UGANDA BUSINESS AND TECHNICAL EXAMINATIONS BOARD

Business and Humanities Certificate Examinations

NOV-DEC SERIES

PROGRAMME

CERTIFICATE IN INFORMATION AND COMMUNICATION TECHNOLOGY

PAPER NAME

BASIC BUSINESS CALCULATIONS

PAPER CODE

CBMS113

YEAR I SEMESTER I

2½ HOURS

WEDNESDAY, 11TH DECEMBER, 2019

INSTRUCTIONS TO CANDIDATES

1. *This paper consists of **two** sections **A** and **B**.*
2. *Section **A** is compulsory and carries **20** marks.*
3. *Section **B** consists of **six** questions. Answer only **four** questions from this section.*
4. *All questions carry equal marks.*
5. *Answers to all each question should begin on a fresh page.*
6. ***Do not** write on this question paper.*
7. *All answers and rough work should be done in the official answer booklet provided.*
8. *Non-programmable electronic calculators, mathematical tables, and graph papers may be used for this examination.*
9. *Read other instructions on the answer booklet.*

© 2019 Uganda Business and Technical Examinations Board

Turn Over

SECTION A-(20 MARKS)

Question One

(a) Margie bought a bag at UGX 60,000 and sold it to Nani making a profit of 30%. What was her selling price? (04 marks)

(b) A pawpaw weighs 7kg. If $4\frac{1}{3}$kg is cut off. Calculate the weight of the part that remains. (02 marks)

(c) Simplify: $-4(60x - 15m) - 5(12x + 6m)$ (02 marks)

(d) The area of a circular piece of land is $490m^2$. Find the diameter of the land. (Take $\pi = 3.14$) (04 marks)

(e) A trader bought a short from Owino at UGX 9,000 and sold it to John at 20% profit who later sold it to Ben at 3% discount when it refused to fit him. Find the price at which Tom bought the shirt. (04 marks)

(f) A rectangular pond containing water measures $8.8\ m$ by $6.3\ m$ by $4.2\ m$. Find the;

(i) Total surface area of the pond. (02 marks)

(ii) Volume of the pond. (02 marks)

SECTION B - (80 MARKS)

Answer all the questions in this section

Question Two

(a) John uses x litres of fertilizer and James uses 10 litres more than John to spray the same plot of land. Twice John's fertilizer plus James' fertilizer gives a total of 38 litres of fertilizer.

(i) Write down the equation connecting John and James' fertilizer consumption. (02 marks)

(ii) Solve the equation to find the amount of fertilizer each used. (03 marks)

(b) Two farmers went to the market to buy seeds for planting as follows;

Farmer Q bought $20kgs$ of beans and $30kg$ of maize and spent UGX 130,000 altogether. Farmer P bought $20kgs$ of beans and $10kg$ of maize and spent UGX 70,000 altogether.

(i) Write down two equations representing their purchases. (04 marks)

(ii) Find the unit cost of beans and of maize. (03 marks)

(c) A log 564cm long was cut into three pieces in the ratio 2:1:1. Find the length of each piece. (04 marks)

(d) Evaluate: $\left(\frac{1}{4} + \frac{1}{3}\right) - \frac{1}{8}$ (04 marks)

Question Three

(a) A room is 6m long, 5m wide and 2.5m high. It has 2 doors each 1m wide and 1.5m high and one window 2m wide and 1.5m high. Calculate the cost of painting the walls if the cost per square metre is UGX 1,500. (10 marks)

(b) A man divided his savings as follows;

Wife 30%, first son 25%, second son and daughter 15% each, the youngest son 50% of the remaining and the rest to his brother who received Shs6,000,000 only. Calculate how much each of the others received. (10 marks)

Question Four

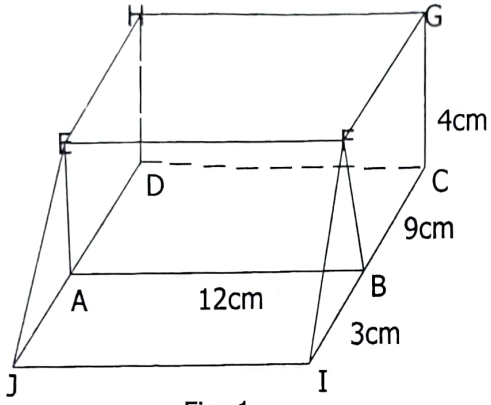


Fig. 1

(a) Figure 1 shows a solid formed by joining a cuboid ABCD to a wedge ABJI used to prevent vehicles from rolling Backwards on slopes.

(i) Calculate the total surface area of the solid. (13 marks)

(ii) Calculate the volume of the solid. (03 marks)

(b)

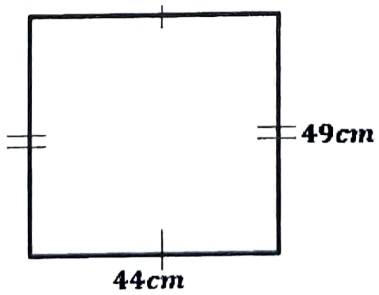


Fig. 2

Figure 2 shows a sheet of metal. If it is used to make a hollow cylindrical pipe for a VIP latrine. Calculate;

(i) The radius of the cylindrical pipe formed. (02 marks)

(ii) The total surface area of the cylindrical pipe formed. (02 marks)

Question Five

(a) A rectangular tank contains some liquid. This tank is 3m long 2m wide and 1.5 high. The liquid is sold at 8.5 per litre, find the value of the liquid contained in the tank. (10 marks)

(b) A triangular field measures 90m X 80m X 60m. Find;

(i) The perimeter of the field. (03 marks)

(ii) The area of the field to the nearest m^2. (04 marks)

(c) A circular field has a diameter of 28m. If it has to be fenced, calculate the length of the wire mesh needed for the work. (03 marks)

Question Six

Vin's farm covers the area bounded by the curve; $y = x^2 + x - 6$, and the $x - axis$.

(a) Use the information to complete **table 1.** (08 marks)

Table 1

x	-4	-3	-2	-1	0	1	2	3
x^2	16			1	0			9
-6	-6	-6	-6	-6	-6	-6	-6	-6
y	6	0			-6		0	

(b) Sketch the boundary of the farm on the Cartesian plane. (12 marks)

Question Seven

(a) Round off the following to the required degree of accuracy.

(i) 3.7846 to 3 decimal places (02 marks)

(ii) 75. 0794 to 2 decimal places (02 marks)

(iii) 144 to 2 significant figures. (02 marks)

(b) Mr Z's catering service was contracted to cook at the recently concluded Common wealth Parliamentary conference. He was paid $\$\ 9450$ daily. Given that $£1 = UGX\ 4900$ and $1\$ = UGX\ 3740$. Find;

(i) Mr. Z's daily income in Uganda shilling. (03 marks)

(ii) His income in pounds (£). (03 marks)

(iii) The profit he made daily in Uganda shillings if he spent $£\ 3500$ on paying workers and purchasing food items for the conference meals. (06 marks)

(iv) If the workers were paid 20% of the daily expenditure, how much money in Uganda shillings was paid to the workers? (02 marks)

END