

15CV61

Visvesvaraya Technological University, Belagavi

MODEL QUESTION PAPER

6th Semester , B.E (CBCS) CV

Course : 15CV61 –Construction Management and Entrepreneurship

Time : 3 hours

Max Marks : 80

Note : (1) Answer any FIVE full questions selecting any one full question from each module.

(2) Assume missing data suitably and clearly mention in the answer script about it

Module-1

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| 1a | Define Management and List out management functions or process | 04 |
| 1b | Define “ Activity Time” , Event Time , Critical Path and Total Float | 08 |
| 1c | <p>Compute the Project duration of PND given Below</p> | 04 |

OR

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| 2a | List out different types of construction organization structure and explain “ Matrix Organization Structure” | 08 |
| 2b | Explain the Concept of Scheduling through “ Bar or Gantt chart “ and Mile stone Chart” ? How Mile stone chart is Converted to Network Diagram | 08 |

Module-2

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| 3a | Explain Main Provisions of the Minimum wages act 1948 (as amended now) | 06 |
| 3b | <p>A labor gang consisting of 4 Skilled , 8 Unskilled and 2 Highly Skilled will do 20 MT of Rebar Work at Ground Floor in 8 Hrs duration per Day. The building is GF+ 2 Upper floors and each floor have 1200MT of Bar bending work. The productivity decreases at the rate of 5% for each floor. The work needs to be completed in 24 days of 8 hours working per day. Estimate following :</p> <ul style="list-style-type: none"> • Total team hour required to complete the activity. • Total number of Labor gangs required to finish the activity. • Total work force involved • total man hours and man days required for the activity • Unit labor Cost for Activity by adopting Per day rate of Rs 750 for Highly Skilled ,Rs 550 for Skilled and Rs 325 for Unskilled workers. | 12 |

OR

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| 4a | Define Workers productivity Standard and list out typical factors affecting the workers production efficiency | 06 |
| 4b | Define “ Depreciation” , Salvage Value & Book Value. Work out Year by year Depreciation cost and its Book Value using Straight Line Method and Declining balance method for an Excavator whose purchase Price is Rs 75Lakhs , Technical Life is 5 yrs , Salvage value = 15% of capital Cost | 12 |

Module-3

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| 5a | Explain “ Total Quality Management “ , “ Cost of Quality” and “ Quality Control” as applicable to construction | 12 |
| 5b | Describe safety measures to be adopted while doing open excavation of earth and rock to avoid accidents | 06 |

OR

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| 6a | Which are domains of Ethics ? List out 7 Ethical conduct in compliance with ethical principles as applicable in construction | 06 |
| 6b | Define “ Quality” and Explain “ Construction Quality Process” and “ Quality Assurance” | 12 |

Module-4

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| 7a | A concrete mixer has the following cash flow details; Initial purchase price = Rs.775000, Annual operating and maintenance cost = Rs.50000 Salvage value = Rs.250000, Useful life = 10 years In addition one operator is required to operate the concrete mixer at cost of Rs.50 per hour. The production (preparation) rate of concrete of the mixer is 0.25m ³ per hour. The revenue to be generated from production of 1m ³ of concrete is Rs.2000. The interest rate is 10% per year. How many „ cum “ of concrete need to be produced per year so that the revenue generated break-evens with the expenditure? | 08 |
| 7b | A company offers 12% interest rate on deposit , what is the effective rate of interest if compounded (1) Monthly (2) Quarterly (3) Semi- annually. Also Calculate Nominal Interest rate , if effective rate is 10% p.a , compounded semi- annually | 08 |

OR

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| 8a | Type A design of a dam costs Rs 50 crore to construct and an expenses of Rs 7.5 crore every year to operate and maintain it. Type B design of the dam on the other hand would require Rs 75 crore to construct and an annual expenses of Rs 5 crore to operate and maintain. Both the designs have considered 100ys as design life of dam. The minimum required rate of return is 5% , which design should be given a go-ahead. | 06 |
| 8b | There are two alternatives for purchasing a concrete mixer. Both the alternatives have same useful life. The cash flow details of alternatives are as follows; Alternative-1: Initial purchase cost = Rs.3,00,000, Annual operating and maintenance cost = Rs.20,000, Expected salvage value = Rs.1,25,000, Useful life = 5 years. Annual revenue generated = 75000 /- Alternative-2: Initial purchase cost = Rs.2,00,000, Annual operating and maintenance cost = Rs.35,000, Expected salvage value = Rs.70,000, Useful life = 5 years. Annual revenue generated = Rs 50000 Using present worth method, find out which alternative should be selected, if the rate of interest is 10% per year. | 10 |

Module-5

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| 9a | Define entrepreneur ? explain the functions of an entrepreneur | 08 |
| 9b | Define a Business plan , Explain Business Planning Process | 08 |

OR

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| 10a | What are various ways of entry into international business | 08 |
| 10b | Write short Notes on (a) TECKSOK (B) KIADB (C) KSSIDC (D) DIC – Single window agency | 08 |