ANALYTICAL ABILITY & LOGICAL REASONING

91. Free notebooks were distributed equally among children of a class. The number of notebooks each child got was one-eighth of the number of children. Had the number of the children been half, each child would have got 16 notebooks. How many notebooks were distributed in total?

(A) 512 (B) 500 (C) 450 (D) 412

92. A man works for 2 days and then rests for one day, then works for 2 days and rests for one day and so on. For everyday he works, he earns Rs. 100. How much will he earn from Monday to Saturday?

(A) Rs. 200 (B) Rs. 300 (C) Rs. 400 (D) Rs. 500

93. In climbing a round pole of 80 meters height, a monkey climbs 5 meters in a minute and slips 2 meters in the alternate minute. To get to the top of the pole, the monkey would take

(A) 51 minutes (B) 54 minutes (C) 58 minutes (D) 61 minutes

94. Ramesh and Kunal start walking to meet one another from places 25 kms apart. If Ramesh walks at the rate of 2 kms an hour and Kunal at 3 kms an hour, how many hours will it be before they meet?

(A) 4 hrs 20 minutes (B) 5 hrs

(C) 10 hrs (D) 12 hrs 30 minutes

95. Leena took a loan of Rs. 1200 with simple interest for as many years as the rate of interest. If she paid Rs. 432 as interest at the end of the loan period, what was the rate of interest?

(A) 3.6 (B) 6

(C) 18 (D) cannot be determined

SPACE FOR ROUGH WORK

MATHEMATICS

1. The function $f(x) = \frac{x}{e^x - 1} + \frac{x}{2}$ is

   (A) an odd function (B) an even function

   (C) a periodic function (D) none of these

2. Consider the following relations

   R = { (x, y) | x, y are real numbers and x = wy for some rational number w};

   S = $\left\{ \left(\frac{m}{n}, \frac{p}{q}\right) \right.$ | m, n,p and q are integers such that n,q ≠ 0 and qm = pm}. Then

   (A) R is an equivalence relation but S is not an equivalence relation

   (B) Neither R nor S is an equivalence relation

   (C) S is an equivalence relation but R is not an equivalence relation

   (D) R and S both are equivalence relations

3. If f : [0, ∞)→ [0, ∞), and $f(x) = \frac{x}{1+x}$, then f is

   (A) one-one and onto

   (B) one-one but not onto

   (C) onto but not one-one

   (D) Neither one-one nor onto

4. $\lim_{h \to 0} \frac{f(2h+2+h^2) - f(2)}{f(h-h^2+1) - f(1)}$ given that f ' (2) = 6 and f ' (1) = 4

   (A) does not exist (B) is equal to -3/2

   (C) is equal to 3/2 (D) is equal to 3

SPACE FOR ROUGH WORK

COMPUTER AWARENESS

61. The ALU of computer normally contains a number of high speed storage elements called

(A) semiconductor memory (B) registers

(C) hard disk (D) magnetic disk

62. Offline device is

(A) a device which is not connected to CPU.

(B) a device which is connected to CPU.

(C) a direct access storage device.

(D) an I / O device.

63. A Proxy server is used for which of the following?

(A) to provide security against unauthorized users

(B) to process client requests for web pages

(C) to process client requests for database access

(D) to provide TCP/IP

64. When data changes in multiple lists and all lists are not updated, this causes

(A) data redundancy (B) information overload

(C) duplicate data (D) data inconsistency

65. Which of the following would most likely NOT be a symptom of a virus?

(A) existing program files and icons disappear.

(B) the CD-ROM stops functioning.

(C) the Web browser opens to an unusual home page.

(D) odd messages or images are displayed on the screen.

SPACE FOR ROUGH WORK