30/11/18

Indian Institute of Engineering Science & Technology, Shibpur

B.Arch. 1st Semester, Final Examination , November,2018

**English for Engineers (Hu-101A )**

Time : 2 hours Marks:35

Answer all questions

1) Make sentences to distinguish between
   prescribe-proscribe; imminent-eminent;
   zealous-zealots; prosecute-persecute [8]
2) As the General Manager of a company write a memo to be circulated to all other sectional heads notifying them about the change in work schedule due to shorter daylight in the coming months. Provide two complete annexure descriptions only. [6]
3) Write the title page, index page and introduction of a technical report on the need for a uniform syllabus in schools of different boards in West Bengal. Give four annexure descriptions only. [1+5+3]
4) Make tree diagram note from the following passage : [6]

Khimp plant is a natural desert shrub and grows abundantly throughout the year in the Thar Desert of Rajasthan of which about 44,000 sq. miles are in India and the rest about 30,000 sq. miles in Pakistan. The Khimp plant is profusely branched with a height of 1.8 m. The flowers are small and yellow in colour. The pods are cylindrical, green in colour when immature, and turn grey when they mature. Average life period of a single plant is 15 to 20 yr.

Presently, the Khimp plant is being used in rope making, animal fodder, and thatching purposes. Due to its good sand binding property, it is also being used for soil conservation in the desert region. The fibre is extracted from the green stem of Khimp plant by crushing and subsequent retting.

The chemical constituents, including pentosan, lignin, alcohol-benzene extract, and ash, were estimated according to TAPPI Standard Method. The alpha-cellulose content was determined according to the modified method of Sarkar et al. The degree of polymerization of the alpha-cellulose was estimated from the relative viscosity of 0.5 per cent solution of alpha-cellulose in cupriethylene diamine, using the equation of Battista. Acetyl value was determined by Clerk method. The pectin content was estimated by extraction with 0.5 per cent ammonium oxalate solution. Uranic acid was determined by spectrophotometry at 535 mm, using UV-VIS Spectrophotometer (Model No. U-34301, Hitachi).

The polysaccharides of the fibre were hydrolysed, according to the method of Jeffery, et al. Sugars in the hydrolysate were identified by paper chromatography using Whatman filter paper No. 1 and butyl acetate: pyridine: ethanol: water ( 8:2:2:1 ) as solvents and were detected using aniline oxalate solution.

The sugars in the hydrolysate were converted to their alditol acetate and estimated by GLC, using a Hewlett Packard 5830A model gas chromatograph equipped with FID and stainless steel column ( 15 x 0.05 cm), containing 3 per cent ECNSS-M on supelcoport ( 80-100 mesh ) at 190°C , using nitrogen as carrier gas.

The ultimate cell length and its diameter were estimated by the method suggested by The Textiles Institute, Manchester. The length/ breadth ratio was also calculated. The gravimetric fineness of the fibre was determined by the method of Bandyopadhyay et al. The filament tenacity was estimated with INSTRON Tensile Tester at a test length of 1 cm and the cross-head speed of 1 cm/ min.

5) Within 100 words write a paragraph (in a grid) on the following topic:
*Engineering education has been replaced by a growing interest in the social sciences among the young generation in India.* [6]