UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION

NOVEMBER/DECEMBER 2014 EXAMINATION

PROGRAMME: FOUNDATION PHASE MATHEMATICS

MODULE: MATHEMATICS FOR THE FOUNDATION PHASE 1B

CODE: MFP20B1

TIME: 2 HOURS

MARKS: 100

EXAMINERS: Mr J Maseko

Mrs N Mbusi

MODERATORS: DR. K. LUNETA

(This paper consists of 4 pages)

INSTRUCTIONS:

Read each question carefully before answering it. Answer all the questions.

Questions can be answered in any sequence but ensure that you clearly number your answers. NO CALCULATORS ALLOWED

Question 1

Find answers to the following fraction problems. Give the answer in its simplest form.

a) $\dfrac{3}{5} + \dfrac{2}{3}$ (3)

b) $4\dfrac{2}{3} - 3\dfrac{3}{5}$ (4)

c) $\dfrac{6\frac{2}{5} \div 8}{4\frac{2}{3} + \frac{4}{5}}$ (6)

d) $5\dfrac{4}{5} \times 3\dfrac{3}{4} \div \dfrac{7}{12}$ (5)

e) $2\dfrac{1}{2} + 7 - \dfrac{4}{5} \times 1\dfrac{1}{4} \div 2$ (6)

f) $20\% \; of \; 80 + 2\dfrac{1}{5}$ (5)

Question 2

2.1 Convert the mixed numbers to decimals

a) $3\dfrac{5}{10}$ (2)

b) $4\dfrac{75}{100}$ (2)

c) $2\dfrac{4}{5}$ (2)

2.2 Convert the decimals to simplest compound fractions

a) 3.4 (2)

b) 5.48 (2)

c) 4.05 (2)

2.3   Solve and leave your answer in decimal form

    a) $36.38 + 6.353 + 1.41071 =$ (2)

    b) $7.0022 - 5.206710 =$ (2)

    c) $34.2 \times 0.0003 =$ (2)

    d) $2.40015 \div 0.003 =$ (2)

Question 3

Simplify (and evaluate where necessary). Give the answer in its simplest form positive exponents.

    a) $14m^6.m^{-35}.m^{44}$ (3)

    b) $(3a^4b^7)^3$ (3)

    c) $\left(\dfrac{x^{\frac{1}{4}}y^{-3}}{yx^{-\frac{5}{4}}}\right)^2$ (7)

    d) $\dfrac{1000^{\frac{1}{3}}}{900^{-\frac{1}{2}}}$ (6)

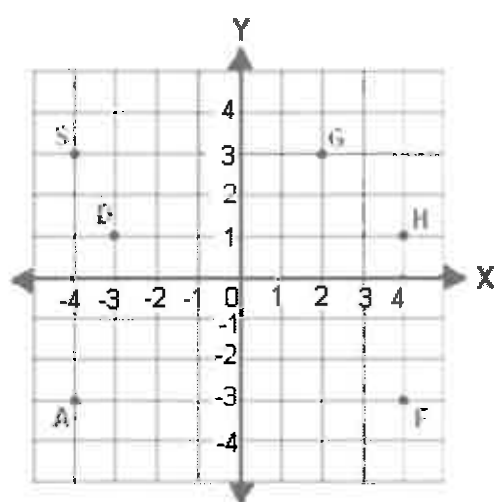   e) $2^{\frac{1}{2}}2^{\frac{3}{2}} + 5\sqrt[4]{16}$ (5)

Question 4

Follow the instructions

    a) Make **a** subject of this formula: 4k + 6ma = 12ma – 2k   (3)

    b) Find the value of $s = ut + \frac{1}{2}at^2$ if $u = -1$; $t = \frac{1}{2}$ and $a = 12$ (3)

    c) If 5x – 20 = 5, find the value of x   (3)

    d) Give the coordinates of points A, D, S, G and F   (5)

    e) What will be the coordinates of a point that will use points A, S, G to form a square?   (3)

    f) Calculate the perimeter as well as the area of this square in **e)**.   (6)

    g) Calculate the area of a ΔDGH formed by points D, G and H with height at G to base DH.   (4)

END OF EXAMINATION   ----oOo----   **TOTAL: 100**