Mid-West University

Examinations Management Office

Surkhet, Nepal

End Semester Examination-2080

Level: B.Ed. / IV Semester

Sub: Trigonometry for Teachers (MATH 443/344)

Roll No. .....

Group "A" **10 × 1 = 10**

Tick (✓) the best answer.

1. If $\cos\theta = 1$, then the general value of θ is ...
   a. $n\pi + 1$ b. $n\pi$
   c. $n\pi - 1$ d. $2n\pi$

2. If $\sin^{-1}p = y$ then the value of p is ...
   a. $p = \sin y$ b. $p = \cos y$
   c $p = \tan y$ d all of the above

3. The sum of three cube roots of unity is ...
   a. 0 b. 1
   c. 2 d. 3

4. $x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \ldots$ is the expansion of ...
   a. sinx b. cosx
   c. tanx d. sin2x

5. What is the value of b ...
   a. $2RsinA$ b. $2Rsinc$
   c. $2RsinB$ d. 2RcosB

6. When was the Demoiver's theorem discovered?
   a. $1660 - 1750$ b. $1667 - 1754$
   c. $1600 - 1670$ d. *all of the above*

7. Which one of the following formula is the area of the cyclic quadrilateral?
   a. r s b. $\sqrt{(s-a)(s-b)(s-c)(s-d)}$
   c. $\frac{1}{2}$ ab sinC d. $\sqrt{\frac{s(s-a)}{bc}}$

8. The value of CosB is ...
   a. $b^2 + c^2 - a^2/2bc$ b. $b^2 - c^2 + a^2/2ab$
   c. $a^2 + c^2 - b^2/2ac$ d. all of the above

9. Which one of the followings is true ...?
   a. $\sinh^2x + \cosh^2x = 1$ b. $\cosh^2x - \sinh^2x$
   c. $\sinh^2x - \cosh^2x$ d. all of the above.

10. Which one is the value of e^x?
    a. $1 + x + x^2/2! + x^3/3! + \ldots\ldots$ b. $1 - x + x^2/2! - x^3/3! -$
    c. $1 - x^3/3! + x^5/5! - \ldots$ d. all of the above ...

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End Semester Examination-2080

Level: B.Ed. / IV Semester FM: 60

Time: 3.00 hrs. PM: 30

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Candidates are required to give their answers in their own words as far as practicable.

Attempt all the questions.

Group "B" **6×5 = 30**

1. Solve: Secx. Tanx = $\sqrt{2}$

2. A boy 1.75m tall is flying a kite when the length of the string of kite is 150m and the vertical height of the kite is 76.75m find the angle made by the string of the kite.

3. Find the value of $Sin^{-1}x + Sin^{-1}y$

Or

Find the value of
$Tan^{-1}\ 1/5 + Sin^{-1}3/5$

4. Prove that $1/r_1 + 1/r_2 + 1/r_3 = 1/r$

5. In a triangle ABC, prove that CosB – CosC/ CosA +1 = c-b/a

6. Find the value of $(1+i)^{1/3}$

Or

Expand the Sinhx and Coshx

Group "C" **2×10=20**

7. If any triangle ABC prove that:
Cos A = $b^2 + c^2 - a^2/2bc$

8. Prove that the area of cyclic quadrilateral PORS is .... $\sqrt{(s-a)(s-b)(s-c)(s-d)}$

Or

State and prove De- Moiver's theorem

THE END