

DEPARTMENTAL EXAMINATION OF TEHSILDARS/ NAIB TEHSILDARS  
OF HIMACHAL PRADESH

OCTOBER, 2011

PAPER-2 ARTITHMETIC AND PATWARIS MENSURATION

TIME ALLOWED: 3 HOURS

MAXIMUM MARKS: 100

- Note: 1. Candidate may answer the question in Hindi or English.  
2. Attempt five question in all at least two from each part.

PART-I: ARITHMETIC

Q.No.1: (i) Simplify

$$\frac{789 \times 789 \times 789 + 211 \times 211 \times 211}{789 \times 789 - 789 \times 211 + 211 \times 211}$$

- (ii) On dividing a certain number by 342, we get 47 as remainder.  
If the same number is divided by 18, what will be the remainder ?
- (iii) The sum of the two numbers is 12 and their product is 35. What is the sum of the reciprocal of these numbers ?

Q.No.2: (i) Find the greatest number which on dividing 1657 and 2037 leaves remainders 6 and 5 respectively.

(ii) If  $\frac{x}{y} = \frac{6}{5}$ , find the value of  $\frac{x^2 + y^2}{x^2 - y^2}$

(iii) Rohit was 4 times as old as his son 8 years ago. After 8 years, Rohit will be twice as old as his son. What are the present ages ?

Q.No.3: (i) If the price of a book is first decreased by 25% and then increased by 20%, what will be the net change in the price.

(ii) At what percentage above the cost price must an article be marked so as to gain 33% after allowing a customer a discount of 5% ?

(iii) A and B undertake to do a piece of work for Rs. 600. A alone can do it in 6 days while B alone can do it in 8 days. With the help of C, they finish it in 3 days. Find the share of each.

P.T.O.

- Q.No.4:
- (i) If Rs.500 amount to Rs.583.20 in two years compounded annually, find the rate of interest per annum.
  - (ii) The length of a rectangle is twice its breadth. If its length is decreased by 5 Cms. and breadth is increased by 5 Cms., the area of the rectangle is increased by 75 sq. Cms. Find the length of the rectangle.
  - (iii) One side of a rectangle field is 15 metres and one of its diagonals is 17 metres. Find the area of the field.

#### PART-II

- Q.No.5:
- (i) What is the lease time / What precautions should one take while fixing the lease time ?
  - (ii) Accurate field survey is necessary for settlement work. Explain its importance.
  - (iii) What are the 'Topographical' and 'Cadastral' survey ? Distinguish between these two. How are these useful for preparing the land records ?

- Q.No.6:
- (i) What is the 'Plane- Table' system of surveying ? How is it useful for preparing maps for settlement record ?
  - (ii) Describe briefly the process of amendment / correction of maps between two settlement operations.

- Q.No.7:
- (i) What are survey marks ? Describe the survey marks which are in use in revenue department.
  - (ii) Describe briefly the process of demarcating a given field. What precautions should one observe while carrying out demarcation ?

- Q.No.8: Explain:
- (i) Sehda
  - (ii) Khasra number
  - (iii) Jamabandi
  - (iv) Shajra Kishtwar
  - (v) Kisan Pass Book
  - (vi) Girdawari
  - (vii) Line Muqwabla
  - (viii) Khatoni
  - (ix) Estate
  - (x) Abadi Deh.

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