

**S.S.M.S**

**S.B.B Alias Appasaheb Jedhe Art's, Commerce & Science College**

**B.Sc Computer Science Department**

**F.Y.B.Sc (Computer Science) Internal Examination, Feb-2017**

**Time Duration: 1 hour**

**Sub: Statistical Methods II**

**Marks: 20**

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**(Attempt any 5 questions of the following questions)**

**Q1.** Define the following terms (Any four) :

**Marks 04**

- a) Population   b) Sample   c) Parameter   d) Statistic   e) Null hypothesis  
f) Type I Error and Type II Error

**Q2.** Describe the test procedure for testing hypothesis  $H_0: \mu = \mu_0$  Vs  $H_1: \mu < \mu_0$  for large sample.

**Marks 04**

**Q3.** In 100 randomly selected hours of production , the mean and standard deviation of acceptable pieces produced by an automatic stamping machine are 1040 and 140 respectively. At 5% level of significance can one reject the null hypothesis that population mean is greater 1000?

**Marks 04**

**Q4.** 70 children were asked which flavour of ice-cream they liked out of Vanilla , Pista and butter-scotch. Test if there is any differences among the tastes of the children as far as ice-cream flavours are concerned at 5% level of significance.

**Marks 04**

Flavour	Number
Vanilla	20
Pista	30
Butter-Scotch	20

**Q5.** What is run? Describe the test procedure of Run test for testing randomness. **Marks 04**

**Q6.** Following are the values of weight gains in 9 mice after getting fed with a special diet: 20.1,30.7,28.3,25.2,26.7,29.2,35.6,31.2,37.3 Test using sign test whether population median is 28. Critical value  $K_{(9, 0.05)} = 1$

**Q7.** Describe the test procedure for testing hypothesis  $H_0: \mu = \mu_0$  Vs  $H_1: \mu > \mu_0$  for small sample ( t test for one population mean).

**Marks 04**