भाग-1

3322355

M 1 5 5 3 0 8 1 2

नामांकन संख्या

अनुक्रमांक (अंकों में)

अनुक्रमांक (शब्दों में)

परीक्षार्थी का पूरा नाम Geetapal

कक्ष निरीक्षक का नाम Ajuni

हस्ताक्षर Ajuni

परीक्षार्थी द्वारा सम्पूर्ण विवरण भर लिए गये हैं।

R

2018- भाग-2

M.Sc. Internal

# चौधरी चरण सिंह विश्वविद्यालय, मेरठ
## Ch. Charan Singh University, Meerut

01/5/19

निम्नलिखित विवरण परीक्षार्थी द्वारा स्वयं भरा जाए (To be filled by the Examinee)

परीक्षा का नाम (Name of Exam) M.Sc वर्ष 20 (Year 20.....) 19-20 भाग/सेमेस्टर (Part / Semester) II sem

विषय (Subject) Zoology प्रश्न-पत्र/पाठ्यक्रम (Paper /Course) Biostatistics प्रश्न-पत्र सं. (Paper Code No.) H-2063

परीक्षा का दिन (Day of Examination) Wednesday दिनांक (Date) 1/5/19

प्राप्तांक एवं पूर्णांक परीक्षकों द्वारा भरे जायें

पूर्णांक (Max. Marks)

| प्रश्नों की क्रम संख्या | a/I | b/II | c/III | d/IV | e/V | f/VI | g/VII | h/VIII | i/IX | j/X | योग |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ½ | 1 | 1 | 1 | | | | | | | 3½ |
| 2 | 2 | 2½ | | | | | | | | | 4½ |
| 3 | 1 | 3½ | | | | | | | | | 2½ |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |

Geeta Pal

15½ = 16

प्राप्तांक

(शब्दों में) | अंकों में

जाँचकर्ता के हस्ताक्षर एवं तिथि

परीक्षक के हस्ताक्षर एवं तिथि

2018- भाग-3

# चौधरी चरण सिंह विश्वविद्यालय, मेरठ

R

आवश्यक निर्देशों हेतु पृष्ठ भाग देखें

Date Stamp to be affixed here

(परीक्षार्थी द्वारा भरा जाए)

परीक्षा का नाम M.Sc भाग/सेमेस्टर II sem

विषय Zoology

प्रश्न पत्र Biostatistics दिनांक 1/5/19

परीक्षार्थी का अनुक्रमांक (Roll Number)

उत्तर-पुस्तिका क्रमांक KM-I-01-

कालेज कोड 6 1 8

(परीक्षार्थी की श्रेणी)

- संस्थागत ●
- व्यक्तिगत ○
- बैक पेपर ○
- अंक सुधार ○
- भूतपूर्व ○
- एकल विषय ○

नामांकन संख्या (Enrollment Number) M 1 5 5 3 0 8 1 2

पेपर कोड H - 2 0 6 3

परीक्षार्थी का पूरा नाम Geetapal

कक्ष निरीक्षक का नाम Ajuni

# Section-A

## Q1. Hypothesis :-

Ans:- Summary :-

- Definition
- Introduction
- Types of Hypothesis
- Type-I
- Type-II Error
- T- Test
- Z- Test
- $\chi^2$- Test

- Hypothesis are two types

Hypothesis

- Null Hypothesis
- Alternative Hypothesis

what is hypothesis? missing

1/2

**Q2:** **Two Genetics disorders:**

(1) Colourblindness

(2) Heamophilia

1

**Q3→ GenBank →** GenBand is a Gene stored in GenBank.

- GenBank is a 1981 in Gene Bank.
- They are national Institute of Genetics (NIG).
- And the International nucleotides of proteins.
- They are EMBL (European Molecular Biology Laboratory)
- GenBank is NCI| GenBank or NCBI | EMBL.

**Q4→ full form of http →**

**Q5) DDBJ →**

Ans→ It is full form of (DNA Databank of Japan).

→ The DDBJ is began activities in earned in 1986. at the national Institute of Genetics (NIG).

→ DDBJ has been functioning International nucleotides sequence database with collaboration in EBI|EMBL or NCBI|GenBank.

## Section-B

**Q7) Components of computer.**

Ans→ Summary→

- Components of computer
- Input unit
- CPU
- Output unit
- Memory and storage unit
- Control unit
- ALU (Arithmetic Logic unit)
- Arithmetic sector
- Logic sector

- **Input unit** → Input unit is data stored in computer and the mobile and Input devices and forms by the stored data. Example - keyboard?

- CPU → (Central processing unit) is full form of CPU.

→ Central processing unit is a brain of computer.

(3) Output unit →

- This unit is out area is control by the output device and the change of server of the computer device.

Ex → ? Monitor printer ?

- ALU → (Arithmetic Logic unit)

- Arithmetic Logic unit are two types.

(1) Arithmetic sector
(2) Logic sector

2

**Q8:** **Data swiss port:**

Ans: Summary:

- Introduction
- Swiss port
- It consists of two types
  - Swissport
  - Tr- EMBL

SWISS?

- Annonation

→ Decogination

→ Tr EMBL are two types

- SP - Tr EMBL
- REM - Tr EMBL

→ Conclusion

⇒ Swiss port is a protein database sequence.

⇒ protein database sequence is EMBL (European molecular Biology Laboratry) is divided by the swiss port.

⇒ Swiss port is GenBank is related between the part of the sequence databases.

⇒ And protein sequence databases are swiss port.

It consists of two types

- Swiss port
- Tr - EMBL (European molecular Biology Laboratory)
  - SP - Tr EMBL
  - REM - Tr EMBL

Focus

⇒ Annogation

⇒ Conclution:

Swiss port are protein sequence database and Tr- EMBL or GenBank.

⇒ They are very Important part of protein data base.

⇒ And the European molecular Biology Laboratory and nucleatides Institute of GenBank present in swiss port.

## Section-C

**Q11.** Types of Test of significance :-

# Test of significance

- T-Test
  Student T-Test
  - Paired T-Test
  - Unpaired T-Test
- $\chi^2$-Test
- ANOVA (Analysis of Variance)

⇒ Any one in detail :

**CHI-Square Test**

- $\chi^2$- Test is Introduced by Karl Pearson.
- $\chi^2$- Test is sampling analysis for testing significance of population variance.
- $\chi^2$- Test is non-parametric Test if can be used for Goodness of fit $\chi^2$.
- $\chi^2$- Test is use simple random sampling method.
- $\chi^2$- Test is value lies b/w 0 to 1.

$$\boxed{\chi^2 = \sum \frac{(O-E)^2}{E}}$$

$$\sum \frac{(O-E)^2}{E}$$

It is calculated $\chi^2$ > tabulated $\chi^2$.
then
if can be used for $\chi^2$ square significance.
then
if can must be hypothesis may be rejected.

Uses

- Goodness of fit
- It is Independent of the Intribute
- $\chi^2$ Test is use for sampling analysis and population linkage.

use one example

4

Q1

| Marks (C.I) | No. of student (f) | c.f. |
|---|---|---|
| 0-10 | 10 | 10 |
| 10-20 | 15 | 25 |
| 20-30 | 5 | 30 |
| 30-40 | 8 | 38 c |
| L — 40-50 | 12 | 50 f |
| 50-60 | 18 | 68 |
| 60-70 | 21 | 89 |
| 70-80 | 11 | 100 |

median not mean

$$\text{mean} = L + \frac{\left(\frac{n}{2} - c\right) i}{f}$$

$$L + \frac{\left(\frac{n}{2} - c\right) i}{f}$$

$$= 40 + \frac{(50 - 38) \times 10}{50}$$

median $= \dfrac{40 + 12 \times 10}{50}$

$= \dfrac{\cancel{40}^{8} + 12\cancel{0}}{\cancel{50}}$

$= 8 + 12 =$

$\boxed{\text{Mean} = 96}$

mode $= \dfrac{L + (F_m + f_1) \times i}{2F_m - F_1 - F_2}$

$L + \dfrac{(f_m - f_1)}{2f_m - f_1 - f_2} \times k$

$= 40 + \dfrac{(50 - 38) \times 10}{2 \times 50 - 38 - 68}$

$= \dfrac{40 + 12 \times 10}{100 - 38 - 68}$

$$= \frac{40+120}{100-106}$$

$$\text{Mode} = \frac{160}{6} = \boxed{26.6}$$

$$\text{Mode} = 3\,\text{median} - 2\,\text{mean}$$

$$26.6 = 3\,\text{median} - 2 \times 96$$

$$26.6 = 3\,\text{med} - 192$$

$$192 + 26.6 = 3\,\text{med}$$

$$165.4 = 3\,\text{m}$$

$$\frac{165.4}{3} = \text{median}$$

$$=$$

$$\text{median} = 55.1$$

3 ½

But calculation of mean is wrong so answer is wrong.