PG Odd Semester (CBCS) Exam., December—2016

STATISTICS

(3rd Semester)

Course No. : STSCC–304

(Applied Statistics—I)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. *(a)* What is the difference between 'economic growth' and 'economic development'? Explain how economic development can be measured from economic welfare, along with the problems faced on quantifying development from welfare. 2+4=6

(b) What is national income? Explain how national income can be estimated using the expenditure approach. What shall the precautions be? 2+3+3=8

2. *(a)* Explain the human development index. Write why you feel that this index is better than the physical quality of life index. What are the limitations of the human development index? 3+3+3=9

(b) "The Gross National Product per capita is a better measure of economic development than Gross National Product." Explain. 5

UNIT—II

3. *(a)* Define stationary population and stable population. Explain the different measures of fertility. 3+4=7

(b) Define force of mortality. Show that

$$q_x \quad {}_0^1 \; {}_x \; {}_t \; {}_t p_x \, dt$$

1+3=4

(c) Write a few uses of life table. 3

4. *(a)* Deduce the Greville's unabridged life table formula, i.e.,

$$ {}_n q_x \quad \frac{{}_n m_x}{\frac{1}{n} \quad {}_n m_x \quad \frac{1}{2} \quad \frac{n}{12}\left({}_n m_x \quad k\right)} $$ 8

(b) Deduce Mekeham's graduation formula for the force of mortality. 6

UNIT—III

5. *(a)* What is the difference between population projection and population estimate? Explain the method of fitting the logistic curve using the Rhodes method. 7

(b) Explain the different measures of quantifying poverty. 7

6. *(a)* Explain the method of population projection by the component method. 5

(b) Explain how inequality in income can be measured using the Gini coefficient. 5

(c) Write a note on the combined measure due to Sen. 4

UNIT—IV

7. *(a)* Explain the role of P. C. Mahalanobis towards the improvement of statistical system of our country. 7

(b) Give an overview of the current statistical system of India. 7

8. *(a)* Explain the role and functions of the National Statistical Commission. 7

(b) Give a brief overview of the challenges faced in conducting the Census in India. 7

UNIT—V

9. *(a)* How is agricultural statistics collected in India? Provide a brief details. 7

(b) Explain how consumer price index number in India is computed. 7

10. *(a)* What is industrial statistics? Provide a brief details of the annual survey of industries. 7

(b) How is inflation measured in India? 7

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