United College

Kumaripati, Lalitpur

SECOND TERM EXAM – 2080

Level: BBS (I[st] Year) F.M.: 100

Time: 3 hrs. P.M.: 40

Course Title: Principles of Management

(SET A) Date: 2081/01/07

Candidates are required to give the answer in their own words as far as practicable. The figures in the margin indicate full marks.

Group 'A'

Brief answer question. Attempt all question (2*10 = 20)

1. What is goal displacement?
2. What are the characteristics of Management?
3. What does knowledge management mean?
4. What is SWOT analysis?
5. What are the fundamentals of strategic planning?
6. Compare strategic plan and tactical plan?
7. What is decision making?
8. What are the conditions of decision making?
9. What do you mean by span of control?
10. What does the classical approach to organizing mean?

Group-'B'

Descriptive answer questions (Attempt any FIVE questions) (10*5 = 50)

11. What is goal succession? Explain its reason.
12. What are the functions of Management? Explain.
13. Explain contingency theory with its contribution and limitation.
14. What is planning? Explain its type.
15. What is decision making? Explain its process.
16. What is organizing? Explain its importance.

Group-'C'

Analytical answer questions (Attempt any TWO questions) (15*2 = 30)

17. What is departmentalization? Explain its type.
18. What is business environment? Explain its general environment with its component.
19. Explain emerging challenges for management.

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SECOND TERM EXAM – 2080

Level: BBS (Ist Year) F.M.: 100

Time: 3 hrs. P.M.: 40

Course Title: Business Statistics (SET A) **Date: 2081/01/11**

Candidates are required to give the answer in their own words as far as practicable.
The figures in the margin indicate full marks.

Group 'A'

Brief answer question. Attempt all question: (2*10 = 20)

1. The frequency distribution of daily expenditure of a group of families is given below:

Daily expenditure	0-20	20-40	40-60	60-80	80-100
No. of families	13	-	27	19	16

If the mode of the distribution is 44, find the missing frequency.

2. Calculate the correlation coefficient between X and Y from the following data:
n = 10, $\sum X = 18$, $\sum Y = 25$, $\sum X^2 = 90$, $\sum Y^2 = 120$ and $\sum XY = 65$,

3. Obtain the regression equation of Y on X from the following results:
$\bar{X} = 80$, $\bar{Y} = 120$, r = 0.72, $\sigma_x^2 = 64$ and $\sigma_y^2 = 81$

4. The first two moments of a distribution about the value 5 of the variables are 3 and 19. Find the second central moment.

5. Let n = 100 and $\bar{X} = 85$. If one of the data was wrongly taken as 120 instead of 100. What is the correct mean?

6. A person travels the first 5 km at 10 km/ hr, the second 6 km at 3 km/hr and third 9 km at 6 km/hr., what is his average speed?

7. 120 students appeared for a certain test and the following marks distribution was obtained:

Marks	0-20	20-40	40-60	60-80	80-100
No. of students	10	30	40	24	16

Find the highest mark of the lowest 40% of the mark of the students.

8. From the information given below, find the average daily wage for the workers of the two factories.

	Factory A	Factory B
No. of wage earners	250	200
Average daily wage	Rs 20	Rs 25

9. In a distribution, the difference of two quartiles is 2.05, sum of two quartiles is 72.67 and median is 36.18, find the coefficient of skewness.

10. In a moderate asymmetrical distribution, the values of the mode and the median are 20 and 24 respectively, find the mean.

Group-'B'

Descriptive answer questions (Attempt any FIVE questions): (10*5 = 50)

11. The following table provides the population in 5 years of a certain village:

Year	1990	1991	1992	1993	1994
Population '000'	20	22	25	29	34

i) Fit a straight-line trend by the method of least square
ii) Calculate the trend values
iii) Plot the original data and trend values in the same graph paper

12. Calculate the rank correlation coefficient from the following data:

Marks in Economics	25	28	32	36	40	38	39
Marks in Statistics	70	80	85	75	65	59	48

13. 20, 13, 27, 36, 22, 32, 41, 12, 42, 33, 18

i. Calculate the five number summaries
ii. Construct a box and whisker plot

14. Calculate measure of skewness based on mean, mode and standard deviation.

Size (cm)	30-33	34-37	38-41	42-45	46-49	50-53
Frequency	6	10	16	25	15	8

15. Calculate Harmonic mean from the following frequency distribution.

Marks	10-15	15-20	20-25	25-30	30-35
No of students	2	4	5	8	6

16. Calculate skewness and kurtosis of the following frequency distribution by the method of moments

Class Interval	0-10	10-20	20-30	30-40
Frequency	1	4	3	2

Group-'C'

Analytical answer questions (Attempt any TWO questions) (15*2 = 30)

17. Regressions equations are: 4X -5Y + 33 = 0 and 20X -9Y - 107 = 0, Standard deviation of X is 3. Find
i. Mean of X and Y
ii. Correlation Coefficient between X and Y
iii. Standard deviation of Y

18. From the data given below, test for normality of the sales distribution of two firms A and B:

Sales in Lakh Rs.	No. of firms	
	A	B
0-10	3	5
10-20	12	10
20-30	20	19
30-40	11	11
40-50	4	5

19. The following table gives the ages of the husbands and wives in a group of 50 newly married couples

Age of wife	Age of husbands			Total
	20-25	25-30	30-35	
16-20	9	14	-	23
20-24	6	11	3	20
24-28	-	-	7	7
Total	15	25	10	50

i) Find the two lines of regression.
ii) Find the correlation coefficient
iii) Estimate the age of the husband when the wife is 20 years old.

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Level: BBS (I[st] Year) F.M.: 100

Time: 3 hrs. P.M.: 40

Course Title: Business Statistics (SET B) **Date: 2081/01/11**

Candidates are required to give the answer in their own words as far as practicable.
The figures in the margin indicate full marks.

Group 'A'

Brief answer question. Attempt all question: (2*10 = 20)

1. From the information given below, find the average daily wage for the workers of the two factories

	Factory A	Factory B
No. of wage earners	250	200
Average daily wage	Rs 20	Rs 25

2. In a moderate skewed distribution, if arithmetic mean = 24.6 and mode =26.1, find the value of median.

3. The ranks of 6 trainees before and after the training are as follows:

Rank before training	2	3	5	1	4	6
Rank after training	1	2	4	3	6	5

Calculate the rank correlation coefficient.

4. The frequency distribution of daily expenditure of a group of families is given below:

Daily expenditure	0-20	20-40	40-60	60-80	80-100
No. of families	13	-	27	19	16

If the mode of the distribution is 44, find the missing frequency.

5. Regression equations of the variables X and Y are given below:
$3X + 2Y - 26 = 0$ and $6X + Y - 31 = 0$, find the mean of X and Y
6. From the following data, find the skewness
$N = 100$, $\sum f (X - \bar{X})^2 = 320$ and $\sum f (X - \bar{X})^3 = 274$
7. For a distribution, Bowley's coefficient of skewness = -0.36, $Q_1 = 8.6$ and median = 13.3, find Q_3
8. The mean mark of 100 students found to be 40. Later on, it was discovered that a score 53 was misread as 83. Find the correct mean corresponding to the correct score.
9. A man climbs up a slope at a speed of 30 km/hr and descends it at a speed of 45 km/hr. If the distance covered each way is same, find the average speed for the entire journey.
10. 120 students appeared for a certain test and the following marks distribution was obtained:

Marks	0-20	20-40	40-60	60-80	80-100
No. of students	10	30	40	24	16

Find the least mark of the highest 5% of the mark of the students.

Group-'B'

Descriptive answer questions (Attempt any FIVE questions): (10*5 = 50)

11. Obtain the seasonal indices from the following data using the method of simple averages.

Year	Production (in thousands of units)			
	1[st] quarter	2[nd] quarter	3[rd] quarter	4[th] quarter
2050	25	30	21	32
2051	27	28	25	34
2052	22	27	21	30
2053	24	25	20	33

12. Find the regression equations of Y on X and X on Y from the following data:

X:	5	9	13	17	21
Y:	3	8	13	18	23

13. Calculate the five-number summary, construct the box and whisker plot and give comment about the distribution also.

Income	35	40	45	50	55
No. of workers	8	10	12	10	7

14. Calculate the Bowley's measure of skewness from the following data:

Income group	Below 100	100-150	150-200	200-250	250-300	300 & above
No. of workers	10	25	145	220	70	30

15. Find the correlation coefficient from the following bi-variate table:

Y X	2.5 – 7.5	7.5 – 12.5	12.5 – 17.5	17.5 – 22.5	Total
10 – 12	-	2	4	6	12
12 – 14	-	5	3	-	8
14 - 16	3	-	-	7	10
Total	3	7	7	13	30

16. Calculate the appropriate measure of central tendency from the following data:

Monthly Income	Below 100	100 - 199	200 - 299	300 - 399	400 - 499	500 & above
No. of families	5	20	40	15	12	8

Group-'C'

Analytical answer questions (Attempt any TWO questions) (15*2 = 30)

17. Calculate the seasonal indices for the following data by ratio to moving average method using multiplicative model:

Year	Quarters			
	I	II	III	IV
2001	68	62	61	63
2002	65	58	66	61
2003	68	63	63	67

18. Given below are the figures of production of sugar factory:

Year	1964	1965	1966	1967	1968	1969	1970
Production'000' tones	77	88	94	85	91	98	90

i) Fit a straight-line trend by the method of least squares.
ii) Calculate the trend values
iii) Plot the original data and the trend values on graph paper

19. The following table gives the monthly income of the workers in Kathmandu and Pokhara. Using Lorenz's curve, examine which city has greater inequality of monthly income distribution.

Monthly Income (Rs.)	No. of persons '000'	
	Kathmandu	Pokhara
450	5	32
500	15	22
550	20	15
600	20	12
650	12	10
700	10	6
750	9	2
800	9	1

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