



SCHOOL OF: HOSPITALITY, ENGINEERING

ARTISAN: ELECTRICAL AND FOOD BEVERAGE

JAN 2021

END OF SEMESTER EXAMINATIONS

JAN- APRIL 2021

MATHEMATICS

0202/215, 0402/215

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. *This paper has **SEVEN** questions.*
2. *Answer any **FIVE** questions in this paper.*
3. *Any examination **IRREGULARITY** will lead to **DISQUALIFICATION**.*
4. *Indicate your **FULL ADMISSION NUMBER** in each Answer Sheet used.*
5. *Cell phones are **NOT** allowed in the examination room.*

QUESTION ONE

(a) Simplify where possible.

(i) $2a + 3b + 4ab$

(ii) $7t + 2p + 3t + 5p$

(iii) $6x - 9x - 2y + 9y$

(iv) $-4z - 7d + 2z$

(v) $-10k + 2m - 3k - 5m$

(20mks)

QUESTION TWO

(a) Find the GCD of the following pair of numbers leaving the answer in prime factors:

(i) 30,45

(ii) 36,64

(iii) 48,60

(9mks)

(b) Find the LCM of the following sets of numbers, leaving the answer in prime factors:

(i) 82,182

(ii) 60,225

(6mks)

(c) Find the greatest number which can divide 181 and 236 leaving a remainder of 5 in each case

(5mks)

QUESTION THREE

(a) Round off each of the following numbers to the nearest number indicated in the bracket:

(i) 473 678 (10)

(ii) 524 239 (1000)

(iii) 2 499 (10)

(iv) 38 679 (10 000)

(v) 89 365 (100)

(vi) 379 (10)

(vii) 37 468 592 (10 000)

(viii) 5 349 (10)

(ix) 498 382 (10)

(x) 3 486 789 (100)

(20mks)

QUESTION FOUR

Show how the following additions can be done using a number line and give the results

- (a) $(+2) + (+3)$
- (b) $(+7) + (-4)$
- (c) $(-3) + (-4)$
- (d) $(-7) + (+2)$
- (e) $(+4) + (-13)$
- (f) $(-15) + (+12)$
- (g) $(+3) + (-1)$
- (h) $(-2) + (+3)$
- (i) $(+1) + (+4)$
- (j) $+(-4) + (-2)$

(20mks)

QUESTION FIVE

Write the following fractions in words :

- (a) $\frac{3}{4}$
- (b) $\frac{5}{17}$
- (c) $\frac{11}{30}$
- (d) $\frac{6}{23}$
- (e) $\frac{37}{124}$
- (f) $\frac{23}{50}$
- (g) $\frac{6}{7}$
- (h) $\frac{7}{10}$
- (i) $\frac{3}{100}$
- (j) $\frac{3}{5}$

(20mks)

QUESTION SIX

Use long division method to express the following in decimal notation:

- (a) $\frac{8}{10}$
- (b) $\frac{24}{100}$
- (c) $\frac{3}{10}$
- (d) $\frac{7}{100}$
- (e) $\frac{1}{1000}$
- (f) $\frac{15}{1000}$
- (g) $\frac{27}{10}$
- (h) $\frac{102}{1000}$
- (i) $\frac{6.7}{100}$
- (j) $\frac{3.5}{100}$

(20mks)

QUESTION SEVEN

Express each as a fraction:

- (a) 0.6...
- (b) 0.73...
- (c) 0.15...
- (d) 0.45...
- (e) 0.7...

(20mks)