

MODEL QUESTIONS 2018

Janapriya Multiple Campus

Pokhara, Nepal

BMTM/Second Semester/Statistics for Managers

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

Group "A"

Brief Answer Questions

[5X2=10]

QN 1. Compute a suitable measure of central tendency from the following frequency distribution.

Income (Rs. 000)	Below 50	50-60	60-70	70-80	80-90	90 & above
Workers	6	18	35	24	21	3

QN2. Explain the basic difference between exclusive and inclusive frequency distribution.

QN 3. The mean and variances of villages A and B are as follows

Villages	A	B
Means	22	28
Variances	16	19

Which village is more consistent and why?

QN 4. A bag contains 25 balls from 1 to 25. If a ball is chosen at random, what is the probability that the number is (i) multiple of 5 and (ii) more than or equal to 20.

QN 5. If the covariance between A and B is 20 and the variances of A and B are 18 and 83 respectively, find the correlation coefficient between them.

Group "B"

Short Answer Questions

[6X5=30]

QN 6. The income of a certain villagers was distributed normally with mean 6000 and standard deviation 500. What percent of villagers get the income:

- more than 6000
- less than 5600
- between 4500 and 6500
- between 6500 and 7500

QN 7. Four hundred European were chosen at random and their mean weekly expenditure was \$250 with standard deviation \$40. However, for 350 American, their mean weekly expenditure was found \$220 with standard deviation \$55. At 5.0 percent level of significance, test whether the mean weekly expenditure of two nationals are equal or not?

QN 8. The mode of the following series is 24. Find the missing frequency, where the total number of students are 100.

Marks	:	0-10	10-20	20-30	30-40	40-50
No. of students (f)	:	14	?	27	?	15

QN 9. Calculate the theoretical frequencies from the following frequency distribution if the probability of success and failure is equal.

No. of Success	5	4	3	2	1	0
Frequency	190	500	900	960	500	150

QN 10. A population consists of five members 2, 3, 6, 8 and 11. Consider all possible samples of size 2 that can be drawn without replacement from this population.

- Find the mean and variance of the population.
- Show the mean of sample means is equal to the population mean.

QN 11. The number of tourists arrival before and after the campaign "Visit Nepal" for eight months of 2017 is given below.

Before	70	675	48	72	80	92	98	100
After	72	70	53	75	84	95	105	104

Test whether "Visit Nepal Campaign" was effective or not?

Group "C"

Comprehensive Answer Questions

[20X2=40]

QN 12. From the following distribution of marks of 500 students of a campus, find

- the limits of marks of middle 80% students.
- the minimum pass mark if only 20% of the students had failed.
- the minimum marks obtained by the top 25% of the students.
- percentage of students failed.
- percentage of students getting marks more than 75.

Marks	0-20	20-40	40-50	50-60	60-80	80-100
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No. of students	50	100	150	90	60	50
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QN 13. The following table gives the ages and blood pressure of 10 women.

Age	56	42	36	47	49	42	60	72	63	55
Pressure	147	125	118	128	145	140	155	160	149	150

- I. Obtain the line of regression for estimating blood pressure.
- II. Interpret the result.
- III. Estimate the blood pressure of a woman whose age is 50 years.
- IV. Also compute correlation coefficient between age and blood pressure.