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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2018

Programme: BBA E-Commerce Marketing
Course Name: Research Methodology & Report Writing
Course Code: BBC 123
No. of page/s: 3

Semester – **IV**
Max. Marks : 100
Duration : 3 Hrs

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1. Write briefly on the following – (6*5=30)
- Mode
 - Median
 - Degree of Freedom
 - Null Hypothesis
 - Two Tailed Test
2. Which measure of Central Tendency would be applicable in the below cases and Why? (5*2=10)
- To find the average income of a village of 1500 people. Two millionaires live in the village; remaining are poor farmers.
 - To find the winning party in an election
3. Using the Z-table, figure out what percentage of area under the curve is greyed? (10)



4. Twenty five high school students complete a preparation program for taking the SAT test. Here are the SAT scores from the 25 students who completed the SAT prep program:
- 434 694 457 534 720 400 484 478 610 641 425 636 454 514 563 370 499 640 501 625
612 471 598 509 531**
- We know that the population average for SAT scores is 500 with a standard deviation of 100. The question is, are these students' SAT scores significantly greater than the said population. Test at **5%** level of significance. (15)
5. In a population, the average IQ is 100 with a standard deviation of 15. A team of scientists wants to test a new medication to see if it has either a positive or negative effect on intelligence, or no effect at all. A sample of 30 participants who have taken the medication has a mean of 140. Did the medication affect intelligence, Test at **5%**? (10)

6. The specimen of copper wires drawn from a large lot have the following breaking strength (in Kg. Weight):

578 572 570 568 572 578 570 572 596 544

Test whether the mean breaking strength of the lot may be taken to be 578 Kg. Weight. Test at **5%**.
(15)

7. Calculate the standard deviation for the following population of scores:

8 5 3 7 5 6 4 7 2 6 5 3 6 4 5 7 8 6 5 6

(10)
