Rules for the bridge competition

1. Competitors have to form a team and there must not be over 3 members in each team.

2. Conditions to be met for the competition are as follows:

   2.1 The bridge is not over 60 cm long. If it is longer than 60cm, it cannot participate in the competition.

   2.2 The bridge has to have a flat surface for loading purposes and has to be horizontal so that it connects to both sides of the bridge.

   2.3 The bridge's two simply supporting points are 50 cm apart.

   2.4 The bridge must stand by itself when placed on the prepared fulcrum point.

   2.5 The main structure of the bridge has to use meat ball skewers connected with glue or rope (These materials will be prepared by the committee). If competitors would like to use other materials for connecting purposes, they have to prepare it by themselves.

   2.6 There are not over 3 meat ball wooden skewers for each part of the bridge.

   2.7 Other metals can not be used for any other part of the bridge.

   2.8 Putting the load can do at the middle of the bridge structure (the same level as the plane flat of loading). Competitors have to prepare the point for hanging the weight with the structure. The committee will provide the hook and iron to put across the bridge for hanging weight.

3. The committee will provide the following materials:

   3.1 Two hundred meat ball wooden skewers at 8 inches long.

   3.2 Warm glue, latex glue.

   3.3 Two spools of thread

4. Criteria for scoring

4.1 Efficiency scores for loading (60 points). Weights will be put on the bridge to check how much weight the bridge can support. The bridge must be able to support at least 10 kilograms (100N) for a team to get a score. The minimum weight of 10 kilograms (100N) will be placed on the bridge three times and each time the weight must be supported for a minimum time of 15 seconds. The team who has the highest efficiency value will get the highest scores and the bridges that have lower efficiency values will get scores in descending order. For example, a bridge weighing 200 grams that can support 10 kilograms has an efficiency value of 10,000 g/200 g = 50

4.2 The accuracy of evaluating the load capacity of each bridge will receive a score of up to 30 points

- If the bridge can accept the weight and the deviation is not over 5 percent from the required amount, competitors will get full marks.
- If the deviation is not over 15 percent, competitors will get 20 marks.
- If the deviation is not over 30 percent, competitors will get 10 marks.
- If the deviation is over 30 percent, competitors will not get any marks.

The deviation can be calculated from the difference between the load weight and the designed weight divided by the designed weight and multiplied by 100.

5. Prizes for competition

5.1 The winning team will receive 3,000THB prize with the certificate and trophy from the department head of the Civil Engineering program Faculty of Engineering Khon Kaen University

5.2 The second winning team will receive 2,000THB prize with the certificate and trophy from the department head of the Civil Engineering program Faculty of Engineering Khon Kaen University The third winning team will receive 1,000THB prize with the certificate and

trophy from the department head of the Civil Engineering program Faculty of Engineering Khon Kaen University