	$450 000
Couple (combined Assets)	$375 000	$575 000

Assets above the amounts shown will reduce the pension by $3.00 per fortnight for each $1000 above the amounts shown above.

The Income Test :

Situation	
Single	$180.00
Couple	$320.00

Exceeding the fortnightly income limits will see your income reduce by 50 cents per fortnight for each $1 earned above the limit shown above.

Calculate the fortnightly age pension for a single homeowner, of pension age with assets of $480 000 (excluding the family home), of which $180 000 are deemed to earn 2.25% per annum income. She earns a fortnightly income of $500 from casual work. The first $300 of earned income from employment per fortnight does not count for the income test. This is called the work bonus.

End of Calculator Assumed Section