

2016

**INTEGRATED M.Phil. & Ph.D. PROGRAMME**

**1st Semester Examination**

**COMMERCE**

**RESEARCH METHODOLOGY—II**

**PAPER—COM-112**

*Full Marks : 25*

*Time : 1 Hours*

*The figures in the right hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any two questions from the following : 5×2

(a) Write brief notes on :

(i) Type-I error and Type-II error.

(ii) Level of significance.

(iii) Degree of freedom.  $(2+1\frac{1}{2}+1\frac{1}{2})$

*(Turn Over)*

(b) Define primary data. Name the methods for collecting primary data. Briefly describe any one of them.

1+1+3

(c) Explain the method of drawing a stratified sample. State the situation where stratified random sampling is preferred to simple random sampling.

5

(d) What is an error? Distinguish between sampling error and non-sampling error.

5

2. Answer *any one* question from the following : 10×1

(a) (i) A die is thrown 120 times. Denote the observed number of occurrences of  $i$  by  $O_i$ , ( $i=1, \dots, 6$ ).

$O_1 = 25$ ,  $O_2 = 17$ ,  $O_3 = 15$ ,  $O_4 = 23$ ,  $O_5 = 24$ ,  
 $O_6 = 16$ . Can we consider the die to be fair at the

5 percent level of significance?

[Given that  $\chi_{0.05,5}^2 = 11.07$ ]

(ii) India Today Magazine reported the result of a telephone poll of 800 adult Indians. The question posed of the Indians who were surveyed was: "Should the federal tax on cigarettes be raised to pay for health care reform?" The results of the survey were:

Non-Smoker	Smoker
$n_1 = 605$	$n_2 = 195$
$y_1 = 351$ said "yes"	$y_2 = 41$ said "yes"

Is there sufficient evidence at  $\alpha = 0.05$  level to conclude that the two populations – smokers and non-smokers – differ significantly with respect to their opinions? 5+5

- (b) (i) Distinguish between internal and external sources of data collection. In which situations would you recommend the use of one over the other?
- (ii) Explain the interview method of data collection. State the advancements that have been made in the technique in recent times. 5+5

**[Internal Assessment : 5 Marks]**

---