

DIRECTIONS TO WRITE ASSIGNMENT

- Use only foolscap size paper for writing your responses.
- Only handwritten assignments will be accepted.
- **Typed or printed copies of assignments will not be accepted.**
- Tie all the pages after numbering them carefully.
- Write the question above each answer.
- Start each question from a Fresh page
- **Answer any 05 questions out of 06.**
- Answer to each question should be between **500-750 words**.

SUGGESTIONS FOR WRITING AN ASSIGNMENT:

- Read the assignments carefully.
- Go through the units on which the answers are based. Draw a rough outline of your answer.
- Make a logical order. Then write your answer neatly and submit.
- Give illustrations and tables wherever necessary.
- **You should keep a Xerox copy of the answer sheets for future reference.**
- **Answer to each question should be between 500-750 words**
- Give a index of content with page number

On the first page of the assignment response sheet, write the following

Course Name _____	Enrollment No _____
Course Title _____	Name _____
Assignment Code _____	Address _____
Date of Submission _____	Signature _____
E-mail ID _____	

NATIONAL INSTITUTE OF HEALTH AND FAMILY WELFARE

(DISTANCE LEARNING CELL)

Diploma in Applied Epidemiology

Through Distance Learning

SESSION 2015-16

ASSIGNMENT – I

Max. Marks 100

Attempt any five, out of the six questions

- 1 (a) Describe in brief the classical epidemiological study of James Lind which highlighted the role of citrus fruits in preventing scurvy. **(10 Marks)**
- 1 (b) A sample of 10 has to be studied from a population of 25. Draw a sample using the simple random sampling method with the help of a random number table. **(10 Marks)**
- 2 (a) In a case control study of 'Risk of Smoking on Development of Ischemic Heart Disease', identify the potential confounders and how would you control them? **(10 Marks)**
- 2 (b) From a population of 50, select 10 subjects using systematic random sampling. Tell us what your 'random start' was. **(10 Marks)**
- 3(a) Describe the methods for preventing pandemic influenza. **(10 Marks)**
- 3(b) You are a public health officer in charge of data analysis and interpretation for Kinnaur district in the state of Himachal Pradesh. During the previous 6 years, one to three cases per year of tuberculosis had been reported to your district. During the past 3 months, however, 17 cases have been reported. All but two of these cases have been reported from one commune. The local newspaper published an article about one of the first reported cases, which

occurred in a 3 year-old girl. Describe the possible causes of the increase in the number of reported cases. **(10 Marks)**

4. From the following table, identify 30 clusters. Describe the process **(20 Marks)**

S. No.	Name of the Village	Population
1.	Kharangna (Gode)	1504
2.	Sewagram	6017
3.	Kutki	631
4.	Chitoda	990
5.	Chinchala	1296
6.	Barbadi	4287
7.	Ambanagar	310
8.	Karanji (B)	1490
9.	Nandora	820
10.	Dhanora	1546
11.	Nagapur	790
12.	Sondlapur	232
13.	Mandwgad	932
14.	Madni	2295
15.	Pujai	1330
16.	Karnji (K)	1296
17.	Yerangaon	632
18.	Taroda	3692
19.	Sawali	1228
20.	Sakhara	99
21.	Yesamba	951
22.	Goji	1892
23.	Bhankheda	1219
	Total Population	35479

5. The following table (Table 1) is from a Cohort Study carried out to study the association between salt intake and hypertension. **(20 Marks)**

Table 1: Association between salt intake and hypertension

		Hypertension	
		Present	Absent
Salt Intake	More	90	110
	Normal	90	910

Comment on the data supported with appropriate calculations:

- I. Is there an association between salt intake and hypertension?
- II. What is the strength of association?
- III. What is the risk difference and attributable fraction?
- IV. Discuss the use this data can be put to.

6. Read the following case study and answer the subsequent questions.

(20 Marks)

An outbreak of Hepatitis-A as illustrated by the epidemic curve in Figure-1, broke out in Najafgarh area of Delhi in the period of September - December, 2012. The incubation period for Hepatitis-A ranges from 15 to 50 days (roughly 2 to 7 weeks), with an average incubation period of 28-30 days (roughly one month). Because cases can occur from 15 to 50 days after exposure, all cases from a point source exposure should occur within a span of $50 - 15 = 35$ days.

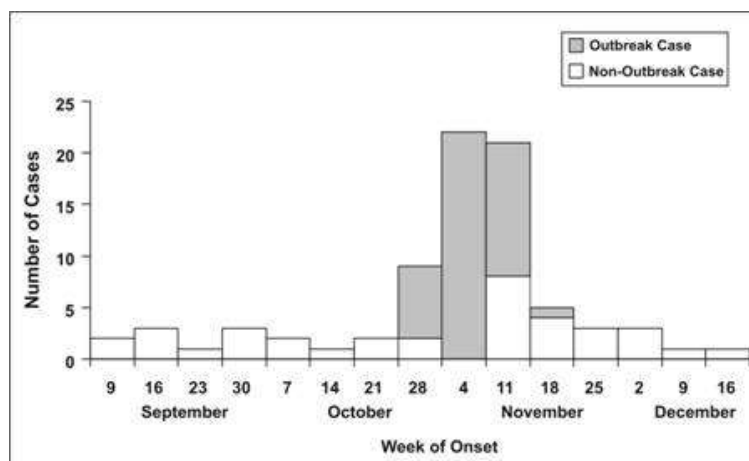


Figure: Hepatitis -A cases reported from Najafgarh in year 2012

Discuss the following:

- I. Is this a point-source epidemic?
- II. Explain the peak of the outbreak.
- III. When do you think is the date of exposure, based on one average incubation period prior to the peak of the outbreak?
- IV. When did the outbreak begin?
- V. When do you think is the (likely) date of exposure? You can explain on the basis of the minimum incubation period before the first case.