Date: 6 March 2015, Friday (Morning)

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)
DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)

1st Semester Examination **Winter Semester (2014-2015)**

Course No: Hum 4149

Course Title Technology, Environment and Society

Time : 90 minutes
Full Marks : 75

There are 4 (four) questions. Answer any 3 (three).
Figures in the right margin indicate marks of the questions.

1. a) Name the parameters considered as 'functions' that are used to describe the development of technology with time. By using these parameters prove that 'technological development with time is non-linear'. 10
   b) Describe complexity, dependency, valence and scale. Show the inter-dependency among them. 10
   c) Name the 'most significant' inventions in the historical development of technology. Among these inventions which is generally considered as the 'turning point' in the development of technology? 5

2. a) Explain two different approaches used to describe the inter-relationship between technology and society. 10
   b) Using the functional approach and the technological stress approach establish the relationship between the technology and environment. 10
   c) Describe different ways to 'control' the technological development. What is the most effective method among them? 5

3. a) Define HRD. What are the roles of technology on the development of HRD? 8
   b) Name the different components of HRD. 5
   c) What are the factors that should be considered in Human Resource Management? 12

4. a) From the Cobb-Douglas production function, prove that using better technology ensures economic development. 5
   b) A company is working with the following resources and conditions: 20
   Number of person working = 100
   Working hour per day = 8
   Total working day per year = 220
   Total investment = Tk 100,000,000
   The parameter representing the Technological Process = 2.0
   Output elasticity measures related to the labour input = 0.15
   Output elasticity measures related to the capital input = 0.85

   After observing the production for one year, the company has decided to double its production. There is no way to improve the technological process within this short time. How can they achieve their target in a rational way?