Day: **Saturday**	**S-2018-3852**	Time: **10.00 AM TO 01.00 PM**
Date: **09/06/2018**		Max. Marks: 100

N.B.:

1) Attempt **ANY FIVE** questions in each section.
2) Figures to indicate **FULL** marks.
3) Answer to both the section should be written in **SEPARATE** answer book.
4) All questions carry **EQUAL** marks.

SECTION-I

Q.1 Define research question under 'FINER' and 'PICO' criteria. **(10)**

Q.2 What is 'bias' and explain the types of bias in clinical research. **(10)**

Q.3 What are good clinical practices (GCP)? Add a note on ICMR code of ethics. **(10)**

Q.4 What is an importance of background and rationale as component of research proposal? **(10)**

Q.5 Write in detail about merits and demerits of longitudinal study design. **(10)**

Q.6 What is literature review? Explain '4s' of literature review. **(10)**

SECTION-II

Q.7 Explain measures of central tendency. **(10)**

Q.8 Explain Z –test. **(10)**

Q.9 Write in detail about Mann Whitney U test. **(10)**

Q.10 Write in detail about independent 't' test and paired 't' test. **(10)**

Q.11 The duration of time from first exposure to HIV infection to AIDS diagnosis is called the incubation period. The incubation periods of a random sample of 7 HIV infected individuals is given below (in years) : 12.0, 10.5, 9.5, 6.3, 13.5, 12.5, 7.2 **(10)**
   i) Calculate the sample mean.
   ii) Calculate the sample median
   iii) Calculate the sample standard deviation.

Q.12 In a random survey of 3,015 boys age 11, the average height was 146cm, and the standard deviation (SD) was 8 cm. A histogram suggested the heights were approximately normally distributed. Fill in the blanks. **(10)**
   a) One boy was 170 cm tall. He was above average by _____ SDs.
   b) Another boy was 148 cm tall. He was above average by _____ SDs.
   c) A third boy was 1.5 SDs below the average height. He was _____ cm tall.

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