

**Model Question**

Subject: Mathematics

Time: 2 hours 30 minutes

Total marks: 100

[N.B: Figures in the right side indicate full marks of the questions. Answer any 10 including questions No. 1,2,3,5 and 13]

**1. Write down the correct answer in your answer script:  $1 \times 10 = 10$**

- i. If the price of one Khata is 15 taka. Then what will be the price of 10 Khata?  
a) 115 taka      b) 125 taka      c) 150 taka      d) 200 taka
- ii. What is the number of factors of 24?  
a) 6                  b) 7                  c) 8                  d) 9
- iii. What is the number of brackets symbol?  
a) 2                  b) 3                  c) 4                  d) 5
- iv. Which one is the improper fraction?  
a)  $\frac{2}{5}$                   b)  $\frac{5}{2}$                   c)  $2\frac{2}{5}$                   d)  $\frac{3}{5}$
- v. What is the fraction of 18%?  
a)  $\frac{9}{50}$                   b)  $\frac{50}{9}$                   c)  $\frac{98}{50}$                   d)  $\frac{9}{100}$
- vi. 1 cubic meter = How many litre?  
a) 100 litre                  b) 1000 litre  
c) 10000 litre                  d) 100000 litre
- vii. If the time of international system is 20 hours, then what will be the time of national system?  
a) morning 8 hours                  b) night 8 hours  
c) morning 10 hours                  d) night 10 hours
- viii. Which one is the tally sign of 7?  
a) IIIIII                  b) ~~II~~ II                  c) II ~~II~~                  d) ~~II~~
- ix. What is called a parallelogram whose one angle is right angle?  
a) square                  b) rhombus                  c) rectangle                  d) parallelogram

- x. Which one of the following is input device?  
a) Mouse      b) Printer      c) Monitor      d) Speaker

2. **Answer in short:** **1×10=10**

- a) What is the formula to determine divisor in case of division with remainder?  
b) If the days will increase to eat same amount of food, what will be the number of students?  
c) If  $a \div 8 = 3$ , then what is the value of a?  
d) What is the prime factors of 36?  
e) Write two equivalent fraction of  $\frac{5}{6}$   
f)  $0.01 \times 0.001 \times 0.0001 =$  what?  
g) Convert 50% as fraction.  
h) What is the basic unit four measurement of weight?  
i) What is formula of calculating area of a triangular region?  
j) The diameter divides a circle into how many parts?

3. In a hostel there is food for 40 students for 20 days. If 10 new students arrive after 5 days. **5×2=10**

- a) What will happen of days if the number of students increase?  
b) What will be the total number of students in the hostel?  
c) How many days remained?  
d) How many students will be needed to finish this food in one day?  
e) How many days will be needed to finish this food by one student?

4. 200 persons need 15 days to excavate a pond. How many additional persons must be employed if the pond is to be excavated in 10 days? **10**

5. Out of eleven numbers the average of first six numbers is 87 and the average of the last five numbers is 131. **2×5=10**

- a) What is the formula to find average?  
b) What is the sum of first 6 numbers?  
c) What is the sum of last 5 numbers?  
d) What is the average of all numbers?  
e) What is the difference of the sum of first 6 and last 5 numbers.

6. What is the largest number of children among whom 60 mangoes and 150 lychees can be divided exactly? How many mangoes and how many lychees will each of them get? 10
7. Mr. Nagen kept  $\frac{1}{8}$  portion of his property for himself and gave  $\frac{1}{8}$  portion to his wife. The remaining property he divided equally among his four sons. Each son got property worth 15000 taka. What is the value of the total property? 10
8. One litre of milk costs 45.75 taka. Shamim bought 2 litres of milk and gave the Milkman 100 taka. What refund will Shamim get? 10
9. Increasing by 5% the population of Birampur village became 2100. What was the previous population of the village? 10
10. Find the areas of the following rectangular regions:  
Length 54 metre and breadth 47 metre. 10
11. How many hours, minutes and seconds are there in 84648 seconds. 10
12. The amount (in taka) of a day's sale 20 shops are given below:  
Classify the data. 10  
125, 200, 170, 225, 325, 270, 180, 210, 300, 315, 390, 250, 260, 220,  
270, 375, 315, 220, 250, 270.
13. a) Draw a circle and identify its different parts. 4  
b) Write the definitions with figure (any two):  $3 \times 2 = 6$   
Rhombus, Circle, Chord.