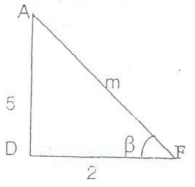
NAME ... USES ... SUNDAY
ELECTRICAL AND INFORMATION ENGINEERING
1100495

LANDMARK UNIVERSITY, OMU-ARAN
2011/2012 ALPHA SEMESTER EXAMINATIONS
COLLEGE: SCIENCE AND ENGINEERING
COURSE CODE: MAT 112 COURSE TITLE: TRIGONOMETRY AND ANALYTICAL GEOMETRY
COURSE UNIT: 2UNITS TIME ALLOWED: 1HOUR
INSTRUCTIONS: ANSWER ALL QUESTIONS. EACH QUESTION WILL EARN YOU 1MARK



15/20

Fig 1: A right angled triangle

Q1. Find the value of m in the triangle ADF in Fig1
(a) 5.213 (b) 5.3852 (c) 10 (d) 2.646 (e) 29

A B C D E

Q2. Find the value of Sinβ and β in Fig1
(a) Sinβ=0.5547, β= 56.31° (b) Sinβ=0.9284, β= 68.2 (c) Sinβ=0.5, β= 60° (d) Sinβ=0.89, β= 27.13° (e) Sinβ=0.123, β= 82.93°

A B C D E

If Tanθ = 0.6, and Sinθ= 0.25; Use this information to answer questions Q3, Q4 and Q5

Q3. Cos θ = ? (a) 0.4167 (b) 0.4888 (c) 0.85 (d) 0.15 (e) √0.6

A B C D E

Q4. Sec θ - Cot θ = ? (a) 0.733 (b) 0.999 (c) 0.2345 (d) 0.3562 (e) 0.7453

A B C D E

Q5. Sec θ + 2Cosec θ = ? (a) 6.3998 (b) 6.56733 (c) 6.3333 (d) 50.4 (e) 4.16667

A B C D E

Q6. Sin(θ-β) = ? (a) Cos2θ + 2Sinβ (b) CosθCos β – Sin β Sinθ (c) SinθCosβ + CosθSinβ (d) CosθCos β + Sin β Sinθ (e) SinθCosβ – CosθSin β

A B C D E

Q7. Sin2θ = ? (a)Tanθ+ Secθ (b) 2SinθCosθ (c) $2Sin^2\theta Cos^2\theta$ (d) 1- $Sin^2\theta$ (e) None of the above

A B C D E

Q8. If β=30° and θ = 60° find $Cos^2\theta+Sin^2\theta$ - Tanβ (a) 4.619 (b) 5.4 (c) 4.226 (d) 0.5774 (e) 9.99

A B C D E

Q9. The sawtooth wave is....(a) a trigonometric function (b) a periodic function (c) an exponential function (d) a logarithmic function (e) an hyperbolic function.

A B C D E

Q10. The amplitude of Sin θ and Cos θ ranges from (a) 1 to 1 (b) -1 to 1 (c) 2 to 2 (d) -2 to 2 (e)-1 to 2

A B C D E