



UNIVERSITY OF NAMIBIA
MATURE AGE ENTRY
NUMERACY EXAMINATION
(Science Related Paper II)
16 AUGUST 2015

DURATION: 1.5 HOURS

MARKS: 60

PROPOSED QUALIFICATION:.....

SURNAME:

STUDENT NUMBER:.....

CENTRE:.....

Instructions

- This question paper consists of five pages
- Attempt all 19 questions in the spaces underneath each question.
- Full marks are obtained for complete answers
- Calculators are allowed
- Round answers to one decimal place where needed

(1) Find the value of $V = lbh$ if $l = 10$, $b = 4$ and $h = 5$. [2]

(2) Write an expression for each phrase. Use n for the number:

(i) 8 more than a number [1]

(ii) n less than 3 [1]

(iii) 17 less than a number [1]

(3) Find the value of $6x + 2y - 3x + 4y - 3$ when $x = 3$ and $y = 2$ [3]

(4) Simplify $\frac{x}{12a^2b} - \frac{y}{18ab^2}$ [3]

(5) Solve the equation

$$4x - \frac{x-2}{3} = 5 + \frac{2x+1}{4}$$

[4]

(6) Evaluate each expression:

(i) $(4 + 8) \div 3 \times 5 + (2^2 + 9)$ [3]

(ii) $(7^2 + 1) \div 5$ [2]

(7) Which whole numbers are greater than 23.01 and less than 25.9? [2]

(8) Write each expression using exponents:

(i) $4 \times 4 \times 4 \times 4$ [1]

(ii) 15 cubed [1]

(iii) $5 \times 5 \times 5$ [1]

(9) Simon earns N\$3 an hour. In 4 years his hourly wage will be equal to the square of his hourly wage now. What will his hourly wage be in 4 years? [2]

(10) A sugar scoop holds $\frac{4}{6}$ cups. How many scoops will equal to 4 cups of sugar? [2]

(11) Cecilia bought a jacket for N\$ 35.40. To the nearest dollar, how much did Cecilia pay for the jacket? [2]

(12) Replace $\odot$ with $<$, $>$ or $=$ to make a true sentence

(i) $0.51 \odot 0.45$ [1]

(ii) $0.494 \odot 0.497$ [1]

(iii) $2.416 \odot 2.410$ [1]

(13) Complete the following:

(i) 2 liter = ... milliliter(s) [1]

(ii) 3 kiloliter = ... liter(s) [1]

(iii) 4 centiliter = ... liter(s) [1]

(iv) 5 deciliter = ... liter(s) [1]

(14) Phila left for work at 7 : 35 am. If it takes him 27 minutes to drive to work,
at what time will he arrive? [1]

(15) The income tax in Namibia on earning is computed as follows. Let I denote the annual income to the nearest N\$, then

- $0 < I \leq 50000$ is not taxable
- $50001 < I \leq 100000$ the tax rate is 18% for each N\$ above 50001.
- $100001 < I \leq 300000$ the tax rate is 9000+25% for each N\$ above 100001.
- $300001 < I \leq 500000$ the tax rate is 59000+28% for each N\$ above 300001.
- $500001 < I \leq 799999$ the tax rate is 115000+30% for each N\$ above 500001.
- $800000 < I \leq 1500000$ the tax rate is 205000+32% for each N\$ above 800000.
- For $I > 1500001$ the tax rate is 429000+37% for each N\$ above 1500001.

(a) Calculate the income tax of the following earning per annum:

i) N\$ 85000 [1]

(ii) N\$ 250000 [1]

(iii) N\$ 400000 [1]

(iv) N\$ 490000 [1]

(16) Find the value of $a^2 + \frac{b}{3} + 2b$ if $a = 4$ and $b = 2$ [1]

(17) If four days from tomorrow is Tuesday, what day was it the day before yesterday? [2]

(18) How many seconds are there in a year of 365 days?

[2]

(19) Tom makes N\$ 310 each month working in one of the dinning halls on campus. He prepare and follows a budget so that he can afford the computer.

Number	Item	Monthly Amount
1	food	N\$ 82
2	computer	N\$ 68
3	recreation	N\$ 40
4	clothes	N\$ 35
5	savings	N\$ 40
6	miscellaneous	N\$ 20
7	transportation	N\$ 25

Find the average amount spent in one week for each of the following items, assuming that there are 4 weeks in a month:

(i) food [1]

(ii) recreation [1]

(iii) clothing [1]

(iv) transportation [1]

(b) From which item of the budget should each of the following expenses be taken?

(i) blouse [1]

(ii) birthday gift [1]

- (iii) lunch [1]
- (iv) movie [1]
- (v) concert [1]
- (c) Tom takes N\$ 5 a month from his clothes allowance and N\$ 8 a month from his recreation allowance and adds both amounts to savings, how much will he save in 6 months? [3]

END