

H.P. Board of Departmental Examination
For Tehsildar's & Naib Tehsildar's
September-2020
Paper-2 Arithmetic and Patwari Mensuration

Time Allowed: 3 Hours

Maximum on Marks:100

Note:-

1. Attempt any five questions from each part. All questions carry equal marks.
2. The candidates may answer the question either in Hindi or English

Part-A Arithmetic

Attempt any five questions:-

- Q.1 A can do a piece of work in 15 days, B can do it in 10 days and C in 12 days. How long will they take to finish it all working together 10 marks
- Q.2 Find the greatest number of four digits which when divided by 2,3,4,5, and 6 leaves 1,2,3,4 and 5 as remainders respectively. 10 marks
- Q.3 A, B and C enter into partnership. A puts in Rs. 600/-, B Rs. 900/-, C Rs. 1200/-. How should a profit of Rs. 549/- be divided amongst them. 10 marks
- Q.4 A path of 5 meters width runs round a rectangular field, 120 meters long and 90 meters broad. Find the cost of Paving the path at the rate of 15 paise per Sq.M. 10 marks
- Q.5 A triangular lawn has sides 165m. 143m and 154m respectively. It has to be ploughed at the rate of 10 paise per Sq. Mtr. Find the total cost of ploughing. 10 marks
- Q.6 (a) Find the square-root of 2819041. 5 Marks
(b) Find the greatest number of six digits which is perfect square. 5 Marks
- Q.7. There are three shareholders A,B and C in a property. The ratio of A's share to B's share=4:5 and the ratio of B's share to C's Share = 3:4. Find the ratio of the three shares. 10 marks

Part-B

Attempt any five questions

- Q.8 Explain briefly the system of measurement of land by triangulation system with the help of a plain table. What are the shortcomings of the system? 10 marks
- Q.9. Write a note how boundaries of fields measured on the system of land triangulations, are to be relayed by way of 'Nishan Dehi' (demarcations). 10 Marks
- Q.10. What are the pre-cautions to be observed at the time of land measurement to ensure the accurate functioning? 10 Marks
- Q. 11 Define the following:- 10 Marks
1. Adda. 4*2½
2. Chain.
3. Plain Table.
4. Scale.

- Q. 12 A. Why and when are 'burjis' and tri-junction pillar fixed? 5 Marks
B. How the accuracy of field map of the last settlement is tested? 5 Marks
- Q. 13 Write brief notes on the following:- 10 Marks
1. Base line. 2*5
2. Chanda.
3. Index Map.
4. Shajra Kishatbar.
5. Shajra-Kashi.
- Q. 14 Describe the obstructions that you come across while measuring land of an estate and how these have to be overcome. Give examples by drawing diagrams. 10 Marks
- Q. 15 What are the contingencies under which Tatimas Shajras are prepared and how and when these are incorporated in the field map. 10 Marks
- Q. 16 Write short notes on any two of the following:- 10 Marks
1. ETS & GPS. 4*2½
2. Computation of land record.
3. Modern land record rooms.
4. Computerization of registration