

Model Question Paper with effect from 2022-23(CBCS Scheme)

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Fourth Semester B.E. Degree Examination Construction Management and Entrepreneurship

TIME: 03 Hours

Max. Marks: 100

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.
02. Use of Normal Distribution Function table is permitted.

Module – 1			BTL	M																					
Q.1	(a)	Discuss the Characteristics of management.	L1,CO1	8																					
	(b)	The activity data of a project is given in the Table below: <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Preceding Activity</th> <th style="text-align: center;">Duration (Days)</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">X</td><td style="text-align: center;">--</td><td style="text-align: center;">5</td></tr> <tr><td style="text-align: center;">Y</td><td style="text-align: center;">X</td><td style="text-align: center;">2</td></tr> <tr><td style="text-align: center;">C</td><td style="text-align: center;">--</td><td style="text-align: center;">6</td></tr> <tr><td style="text-align: center;">D</td><td style="text-align: center;">--</td><td style="text-align: center;">4</td></tr> <tr><td style="text-align: center;">E</td><td style="text-align: center;">D</td><td style="text-align: center;">7</td></tr> <tr><td style="text-align: center;">F</td><td style="text-align: center;">Y, C, E</td><td style="text-align: center;">3</td></tr> </tbody> </table> Draw the network diagram, identify the critical path and Project duration using CPM.	Activity	Preceding Activity	Duration (Days)	X	--	5	Y	X	2	C	--	6	D	--	4	E	D	7	F	Y, C, E	3	L3,CO1	8
	Activity	Preceding Activity	Duration (Days)																						
X	--	5																							
Y	X	2																							
C	--	6																							
D	--	4																							
E	D	7																							
F	Y, C, E	3																							
(c)	Mention the types of project plans,.	L1,CO1	4																						
OR																									
Q.2	(a)	Four activities to be undertaken in series for the completion of a project are as follows: <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Optimistic time (days)</th> <th style="text-align: center;">Most likely time (days)</th> <th style="text-align: center;">Pessimistic time (days)</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">P</td><td style="text-align: center;">8</td><td style="text-align: center;">14</td><td style="text-align: center;">22</td></tr> <tr><td style="text-align: center;">Q</td><td style="text-align: center;">7</td><td style="text-align: center;">21</td><td style="text-align: center;">32</td></tr> <tr><td style="text-align: center;">R</td><td style="text-align: center;">8</td><td style="text-align: center;">19</td><td style="text-align: center;">28</td></tr> <tr><td style="text-align: center;">S</td><td style="text-align: center;">28</td><td style="text-align: center;">40</td><td style="text-align: center;">52</td></tr> </tbody> </table> Estimate the time required at (i) 95% probability to complete the project (ii) 5 % probability to complete the project	Activity	Optimistic time (days)	Most likely time (days)	Pessimistic time (days)	P	8	14	22	Q	7	21	32	R	8	19	28	S	28	40	52	L3,CO1	10	
	Activity	Optimistic time (days)	Most likely time (days)	Pessimistic time (days)																					
	P	8	14	22																					
Q	7	21	32																						
R	8	19	28																						
S	28	40	52																						
(b)	Discuss on Autocratic and Democratic Management Styles.	L1,CO1	4																						
(c)	Explain the Strategic and Operational Plans.	L2,CO1	6																						
Module – 2																									
Q.3	(a)	What are the factors affecting the labour Output?	L1,CO2	8																					
	(b)	Estimate the hourly production in bulk volume (LCM) of a backhoe with bucket capacity of 0.96 cubic meters that is employed on excavation of a foundation, which is 4m deep in hard digging soil. The excavated earth is to be loaded in waiting dump trucks, placed at a swing angle of 75°. The expected performance efficiency is 83%. Assume the ideal output of face shovel with given bucket capacity is 150 LCM. Assume and list the suitable corrections to be applied.	L3,CO2	10																					
	(c)	Give any four advantages of material management.	L1,CO2	2																					
OR																									
Q.4	(a)	Enumerate all the types and sub types of the different construction equipment.	L1,CO2	10																					
	(b)	What is Inventory Control? What are the functions of inventory control.	L2,CO2	5																					

	(c)	The purchase value of a crawler tractor is Rs. 30,00,000/-. Its assessed resale value after using for 5 years is 10% of the delivered price. The equipment is planned to operate 2000 hours per year. Calculate its annual and hourly depreciation.	L3,CO2	5														
Module – 3																		
Q.5	(a)	Differentiate between quality control and quality assurance.	L1,CO 3	4														
	(b)	Explain the safety procedures to be adopted during excavation.	L2, CO3	8														
	(c)	Discuss on the following (i) Gifts and bribes (ii) whistle blowing (iii) engineering ethics	L1, CO3	8														
OR																		
Q.6	(a)	What are the safety procedures to be adopted during drilling and blasting.	L2,CO3	6														
	(b)	Explain the TQM process in construction.	L1,CO3	8														
	(c)	Briefly write about Morals and integrity in workplace.	L1,CO3	6														
Module – 4																		
Q.7	(a)	Differentiate between micro and macro economics.	L1,CO 4	8														
	(b)	An engineer has two bids for an excavator to be installed in a new building project. The details of the bids for the excavator are as follows: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th rowspan="2">Bid</th> <th colspan="3">Engineer's estimate</th> </tr> <tr> <th>Initial Cost (Rupees)</th> <th>Service life (years)</th> <th>Annual Operating & Maintenance Cost (Rupees)</th> </tr> </thead> <tbody> <tr> <td>Bid 'A'</td> <td>10,50,000/-</td> <td>15</td> <td>60,000</td> </tr> <tr> <td>Bid 'B'</td> <td>11,00,000/-</td> <td>15</td> <td>70,500</td> </tr> </tbody> </table> <p>Determine which bid should be accepted, based on the present worth method of comparison assuming 18% interest rate, compounded annually.</p>	Bid	Engineer's estimate			Initial Cost (Rupees)	Service life (years)	Annual Operating & Maintenance Cost (Rupees)	Bid 'A'	10,50,000/-	15	60,000	Bid 'B'	11,00,000/-	15	70,500	L4,CO4
Bid	Engineer's estimate																	
	Initial Cost (Rupees)	Service life (years)	Annual Operating & Maintenance Cost (Rupees)															
Bid 'A'	10,50,000/-	15	60,000															
Bid 'B'	11,00,000/-	15	70,500															
OR																		
Q.8	(a)	Define the following terms related to engineering economics: (i) Present worth (ii) Future worth (iii) Annuities (iv) Salvage value	L1,CO4	8														
	(b)	The fixed costs for a company are Rs. 60,000/-. The estimated sales for the period are valued at Rs. 2,00,000/-. The variable cost per unit for the single product is Rs. 5/-. If each unit sells at Rs. 25/- and the number of units involved coincides with the expected volume of output. Construct the break even chart and determine the following: (i) The breakeven point (ii) The profit earned at a turnover of Rs. 1, 25, 000/-. (iii) Margin of safety (iv) Angle of incidence	L3,CO4	12														
Module – 5																		
Q.9	(a)	Write briefly about international entrepreneurship opportunities.	L1,CO5	4														
	(b)	Enumerate the barriers for entrepreneurship.	L1,CO5	8														
	(c)	Discuss in detail about the project report for starting a new venture.	L2,CO5	8														
OR																		
Q.10	(a)	Mention the uses of direct foreign investment.	L1,CO5	4														
	(b)	Discuss the characteristics of entrepreneur.	L2,CO5	8														
	(c)	Explain Business planning process	L1,CO5	8														