Research methodology and Medical statistics

PART – A –Research Methodology

COURSE OUTCOMES		PROGRAM OUTCOMES						
Historical background of research		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	Describe historical background of research in Ayurved.	1	1	2	3	1	3	3
CO-2	Describe historical background of research in contemporary medical science.	1	1	2	3	1	3	3
CO-3	State the evidences of researches in ayurvedic classics.	1	1	2	3	1	3	3
Research		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	State Etymology of the word Research.	1	1	2	3	1	3	3
CO-2	State definitions of the word Research.	1	1	2	3	1	3	3
CO-3	State synonyms (Anveshana, Gaveshana, Prayeshana, Anusandhan and Shodha) of the word Research.	1	1	2	3	1	3	3
Research in Ayurved		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	State the scope of research in Ayurved.	1	1	2	3	1	3	3
CO-2	Describe need of research in Ayurved.	1	1	2	3	1	3	3
CO-3	Describe importance of research in Ayurved.	1	1	2	3	1	3	3
CO-4	Describe utility of research in Ayurved.	1	1	2	3	1	3	3
Types of Research		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	State the types of research and familiarization of the terms.	1	1	2	3	1	3	3
CO-2	Explain Pure and Applied research	1	1	2	3	1	3	3
CO-3	Describe Qualitative, Quantitative and Mixed research.	1	1	2	3	1	3	3
CO-4	Describe Observational and interventional research.	1	1	2	3	1	3	3
Research process		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	Explain the Research process and importance of each step in brief.	1	1	2	3	1	3	3
CO-2	Explain about Selection of the topic	1	1	2	3	1	3	3
CO-3	Explain about Review of the literature	1	1	2	3	1	3	3
CO-4	Explain about Formulation of Hypothesis	1	1	2	3	1	3	3
CO-5	Explain about Aims and Objectives	1	1	2	3	1	3	3
CO-6	Explain about Materials and methods	1	1	2	3	1	3	3
CO-7	Explain about Observations and results	1	1	2	3	1	3	3
CO-8	Explain about Methods of communication of Research	1	1	2	3	1	3	3
Research tools		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	Describe research tools	1	1	2	3	1	3	3
CO-2	Explain the Role of the Pramanas as research tools.	1	1	2	3	1	3	3
Ethics in research		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	Describe the concept of ethics in research.	1	1	2	3	1	3	3
CO-2	Describe the importance of ethics in research.	1	1	2	3	1	3	3
Evidenvce Based Medicine		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	Explain the concept of Evidenvce Based Medicine.	1	1	2	3	1	3	3
Scientific Writing		**1**	**2**	**3**	**4**	**5**	**6**	**7**
CO-1	Describe various steps in Scientific Writing.	2	1	2	3	1	3	3
Importance of IT								
CO-1	Explain the importance of IT in data mining.	1	1	2	3	1	3	3

CO-2	Describe in brief about important research data portals concerned with Ayurved viz. DHARA , Ayush Research Portal etc.	1	1	2	3	1	3	3
CO-3	Describe important research data portals concerned with contemporary medical science viz. PubMed, Bioinformatics Center, Research Management Informatic System etc.	1	1	2	3	1	3	3

Part – B Medical-Statistics

Co no.	COURSE OUTCOME	PROGRAM OUTCOMES						
	Medical statistics	1	2	3	4	5	6	7
CO1:	State the definition of Medical statistics.	0	1	2	3	1	3	3
CO2:	Describe scope of Medical statistics	0	1	2	3	1	3	3
CO3:	Describe importance of Medical statistics.	1	1	2	3	1	3	3
	Common statistical terms and notations	1	2	3	4	5	6	7
CO1:	Define and describe Population.	0	1	2	3	1	3	3
CO2:	Define and describe Sample.	0	1	2	3	1	3	3
CO3:	Define and describe Data.	0	1	2	3	1	3	3
CO4:	Define and describe Variable.	0	1	2	3	1	3	3
CO5:	Define and describe Normal distribution.	0	1	2	3	1	3	3
	Collection and Presentation of data	1	2	3	4	5	6	7
CO1:	Explain various methods of collection of data.	1	1	2	3	1	3	3
CO2:	Describe Tabular form of presentation of data.	1	1	2	3	1	3	3
CO3:	Describe Graphical form of presentation of data.	1	1	2	3	1	3	3
CO4:	Describe Diagrammatical form of presentation of data.	1	1	2	3	1	3	3
	Measures of location	1	2	3	4	5	6	7
CO1:	Explain Measures of location.	1	1	2	3	1	3	3
CO2:	Define and explain Average.	1	1	2	3	1	3	3
CO3:	Define and explain Percentile.	1	1	2	3	1	3	3
	Measures of Central Tendency	1	2	3	4	5	6	7
CO1:	Explain Measures of Central Tendency.	1	1	2	3	1	3	3
CO2:	Define and explain Arithmetic mean.	1	1	2	3	1	3	3
CO3:	Define and explain Median.	0	1	2	3	1	3	3
CO4:	Define and explain Mode.	0	1	2	3	1	3	3
	Variability and its measurement	1	2	3	4	5	6	7
CO1:	Define and explain Variability.	1	1	2	3	1	3	3
CO2:	Describe measurement of variability.	1	1	2	3	1	3	3
CO3:	Define and explain Range.	1	1	2	3	1	3	3
CO4:	Define and explain Standard deviation.	0	1	2	3	1	3	3
CO5:	Define and explain Standard error.	0	1	2	3	1	3	3
	Probability	1	2	3	4	5	6	7
CO1:	Define probability.	1	1	2	3	1	3	3
CO2:	Describe probability.	1	1	2	3	1	3	3
CO3:	State various tests of significance.	0	1	2	3	1	3	3

CO4:	Explain various tests of significance.	0	1	2	3	1	3	3
	Parametric and non parametric tests.	1	2	3	4	5	6	7
CO1:	Explain Parametric tests.	0	1	2	3	1	3	3
CO2:	Explain non parametric tests.	0	1	2	3	1	3	3
	Statistical softwares	1	2	3	4	5	6	7
CO1:	Explain in brief various commonly used statistical softwares.	0	1	2	3	1	3	3