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## **EIGHTH SEMESTER**

**B.E. (PE)**

**MID SEMESTER EXAMINATION MARCH 2005**

### **PE-411 PROJECT PLANNING AND APPRAISAL**

*Time: 1 Hour 30 Minutes*

*Max. Marks : 20*

Note : Answer **ALL** questions.  
Assume suitable missing data, if any.

- 1 Define Capital Budgeting. Explain Selection and Implementation phases. (4)
- 2 Define the levels of Decision making. What are their key characteristics? (4)
- 3 List and describe the various elementary investment strategies. (4)
- 4 What do you mean by conglomerate diversification. Explain. (4)
- 5 Discuss how a project rating index may be developed. (4)

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## EIGHTH SEMESTER

**B.E. (PE)**

MID SEMESTER EXAMINATION **MARCH 2005**

### **PE-413 NON-CONVENTIONAL METHODS OF MANUFACTURING**

Time: 1 Hour 30 Minutes

Max. Marks : 20

**Note :** Answer **ALL** questions.  
Assume suitable missing data, if any.

- 1[a] Define unconventional method of manufacturing and state reasons for its development. Why is it also termed as modern method of manufacturing? How do these processes differ from conventional methods of manufacturing? (2)
- [b] Discuss ultrasonic machining process with schematic diagram giving emphasis on the following : (3)
- Mechanics involved
  - Type of media
  - Types of abrasives used
  - Material applications
  - Job (shape) application
  - Limitation
  - Frequency of amplitude
- 2 Elaborate electrochemistry of Electrochemical Machining – “ECM” process. Discuss in brief kinematics and dynamics of ECM along with working principle, type of applications, shape of finished components, merits and limitations. (5)
- 3[a] Discuss factors affecting the penetration rate of ultrasonic machining tools. (2)
- [b] What are the properties of electrolytes used in ECM? (1)
- [c] Draw a neat sketch of “Electrolytic Grinding” process. (2)

- 4[a] Explain electro discharge machining process with schematic diagram, principle involved, mechanics used and its applications in engineering industries. (2)
- [b] Name conventional and super abrasives used in abrasive machining. What is the purpose of the abrasives in electrochemical grinding? (1½)
- [c] In abrasive jet machining at what stage is the abrasive introduced in the water jet. Draw a schematic outline of the equipment involved. (1½)