QUESTION 1

(a) Define the following terms

i. Curriculum
ii. Schemes of work
iii. Mathematics

(a) Define the following terms (3marks)

a. What is the significance of using the teaching and learning resources when teaching mathematics? [1mark]
b. State any two records a teacher should have in class when teaching [2marks]
c. Explain any three methods you can use to introduce addition as a skill in mathematics in std. Three for learners with H.I. [6marks]
d. Use any three examples to explain the fact that multiplication is commutative just like addition to STD. III for learners with H.I. [6marks]
e. Vygotsky (1978) emphasised the zone of proximal development in teaching a subject like mathematics. Explain how this helps a teacher in teaching and setting questions on capacities as a concept [8marks]
f. Demonstrate how you would use balancing machine to verify that 4kgs is equal to 4000g to a learner with mathematics difficulties in STD VI [4marks]
QUESTION 2

a. Describe how some two teaching resources would be used to introduce additions with regroupings in a class of learners with mathematics difficulties [2marks]
b. A child with mathematics difficulties mathematics assignment to compute:

\[
\begin{array}{c}
342 + 1806 + 27 \\
\end{array}
\]

He did it as follow:

\[
\begin{array}{c}
+342 \\
1806 \\
27 \\
\hline \\
61926
\end{array}
\]

Analyse the response and explain why he/she got the wrong answer (8marks)

(c) Explain the steps you would use to introduce the concept of measurements in STD V of learners with H.I. using the units of lengths. (10marks)

QUESTION 3

A train left Nyuki town at 8.35 am and arrived at Ndiwo town at 3.55 pm. What was the time taken by the train to cover the journey. A child with mathematics difficulties worked it out as follows:

\[
\begin{array}{c}
8.05 \\
3.55 \\
\end{array}
\]

\[
\begin{array}{c}
\hline \\
4.50 HRS
\end{array}
\]

a. Identify any four areas of difficulty that he had [4marks]
b. Describe the procedure you would take to enable the child reach the level of solving such a problem in mathematics [9marks]
c. Work out the correct answer to that question. [7marks]
QUESTION 4

a. Draw a net to help you lead your standard 7 learners with H.I. in constructing a cube whose length is 6cm
   [6marks]
b. Calculate the total surface area of the cube
   [2marks]
c. Two standard 5 pupils were told to increase 25 by 255 and their answers were 50/= and 50% respectively. Explain the procedure a teacher would use to help the two children reach the correct answer
   [10marks]
d. Calculate and get the correct answer
   [2marks]

QUESTION 5

a. Using specific examples state the 5 emphasised areas of an objective in a scheme of work or a lesson plan.
   [5marks]
b. With specific examples differentiate between formative and summative evaluation in the Kenyan education system
   [4marks]
c. Set three questions in mathematics reflecting on comprehension, application and analysis among the components of Bloom’s taxonomy in cognitive domain in learning
   [6marks]
d. Describe an activity you would conduct to clarify how pi \( \pi \) comes to be used in circumference: \( C = 2\pi r \) OR circumference: \( C = \pi d \).
   (4marks)