

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- JUNE-2024

COURSE CODE(CREDITS): 10M11CE214

MAX. MARKS: 35

COURSE NAME: CFM

COURSE INSTRUCTORS: Ashok Kumar Gupta

MAX. TIME: 2 Hour

*Note: All questions are compulsory. Marks are indicated against each question in brackets.*

1. A project consists of three tasks. Task A is scheduled to begin at the start of Week 1 and finish at the end of Week 2. Task B is scheduled to begin at the start of Week 1 and finish at the end of Week 1. Task C is scheduled to begin at the start of Week 2 and end at the end of Week 2. The budgeted cost for Task A is \$3,000, for Task B is \$1,000, and for Task C is \$500. At the end of the first week Task A is 45% complete, Task B is 100% complete, and Task C is 10% complete. What is the schedule performance index for the project at the end of the first week? The actual cost of the work performed at the end of the first week for the project is \$2,350. Determine the cost performance index for the project. (10)
2. Determine the estimated cost of the work performed each week given the tasks—with their associated costs and schedules—shown in the following table. When a task spans more than one week, the costs should be divided equally among the weeks. (8)

TASK	COST (\$)	WEEK	
		START	FINISH
Mobilization	1,000	1	1
Grubbing	4,000	1	1
Rough Excavate Roadway	24,000	2	4
Grade and Roll Sub Grade	1,000	4	4
Place and Compact Road Base	8,000	5	5
Place and Compact Asphalt	12,000	5	5
Grade Shoulders	1,000	6	6
Clean Up	1,000	6	6
Demobilize	1,000	6	6

3. The secretary for your company makes \$8.50 per hour and last year was paid for 2,220 hours of work and 120 hours of vacation. The secretary is expected to work the same number of hours this year. Time-and-a-half is paid on any work over 40 hours per week. In the past the secretary has received a \$200 Christmas bonus. Determine the average wages paid to the secretary during a one-year period. The secretary is paid a \$100 per month vehicle allowance to cover use of a personal vehicle for company business. Determine the annual wages, including allowances paid to the secretary. (5)

4. Determine the annual budget for office utilities using the data from the past twelve months shown in Figure 9-1. Utility costs are expected to increase by 5% per year due to inflation. None of the company's goals are expected to affect the utility costs. (12)

### EXPENSE REPORT

From 12/1/03 to 11/30/04

Ck Num	Date	Payee	Account	Amount
5068	01/14/04	Gas Company	Office Utilities	137.18
5069	01/14/04	Power Company	Office Utilities	66.44
5079	02/13/04	Gas Company	Office Utilities	190.35
5080	02/13/04	Power Company	Office Utilities	66.05
5088	03/12/04	Gas Company	Office Utilities	162.82
5089	03/12/04	Power Company	Office Utilities	66.47
5099	04/09/04	Gas Company	Office Utilities	128.17
5101	04/09/04	Power Company	Office Utilities	53.18
5113	05/15/04	Power Company	Office Utilities	56.50
5115	05/15/04	Gas Company	Office Utilities	96.71
5123	06/09/04	Power Company	Office Utilities	48.54
5124	06/09/04	Gas Company	Office Utilities	55.40
5137	07/14/04	Power Company	Office Utilities	62.66
5138	07/14/04	Gas Company	Office Utilities	46.44
5147	08/06/04	Gas Company	Office Utilities	28.35
5148	08/06/04	Power Company	Office Utilities	69.02
5162	09/09/04	Power Company	Office Utilities	64.42
5163	09/09/04	Gas Company	Office Utilities	31.24
5179	10/16/04	Gas Company	Office Utilities	33.46
5182	10/16/04	Power Company	Office Utilities	57.39
5234	11/05/04	Gas Company	Office Utilities	39.48
5235	11/05/04	Power Company	Office Utilities	51.02
5244	12/10/04	Gas Company	Office Utilities	65.84
5248	12/10/04	Power Company	Office Utilities	68.46
			Total	1,745.59