Questions:-

1) Name

2) Area of interest [classify into 4 topics]
   - (a) Social good
   - (b) Health care
   - (c) Sports analytics
   - (d) School planning

3) How important is it to work in above topic

   [1-5] [Irrelevant — Mandatory]

   [0 - 250]

4) How do you rate yourself in Coding skills?

   [1-5]

5) How important your [teammate/mates

be good in Coding?

[1 - 5]

6) How do you rate yourself in mechanism
design skill?

[1 - 5]

7) How important your teammate / mates
be good in mechanism design?

[1 - 5]

8) Preferred team size?

[1 - 2 - 3]

9) How important is it to work in
your preferred team size?

[1 - 5]

Dafa:

Set of participants $P = \{1, \dots n\}$

Reward probability to incentive max skill
difference $= Prob = d$ }

Number of participants $= ?$

Max possible number of teams

Compatibility weightage of $W_{ij,k}$
$$\forall \; i,j \in P$$
$$k$$

Compatibity of i over $j = C_{i \to j}$

j over $i = C_{j \to i}$

$$W_{ij} = \sqrt{C_{ij} \times C_{ji}}$$

Similarly

$$W_{ijk} = \sqrt[3]{W_{ij} \times W_{ik} \times W_{jk}}$$

w_{ij} i w_{ik}

$j \, \underline{\quad k} \,$
w_{jk}

To maximize
difference

$$C_{i \to j} = \frac{[\text{Sum of impt of } I] + \text{prob}[\text{Sum of differ}]}{[\text{Sum of impactn of } j]}$$

Variables:-

$$x(i,j,k) \in (0,1)$$

$$\Downarrow$$

i,j,k to be in a team

if $i=j=k$ then 'i' is working alone

if $i=j$ & k then 'i','k' are working together
$i=k$ & j
$\quad\quad\quad$ 'i,j'

Constraint:-

$\Rightarrow$ Each person should only be in one team

$$\sum_{i,j,k} x_{i,j,k} = 1 \;\; \forall \; i,j,k \in N$$

Objective:-

$$\max \left[\sum_{i,j,k} \omega_{(i,j,k)} \cdot x_{(i,j,k)} \right] \quad \forall \, i,j,k \in N$$