

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

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

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

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

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

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

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

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

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

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

OR

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