SF-666

Seat No.	

Total No. of Pages :2

M.B.A. (Part - I) (Semester - I) (CBCS) Examination, December - 2016
Quantitative Techniques for Management (Paper - III)
Sub. Code : 68304

Day and Date : Thursday, 29-12-2016 **Total Marks : 80**
Time : 10.30 a.m. to 1.30 p.m.

Instructions :
1) **Question No.1 and Question No.2 is compulsory.**
2) **Attempt any two questions from Question No. 3 to Question No. 5.**
3) **Figures to the right indicate full marks.**

Q1) In a survey, data on daily wages paid to workers of two factories A and B are as follows: **[20]**

Daily wages:	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No. of workers (factory A)	15	30	44	60	30	14	7
No. of workers (factory B)	25	40	60	35	20	15	5

Find out:

a) Which factory pays higher average wage?
b) Wage of which factory have greater variability?
c) Combined C.V.

Q2) Define correlation and explain various types of correlation. Seven methods of imparting business education were ranked by MBA students of two universities as follows: **[20]**

Methods of teaching:	I	II	III	IV	V	VI	VII
Rank by students of Uni. A	2	1	5	3	4	7	6
Rank by students of Uni. B	1	3	2	4	7	5	6

Calculate rank correlation coefficient and comment its value.

P.T.O.

Q3) a) Define Poisson distribution. **[10]**

Number of accidents in a factory during a month follows Poisson distribution with mean 5. Find the probability that in certain month number of accidents in factory will be

i) Less than 3.
ii) Between 3 and 5.
iii) More than 3.

b) Explain the terms Type –I and II errors.

A sample of 20 workers enrolled in a health program shows mean diastolic blood pressure 99 and sample S.D 32. Can you conclude that workers enrolled in program have diastolic blood pressure 75 recommended by doctors? (Take $\alpha = 0.05$) **[10]**

Q4) a) Discuss the Chi – square test of goodness of fit. **[10]**

b) Define probability mass function and distribution function.

A scooter coming - off the production line can have 0,1,2,3, or 4 defects according to the p.m.f such that $P(0) = 0.4$, $P(1) = 0.25$, $P(2) = 0.15$, $P(3) = 0.1$, $P(4) = 0.1$ Find the probability that a scooter has

i) Two or more defects.
ii) Less than 3 defects.
iii) Not more than 1 defect.
iv) At most 1 defect.
v) No defect given that the scooter has not more than 1 defect. **[10]**

Q5) Write short notes on any four: **[20]**

a) Properties of normal distribution.
b) Addition and multiplication laws of probability for two events.
c) T- test for mean.
d) Measures of dispersion.
e) Importance of regression in business forecasting.
f) Requirements of good average.

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