KUMARAGURU
college of technology
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Register Number:……..…

M.TECH DEGREE EXAMINATIONS: JUNE 2018

(Regulation 2015)

Second Semester

APPAREL TECHNOLOGY

P15ATT205: Research Methodology

COURSE OUTCOMES

CO1: Understand various aspects of research methodology

CO2: Know about experimental design, and data collection methods

CO3: Optimize given data using different techniques

CO4: Interpret results based on output data

CO5: Carry out projects and write thesis

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Assertion (A): The purpose of research is to discover answers to questions through the application of scientific procedures CO1 [K_1]

   Reason (R): Research can either be applied (or action) research or fundamental (to basic or pure) research

   a) Both A and R are Individually true and R is the correct explanation of A
   b) Both A and R are Individually true but R is not the correct explanation of A
   c) A is true but R is false
   d) A is false but R is true

2. A Hypothesis which develops while planning the research is CO1 [K_1]

   a) Null Hypothesis
   b) Working Hypothesis
   c) Relational Hypothesis
   d) Descriptive Hypothesis

3. Unlike in a laboratory experiment, in a field experiment CO2 [K_1]

   a) participants are unaware that they are in an experiment
   b) the independent variable usually is measured rather than manipulated.
   c) random assignment of participants is rarely possible.
   d) it is easier to protect the rights of participants.

4. CO2 [K_1]

List I	List II
A)Validity	i) consistent results with repeated measurements of the same person and with the same instrument.
B)Reliability	ii) economy, convenience and interpretability.
C)Practicality	iii) consistent results
D)Stability	iv) degree to which an instrument measures what it is supposed to measure.

	A	B	C	D
a)	ii	i	iii	iv
b)	iii	iv	ii	i
c)	ii	iv	iii	i
d)	iii	i	ii	iv

5. Assertion (A): Questionnaire is sent (usually by post) to the persons concerned with a request toanswer the questions and return the questionnaire CO2 [K_2]

Reason (R): Schedules (proforma containing a set of questions) are being filled in by the enumerators who are specially appointed for the purpose.

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6. Role of the moderator in a focus group? CO3 [K_2]

a) To stimulate discussion and keep the conversation on track.
b) To ask leading questions and dominate the discussion.
c) To sit away from the group and observe their behaviour.
d) To evaluate the group's performance on a particular task.

7. Optimization of process can be done by CO4 [K_1]

1.Anova
2.Normal distribution
3.Chi square test
4.Correlation and regression

a) 1,3
b) 1,4
c) 1,2
d) 2,3

8. Canonical correlation analysis is a type of — CO4 — [K_2]

a) Data collection method
b) ANN
c) Multivariate technique
d) Distribution

9. The abstract of the report — CO5 — [K_2]

a) Is usually written before the rest of the report.
b) Provides a snapshot of the major section of the entire report.
c) Serves as the introduction to the report, with a focus on the background for the research.
d) Is usually several pages in length.

10. Identify correct sequence — CO5 — [K_1]

1.Data collection 2.Literature survey- 3.Research objectives 4.Optimization and Conclusion

a) 3-2-1-4
b) 1-3-2-4
c) 3-4-2-1
d) 4-1-3-2

PART B (10 x 2 = 20 Marks)

11.	List various approaches of Research.	CO1	[K_4]
12.	Identify few Research Designs.	CO1	[K_2]
13.	Differentiate lab and field experiments.	CO2	[K_3]
14.	Define: Reliability.	CO2	[K_1]
15.	Distinguish between primary and secondary data.	CO3	[K_3]
16.	Classify focus group.	CO3	[K_4]
17.	Draw the table for two way ANOVA.	CO4	[K_3]
18.	State the uses of factor analysis in apparel industry.	CO4	[K_2]
19.	Identify steps in report writing.	CO5	[K_2]
20.	Define the layout of a research report.	CO5	[K_1]

PART C (6 x 5 = 30 Marks)

21.	Discuss the significance of literature review.	CO1	[K_5]
22.	Interpret on Rating and Attitudinal scales.	CO2	[K_2]
23.	Summarize Guidelines for Questionnaire.	CO3	[K_2]
24.	Describe application of neural network in textiles and apparels for optimization.	CO4	[K_5]
25.	Discuss the significance of integral parts of a research report.	CO5	[K_4]
26.	Explain the Latin square method of optimization.	CO4	[K_4]

Answer any FOUR Questions

PART D (4 x 10 = 40 Marks)

27.	Explain Validity testing of scales, reliability concept in scales being developed and Stability Measures.	CO2	[K_4]
28.	Summarize in detail Descriptive statistics and highlight on frequency distribution, graphical representation, histograms, frequency polygon with neat sketches.	CO1	[K_2]
29.	Discuss elaborately on special data sources such as Focus Groups, Static and Dynamic panels.	CO3	[K_5]
30.	Explain with suitable example ONE WAY ANOVA technique used for optimization.	CO4	[K_4]
31.	Discuss briefly on Defining research problems, research design and formulation of hypothesis.	CO1	[K_5]

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