**جامعة الملك سعود الاختبار النهائي**

 **كلية العلوم الفصل الثاني 1429 / 1430**

**قسم الإحصاء وبحوث العمليات مقرر 145 احص**

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|  **الاثنين 22 / 6 / 1430 هـ الساعة : 8 - 11** |

**اسم الطالبة : -------------------------------------------------------------------------------------**

**رقم الطالبة : --------------------------------------------------------------------------------------**

**رقم الشعبة : ----------------------------- رقم التسلسل : -----------------------------------------**

**أستاذة المقرر : -----------------------------------------------------------------------------------**

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**For each question, write the letter in the space given in the following table**

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| ***Question*** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| ***Answer*** |  |  |  |  |  |  |  |  |  |  |

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| ***Question*** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** |
| ***Answer*** |  |  |  |  |  |  |  |  |  |  |

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| ***Question*** | **21** | **22** | **23** | **24** | **25** | **26** | **27** | **28** | **29** | **30** |
| ***Answer*** |  |  |  |  |  |  |  |  |  |  |

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| ***Question*** | **31** | **32** | **33** | **34** | **35** | **36** | **37** | **38** | **39** | **40** |
| ***Answer*** |  |  |  |  |  |  |  |  |  |  |

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| ***Question*** | **41** | **42** | **43** | **44** | **45** | **46** | **47** | **48** | **49** | **50** |
| ***Answer*** |  |  |  |  |  |  |  |  |  |  |

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| ***Question*** | **51** | **52** | **53** | **54** | **55** | **56** | **57** | **58** | **59** | **60** |
| ***Answer*** |  |  |  |  |  |  |  |  |  |  |

 **Good Luck**

**Question (5):**

In a sample of 20 patients with a certain illness, the mean temperature (in C° )

was 37.Assume that the population is normally distributed with variance 0.24 .

Find a 95% confidence interval for the average temperature.

46-The value of α is

(a) 0.05 (b)0.025 (c) 0.95 (d)0.50 n(e)one of these

47-The correct formula is

(a) (b) (c)

(d) (e)none of these

48-The confidence interval is

(a) (34.896,39.104) (b) (36.820,37.180) (c) (32.706,39.191)

(d) (36.785,37.215) (e) none of these.

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In a sample of 50 pregnant women, the mean hemoglobin level was 11g/dl with standard deviation of 0.5.Assume that the population is not normal. Using α=0.05, test if the average hemoglobin level is greater than 10.

49-The needed assumptions are:

(a)normal,σ2 unknown and n small (b) not normal,σ2 unknown and n small

(c)not normal, σ2 unknown and n large (d) normal, σ2 known and n large

(e) not normal, σ2 known and n large

50-The hypotheses are

 (a) Ho: μ=10 (b) Ho: μ>10 (c)Ho: μ<10 (d)Ho: μ≤10 (e) none of these

 HA: μ10 HA: μ≤10 HA: μ>10 HA: μ>10

51-The test statistic is

(a) (b) (c) (d) (e) none of these

52-The value of the test statistic is

(a) 0.283 (b) 14.142 (c) 28.284 (d)1 (e)none of these

 53-The decision rule is

(a)Reject H0 if Z> 1.645 (b) Reject H0 if Z> 1.96 (c) Reject H0 if Z<-1.645

(d) Reject H0 if Z< -1.96 or Z>1.96 (e) none of these

54-The decision is

 (a)Do not reject H0 (b) reject H0 (c)Reject H0 since<

(d)Reject HA since< (e) none of these

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**Question (6):**

55- All the following are not measures of dispersion except

(a) Mean and range. (b) Range and variance

(c) Standard deviation and mode. (d) Mode and median

(e) None of these

56- The diagrams for continuous variable are

(a) Bar chart (b) bar chart and histogram (c) Polygon and histogram

(d) Bar chart and Polygon (e) none of these

57- One of the following is not from properties of normal distribution

(a) Symmetric around µ.

(b) Mean, median and mode are all equal.

(c) It is a discrete distribution.

(d) Area under the curve equal one.

(e) none of the above.

" is (جدري الماء) 58-The type of variable " if the child get chicken pox

(a) quantitative continuous (b) quantitative discrete (c) qualitative

 (d) Parameter (e) none of these

59-If P-value =0.035 and α=0.10,then the decision in hypothesis testing is

(a) Information is not sufficient (غير كافي) to make a decision. (b) reject HA

(c)Reject H0 (d) none of these

60-If A and B are independent events then

(a)P(A)=P(B|A) (b) P(A)= P(Ac) (c) P(A)= P(AB)/P(B)

(d) P(A)=0 (e)none of these

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End of the questions