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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2018

Program: BBA-IV (FAS&DM)

Subject (Course): Research Methodology & Report Writing

Course Code : BBCQ 123

No. of page/s: 4

Semester – IV

Max. Marks : 100

Duration : 3 Hrs

SECTION A: Attempt all question. Each question carries 1 mark. Choose the one correct answer.

Q1. Which of the following is the first step in starting the research process?

- (A) Searching sources of information to locate problem. (B) Survey of related literature
(C) Identification of problem (D) Searching for solutions to the problem

Q2. A Questionnaire is a:

- (A) Research method (B) Measurement technique
(C) Tool for data collection (D) Data analysis technique

Q3. Which of the following is/are method(s) of data collection?

- (A) Questionnaire (B) Interviewing
(C) Observation (D) All of these

Q4. Which of the following is NOT a form of non-random sampling?

- (A) Snowball sampling (B) Convenience sampling
(C) Quota sampling (D) None of these

Q5. σ^2 and σ usually represents:

- (A) Population mean and variance (B) Population standard and variance
(C) Population variance and standard deviation respectively (C) None of These

Q6. Non-response error occurs when you cannot locate the person or could not encourage the respondent to participate in answering?

- (A) True (B) False

Q7. *Research Methods* and *Research Methodology* are exactly the same device?

- (A) True (B) False

Q8. Mean, Median and Mode are:

- (A) Measures of deviation (B) Ways of sampling
(C) Measures of central tendency (D) None of the above

Q9. In a FAS class, out of 100, marks of 21 students in final exams are as 90, 95, 95, 94, 90, 85, 84, 83, 85, 81, 92, 93, 82, 78, 79, 81, 80, 82, 85, 76, 85 then mode and mean of data is

- (A) 85 & 85.47 (B) 95 & 85.47
(C) 90 & 81 (D) 85 & 81

Q10. The value that has half of the observations above it and half the observations below it, is called the

- (A) Mode (B) Median
(C) Range (D) Mean

Q11. A Professor asked students in a class their ages. On the basis of this information, the professor states that the average age of all the students in the university is 21 years. This is an example of

- (A) Census (B) An Experiment
(C) Descriptive Statistics (D) Statistical Inference

Q12. A variance of a sample of 81 observations equals 64. The standard deviation of the sample equals:

- (A) 128 (B) 8
(C) 4096 (D) 0

Q13. In a Hypothesis testing of: $H_0: \mu = k$ Vs $H_1: \mu \neq k$, the kind of test would be:

- (A) Single Tailed (B) Two Tailed

Q14. Function of sample values is known as:

- (A) Statistic (B) Parameter

Q15. Range of correlation coefficient is:

- (A) 0 to 1 (B) -1 to +1
(c) 0.5 to 1 (D) -0.5 to 1

Q16. Write down the full form of "ANOVA"?

Q17. Rejecting a true Null Hypothesis is an example of what?

- (A) Type II Error (B) Type I Error
(C) Significance Testing (D) Analysis Error

Q18. Which of the following findings is not a correlation?

- (A) As temperature increases ice-cream sales will also increase
(B) Women scored higher than men on narcissism

- (C) As download prices increase sales will decrease
(D) None of These

Q19. In a large sample testing, we fail to accept Null Hypothesis (H_0) if the value of test statistic (calculated value) is greater than the tabulated value?

- (A) True (B) False

Q20. Functional form of Probability distribution of continuous Random Variable is known as:

- (A) Probability Mass Function (Pmf) (B) Probability Density Function (Pdf)

SECTION B. Attempt any four questions. [4*5 = 20 Marks]

Q21. What is Sampling and sampling frame?

Q22. Write down the three axioms of Probability? What is the probability of Universal event?

Q23. What is Measurement in Research? Describe measurement scales?

Q24. What are the various methods of Primary data collection, Explain any two methods?

Q25. Describe different measures of central tendency with example? The weight of 5 patients undergoing laparoscopic cholecystectomy was 90, 90, 70, 70, 80. Find out the mean weight and standard deviation?

Q26. The mean muscular endurance score of a random sample of 60 subject was found to be 145 with a s.d. of 40. Construct a 95% confidence interval for the true mean?

SECTION C. Attempt any three questions. [3*10 = 30 marks]

Q27. What is Test of Hypothesis? Explain Null and Alternative Hypothesis?

Q28. Explain Types of Error and size of Error in detail?

Q29. What is Random Sampling? Draw all possible random samples without replacement of size 3 from a finite population of size 6 having units a, b, c, d, e and f?

Q30. What is Skewness and Kurtosis? Draw the shape of distributions and state skewness when:

- a) Mean = Median = Mode**
- b) Mean > Median > Mode**
- c) Mean < Median < Mode**

Q31. A sample of 400 students is found to have a mean height of 67.47 inches. Can it be reasonably regarded as a sample from a large (or normal) population with mean height 67.39 inches and standard deviation 1.3 inches? (Hint: Test $H_0 : \mu = 67.39$ Vs $H_1 : \mu \neq 67.39$).

SECTION D. Attempt any two questions. [2*15 = 30]

Q32. Discuss the Research Process in Flow Chart with brief notes? What are the necessary steps for writing a Report?

Q33. Explain Parameter and Statistic with example? Enlist the differences? What is Sampling Distribution?

Q34. In a survey of buying habits, 400 women shoppers are chosen at random in super market “A” located in a certain section of the city. Their average weekly food expenditure is \$250 with a standard deviation of \$40. For 400 women shoppers chosen at random in super market “B” in another section of the city, the average weekly food expenditure is \$220 with a standard deviation of \$55. Test at 1% level of significance whether the average weekly food expenditure of the two women populations of shoppers are equal?

Appendix:

Confidence Interval	Alpha	Z - Score
90%	0.10	1.645
95%	0.05	1.96
99%	0.01	2.576