IN 2018 E.C AGEWMIDER COMPREHENSIVE SENIOR SECONDARY SCHOOL MATHEMATICS WORK SHEET I FOR GRADE 11

I. CHOOSE THE CORRECT ANSWER

1. Which one of the following is not true?
   A. $|x|>0$ B. $|xy|=|x||y|$ C. $|x+y|\leq|x|+|y|$ D. $|x-y|\geq |x|-|y|$
2. Let R={(x,y): x,y$\in\mathbb{R}$ & y=x-5} be a relation, then which ordered pair belongs to R ?
   A. (0,5) B. (4,1) C. (6,1) D. (5,1)
3. Which one of the following is relation is a function?
   A. R={(x,y): x,y$\epsilon\mathbb{R}$ y=$\sqrt{x}$ }
   B. R={(x,y): x,y$\epsilon\mathbb{R}$ $x^2+y^2=5$}
   C. R={(x,y): x,y$\epsilon\mathbb{R}$ y≥ x+1 }
   D. R={(x,y): y is a brother of x}
4. Which of the following is a power function?
   A. F(x)= $2x^2+1$ B. F(x)= $x^{\frac{2}{3}}+4$ C. F(x)= x^3-2 D. F(x)= $x^{\frac{1}{2}}$
5. If the relation R={(x,y): y= $\frac{1}{x}$ } ,then the domain of R is ----------
   A. $\mathbb{R}$ B. $\mathbb{R}$ /{-1} C. [0 , ∞) D. (-∞ , 0¿∪$(0,\infty)$
6. Let F(x)= x+2 be a function, then its inverse is -------
   A. $F^{-1}(x)=x+2$ B. $F^{-1}(x)=x-2$ C. $F^{-1}(x)=-x+2$ D. $F^{-1}(x)=\frac{X}{2}$
7. The greatest integer of the function f(x)=$\lfloor -10.37 \rfloor$ is-------
   A. -10 B. -10.4 C. -11 D. – 9
8. Let f(x)= 2x+4 & g(x) = 3x+n , then what is value of n if (fog)(x) =(gof)(x) ? A. 5 B. 4 C. 8 D. -8
9. Let f(x) = sgn(x) , then the domain of f(x) is ------.
   A. $\mathbb{R}$ B. $\mathbb{Z}$ C. {-1,0,1} D. [0, ∞)
10. The domain of the power function p(x)= $x^{-\frac{2}{3}}$ is ---------.
    A. $\mathbb{R}$ B. $\mathbb{R}$ /{0 } C. [0 , ∞¿ D. We can’t determine.
11. The solution set of $|2x-5|=7$is ---------.
    A. {-6,-1} B. {0,6} C. {-1,6} D. {0,2}
12. If f (x)=x^2+4 & g(x)=x-2 , then the value of (fog)(3) is ----- A. 4 B. 5 C. 8 D. 11
13. ..Which pairs of functions are inverse of each other?
    A. f(x)=$\frac{1}{3x-2}$ & g(x)= $\frac{2x+1}{3x}$ B. f(x)=$\frac{4X}{X+3}$ & g(x)= $\frac{x+2}{4X+3}$
    C. f(x)=$\frac{x+2}{X-3}$ & g(x)= $\frac{3x+2}{x+1}$ D. f(x)=$3x+7$ & g(x)= $\frac{x+7}{3}$

II. **DO THE FOLLOWING QUESTIONS ACCORDINGLY**.

14. Find the inverse of the function h(x) = $\frac{2x+3}{4x-5}$

15. The domain and the range of g(x)= $-2x^{\frac{5}{4}}$

16. Given f(x) = 3 + 2$|x|$, then the domain and range of f(x) is -----

17. Given f(x) = x $-\lfloor x \rfloor$, then the domain and range of f(x) is -------

18. Given f(x)= x+sgn(x), then the domain and range of f(x) is ---

19. Given f(x)= x $-$sgn(x), then the domain and range of f(x) is--