**PAKISTAN SCHOOL, ISA TOWN BAHRAIN**

**PRE BOARD EXAMINATION 2021**

**Class: 11th Marks: 40**

**Paper: Business Mathematics Time: 2:15hrs**

**Section B**

**Q: 2 Attempt any eight parts. All parts carry equal marks. (8x3=24)**

1. The length of a Pakistani flag is 1.6 meters. The ratio between green and white parts is 3:1. Find the length of green part.
2. A car runs 150 km in 10 liters of petrol. How much petrol would be used to travel 280km,
3. A shopkeeper bought a bag of rice for Rs. 400 and sold it for Rs. 480. Find the profit percent.
4. A commission agent sold goods for Rs. 60,000. Find out his commission if he received 5% commission
5. What principal amount is needed that the simple interest will be Rs. 48 if it is invested at 3% per annum for 5 years
6. How much interest will be charged by the bank for a loan of Rs. 7,50,000 for 3 months if the rate is 4$\frac{1}{4}\%$ per year.
7. In what time will Rs. 3000 amount to Rs. 3646.50 at 5% compounded annually.
8. Solve $5\left(y-7\right)-2y=1-3\left[\left(4y+7\right)-2\left(y-3\right)\right]$
9. Solve the simultaneous equations $\left\{\begin{matrix}2x+3y-20=0\\3x+5y-11=0\end{matrix}\right.$
10. If $A=\left[\begin{matrix}4&5\\-2&3\end{matrix}\right]$ then find $A^{2}$
11. If the matrix $\left[\begin{matrix}x&6\\2&3\end{matrix}\right]$ is singular then find value of $x$

**Section C**

**Note: Attempt any two questions from Section C. (8x2=16)**

1. a) Rs. 8000 is enough for 4 persons for 40 days. For how many days Rs. 15000 will be enough for 5 persons

b) For how many years Mr. Asad should keep Rs. 50000 so as to accumulate to the amount of Rs. 73205 @ 10 % compounded annually

1. a) Solve using quadratic formula $\frac{3}{x-2}-\frac{1}{x+2}=5$

 b) Solve by factorization $x^{2}+10x=8\left(2x-1\right)$

1. a) If $A=\left[\begin{matrix}2&6\\7&8\end{matrix}\right]$ and $B=\left[\begin{matrix}-1&-3\\2&0\end{matrix}\right]$ prove that $\left(AB\right)^{t}=B^{t}A^{t}$

b) Use inverse method to solve the simultaneous equations $\left\{\begin{array}{c}5x+2y=13\\2x+5y=17\end{array}\right.$

**PAKISTAN SCHOOL, ISA TOWN BAHRAIN**

**PRE BOARD EXAMINATION 2021**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_**

**Paper: Business Mathematics 11th Time: 15min**

 **Section A**

**Q: 1 Choose the correct answer. (1x10=10)**

i. Find $x$ if $\frac{20}{7}=\frac{80}{x}$

 (a) 22 (b) 24 (c) 26 (d) 28

ii. If 2 % of a number is 400. What is the number

(a) 18000 (b) 2000 (c) 22000 (d) 24000

iii. The cost of chair is Rs.160. The markup is 20%. What is the amount of profit on cost?

 (a) Rs.32 (b) Rs.31.50 (c) Rs.30 (d) Rs.29.25

iv. The simple interest of loan Rs. 3000 for 2 years at 7 % is

 (a) Rs.400 (b) Rs.420 (c) Rs.500 (d) Rs.550

v. The roots of equation $x^{2}+2x=0$

 (a) 0, 2 (b) 0, -2 (c) 2, -2 (d) 0, 1

vi. Principal remains constant in calculation of \_\_\_\_\_\_\_\_\_ interest.

 (a) simple (b) compound (c) normal (d) equal

vii. A matrix is called singular if its determinant is equal to

 (a) 1 (b) 0 (c) -1 (d) 2

viii. The transpose of row matrix is

 (a) row matrix (b) column matrix (c) unit matrix (d) none

ix. The degree of quadratic equation is

 (a) 4 (b) 3 (c) 2 (d) 1

x. Profit is earned when

 (a) S.P$<$C.P (b) S.P$>$C.P (c) S.P$=$C.P (d) none