Time allowed: 2 Hrs 30 Min

Roll No: _____

Max Marks: 50

Instruction: Students are required to write Roll No on every page of the Answer Sheet. All other instructions on the question paper/notifications should be followed meticulously.

Sections	No. of Questions to attempt	Marks	Total Marks
A	Minimum 3 questions with internal choices and CILO (Course Intended Learning Outcome) covered Or Maximum 6 questions with internal choices and CILO covered (as an example)	3*10 Or 6*5	30
B	Compulsory Case Study with a minimum of 2 questions	20	20
			50

Section-A

A1(a). The burden of disease (BoD) is the burden that a particular disease process has in a particular area as measured by cost, morbidity, and mortality' Discuss the above statement. (CILO1)

OR

AI(b). A man at the age of 30, suffers from paralysis which disables him for a certain amount but after treatment, he is in remission for 20 years. After 20 years he suffers from the progression of the above disease which incapacitates him substantially and as a result, he dies at the age of 60. Assume years lost due to disability the health of this man is 0.7 for the 20 years and after a progression is 0.6. What is the total loss of DALYs in the above case? (CILO-1)

A2(a). Strategic Purchasing in healthcare has come to be recognized as an important solution for the improved performance of healthcare systems in terms of efficiency, effectiveness, and responsiveness. Elaborate. (CILO-2)

OR

A2(b). Contrat between Application and Eligibility fraud with adequate example. (CILO-2).

A3(a). Health Gaps and Health Expectancies are two important summary measures of population health. Contrast the two concepts with adequate examples.
(CILO-2)

OR

A3(b).

IC Name	12 month Data for 4 Health Insurers Retail Market				
	IC 1	IC 2	IC 3	IC 4	Total
Lives	1020592	488458	547079	361267	2417396
Total Premium	5387777788	2204728322	2442614634	1567713480	11602834224
Premium / Life	5279	4514	4465	4339	4800
Reported Claims	90206	39849	54941	34782	219778
Reported Amt	5839604429	2619274154	3188199232	2059392415	13706470230
Incidence Rate	8.8%	8.2%	10.0%	9.6%	9.1%
Avg Reported Claims Amt	64736	65730	58030	59209	62365
# of Liable Claims	83142	36553	49657	31684	201036
Reported Amt of liable Claims	5515379231	2413221864	2939220540	1915342833	12783164468
Liability Amount	3934582526	1742527594	1998862397	1282068644	8958041161
ACS of Liability Amt	47324	47671	40253	40464	44559
Cost / Life	3855	3567	3654	3549	3706
Deduction %	29%	28%	32%	33%	30%
ICR	73.03%	79.04%	81.83%	81.78%	77.21%
Claims Rejected	7064	3296	5284	3098	18742
Amount	324225198	206052290	248978692	144049582	923305762
Rejection % by Volume	7.8%	8.3%	9.6%	8.9%	8.5%
Rejection % by Value	5.6%	7.9%	7.8%	7.0%	6.7%

.

Q. Draw Inferences from the above data & comment on the nature and application of the data analytics used. (CILO 2&3)

Section-B

Case Study Compulsory:-

An Investigator enrolled 3,500 women in a study and followed them annually for four years to determine the incidence rate of enteric fever. After one year, 5 women suffered from enteric fever, 10 women died and 185 migrated. After two years, 20 suffered from enteric fever for the first time, 15 died and another 65 had been lost to follow-up. 75 women joined the study during the second year. After three years, another 17 women suffered from enteric fever for the first time, and 783 left the study. After four years, another 12 women suffered from enteric fever for the first time, 15 died and 473 more had been lost to follow-up.

1. Calculate the incidence rate of enteric fever among this cohort assuming that persons with new diagnoses of enteric fever and those lost to follow-up were disease-free for half the year. Analyze the result. (7.5) (CILO 3)

2. Calculate the incidence rate of enteric fever among this cohort assuming that persons with new diagnoses of enteric fever and those lost to follow-up were disease-free for nine months in the year. Apply the result. (7.5) (CILO 3)

3. Calculate the incidence proportion of enteric fever among this cohort and contrast it with the incidence rate. (5) (CILO 1 & 2)

****