PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Summer 2017 - 18 Examination

Semester: 2   Date: 25/05/2018
Subject Code: 03216154   Time: 2.00 pm to 4.30 pm
Subject Name: Resource Management   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 A) Discuss precautions to be taken: **(05)**
    1. Before carry out the maintenance
    2. During maintenance

B) Discuss various aspects of equipment planning.   **(05)**

C) Estimate book value of equipment at the end of each year of ownership from following data: **(05)**
- Initial book value of equipment= Rs. 2500000.
- Period of ownership= 5 years.
- Salvage value= Rs. 200000 , i= 16%
- Use sinking fund method.

Q.2 **Answer the following questions**. (Attempt any three) (Each five mark)   **(15)**
A) What is Standardization & Codification?
B) Differentiate between ABC analysis, VED analysis and FSN analysis.
C) What is FAST diagram technique? How to create the FAST diagram?
D) Write following purchasing Principles: (i) Right Quality (ii) Right Price.

Q.3 A) What is the standard procedure to create FAST diagram for any of the construction project.   **(07)**

B) What is the difference between Procurement and Purchasing process? Enlist the various   **(08)**
    steps followed in Procurement life cycle.

<div align="center">OR</div>

B) What are the early and late procurement? Explain the advantages and dis-advantages of   **(08)**
    Centralized and Local purchasing?

Q.4 A) Enlist various equipment selection factors and explain any two in brief.   **(07)**

<div align="center">OR</div>

A) State and discuss Task constrains, Site constrains and economic constrains for equipment   **(07)**
    Planning selection.

B) For a rear dump truck, work out its cost per hour for hiring it out to the other agency, for the   **(08)**
    following data:
- Showroom cost of truck = Rs 350000
- Insurance premium per year = Rs 45000
- Annual investment = 16.75% of average investment
- Life of equipment = 4 years
- Operating time = 3 shifts X 8 hours/day , 28 days/month
- Efficiency factor = 0.90
- Salvage value = 18% of show room cost
- Maintenance and repair cost = 65% of annual depreciation
- Annual overhead cost = Rs 25000
- Fuel and lubricant cost per hour = Rs 300
- Monthly salary of operator and helper = Rs 8000
- Cost of one tyre = Rs 3000 (At least 2 tyres need replacement twice in a year)
    Use constant percentage method for depreciation.