

अनुक्रमांक (शब्दों में) one eight P zero one eight nine zero five. **Arym**

**Arym**

**Kajal**

हस्ताक्षर

कक्ष निरीक्षक का नाम

परीक्षार्थी का पूरा नाम

परीक्षार्थी द्वारा सम्पूर्ण विवरण भरना आवश्यक है।



R

2018-

भाग-2

M.Sc. Internal

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

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

परीक्षा का नाम M.Sc 2<sup>nd</sup> try वर्ष 2019 भाग/सेमेस्टर 1  
 (Name of Exam) (Year 20.....) (Part / Semester)

विषय Zoology प्रश्न-पत्र/पाठ्यक्रम 1/Biostatistics H-2062 पत्र कोड नं. 1/05/19  
 (Subject) (Paper /Course) (Paper Code No.)

परीक्षा का दिन Wednesday दिनांक 11/05/19  
 (Day of Examination) (Date)

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	1	1	1	1							3 1/2
2	2 1/2										5
3	4	4									8
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											

प्राप्तांक

(शब्दों में)	अंकों में
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जाँचकर्ता के हस्ताक्षर एवं तिथि

परीक्षक के हस्ताक्षर एवं तिथि



2018- चौधरी चरण सिंह विश्वविद्यालय, मेरठ

Date Stamp to be affixed here

मार्गदर्शक

(परीक्षार्थी द्वारा भरा जाए)

परीक्षा का नाम M.Sc 2<sup>nd</sup> try भाग/सेमेस्टर 1  
 विषय Zoology  
 प्रश्न पत्र 1 दिनांक 11/05/19

परीक्षार्थी का अनुक्रमांक (Roll Number)

उत्तर-पुस्तिका क्रमांक

18P0189905

M	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
C	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
D	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
E	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
F	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
G	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
H	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
I	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
J	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
K															
L															
P															
S															
T															
U															
V															
W															

KM-I-01-

कालेज कोड

018

(परीक्षार्थी की श्रेणी)

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

नामांकन संख्या (Enrollment Number)

पेपर कोड

M 14085718

M	1	4	0	8	5	7	1	8							
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

H-2062

परीक्षार्थी का पूरा नाम

Kajal

कक्ष निरीक्षक का नाम

**Arym**

# SEC-C

- Summary:
- test of significance
  - type of test
  - $\eta^2$  - test -

① Test of Significance - By the test of significance we check the authenticity of data and also ~~accept and reject the null hypothesis.~~

They are mostly used to check hypothesis and finding in the experiments.

These are mainly three type.

- ① Chi-square test - check single data
- ② T-test →
  - ① Paired
  - ② Unpaired
- ③ ANOVA - for variations.

Chi-Square test :- In this test we always check single data.

Example :- check farmer crop.

character	no. of plant	Expected	O-E	(O-E) <sup>2</sup>	$\frac{(O-E)^2}{E}$
TR	850	900	-50	-2500	-2.77
Tu	250	300	-50	-2500	-8.33
tR	350	300	50	2500	8.33
tU	150	100	50	2500	2.57
	<hr/> 1600	<hr/> 1600			<hr/> 44.43

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

$$\chi^2 = \frac{1100}{100}$$

$$11.00$$

unc details  
4

Ans 9

C-I	x	f	fx
0-10	5	16	80
10-20	15	15	225
20-30	25	15	375
30-40	35	8	280
40-50	45	12	540
50-60	55	18	990
60-70	65	21	1365
70-80	75	11	825
		<u>100</u>	<u>4400</u>

Mean

$$\bar{x} = \frac{\sum f_n}{n}$$

$$\bar{x} = \frac{4400}{100} = 44 \text{ Ans}$$

Median :-

C-I	F	C.F
0-10	10	10
10-20	15	25
20-30	20	45
30-40	20	65
40-50	15	80
50-60	10	90

f / C.f.

60-70	21	4	89
70-80	11	4	100

Modal class

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

L - lower limit value of median class

n - no. of frequency

f - frequency

i - class interval

c - cumulative frequency of pre median class.

$$F = \frac{11}{21} \times \frac{100}{2} = 25.7$$



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

$$40 + \frac{\left(\frac{100}{2} - 38\right) 10}{12}$$

$$= \boxed{65.83} \text{ Ans}$$

There is no space mode 111  
 calculated after step B.  
 plz checked there.

# Sec-B

6)

Character	no. of Plant	Expected	$O-E$	$(O-E)^2$	$\frac{(O-E)^2}{E}$
RT	850	900	-50	-2500	-2.77
Rut	250	300	-50	-2500	-8.33
MT	350	300	50	2500	8.33
ut	150	100	50	2500	25
	<u>1600</u>	<u>1600</u>			<u>44.43</u>



$$\eta^2 \approx \frac{\varepsilon}{\varepsilon} (0 - \varepsilon)^2$$

$$\eta^2 = \frac{44.43}{\varepsilon}$$

2/3

Qns 7

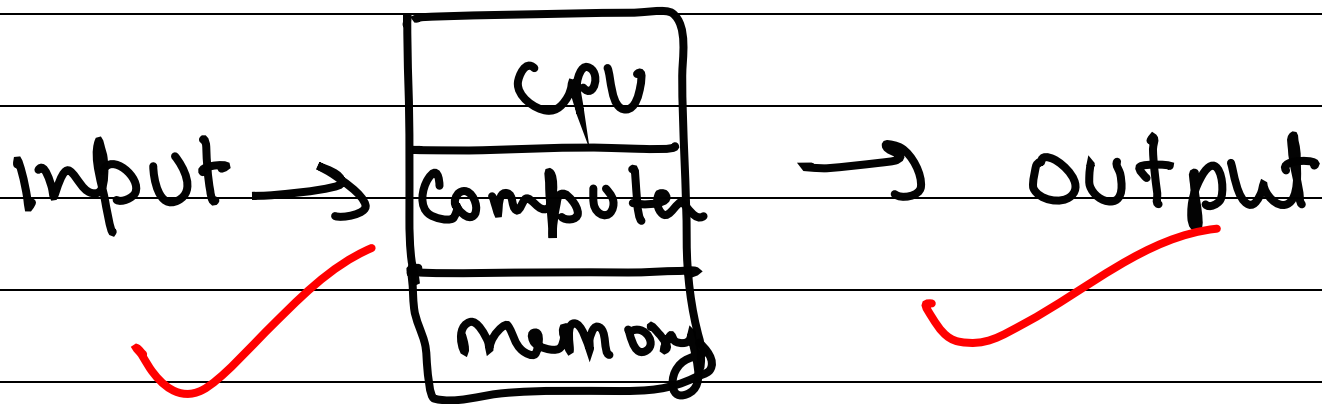
## Components of Computer

Summary  $\Rightarrow$

- Computer ✓
- Basic concept of Computer
- Hardware ✓
- Software ✓
- Input device
- Output device ✓✓

Computer :- Computer is an electronic device which convert data into information.

## Basic concept of Computer



Hardware Component :- Keyboard, Mouse  
CPU, Expansion card

Power supply, Hard disk, Motherboard etc. 10

- Software Component :-

① Operating :- MS-window, Apple, OSX etc.

② Working :- X-el, power point, Adobe- etc.

- Expansion card :- it is a designed provide image for the Computer display

- CPU :-
  - ALU and CU Combined know as CPU.

- Brain of the computer
- Measured in MHz or GHz
- all calculations are performed in ALU (Arithmetic Logic Unit).

- key board :- This is an input device which enters the information into the computer and give command.

- Memory :- Two type
  - ① Primary memory
    - ↳ RAM
    - ↳ ROM
  - ② Secondary Memory.

## Primary memory :-

### ① RAM (Random access memory)

- Major portion of primary memory.
- Volatile
- When RAM get turn off all data lost.

### ② ROM :- (Read only memory)

- This memory can read only. not write.
- contain thing that computer need to operate.
- work on frameworks of computer.

② Secondary memory :-

- permanent memory
- More storage capacity.

→ Output device :- The job of output device just reverse to input device.

Common main output device are

- ① Monitor
- ② Printer.

① Monitor :- it display used to provide data to the users where they can view information they are working on.

② Printer :- Provide the information to the users in hard or in the printed form.

Storage device :- CD, Hard disc, etc.



~~Scanned with CamScanner~~

Q

Mode

C-I	f
0-10	6
10-20	5
20-30	5
30-40	8
40-50	12
50-60	10
60-70	21
70-80	1
	<hr/> 100

?  
modal class

$$\text{Mode} = L + \frac{f_m - f_1}{2f_m - f_1 - f_2} \cdot xi$$

$L$  - lower limit value of median class.  
 $f_m$  - frequency of median class

$f_1$  - frequency of pre median class

$f_2$  = frequency of post median class

$i$  = class interval.

$$L + \frac{fm - f_1}{2fm - f_1 - f_2} \times i$$

$$40 + \frac{12 - 8}{2 \times 12 - 8 - 18} \times 10$$

$$\text{mode} = \underline{60} \text{ Ans}$$

Formula is  
 ok. but modal  
 class is 10-20  
 Selected answer is  
 wrong!

# SGC-A

① The meaning of hypothesis is thinking in test of significance

- ② ① Turner's Syndrome ( $44+X_0$ )  
characteristics: • Sterile female, • Underdeveloped ovary
- ③ Super male ( $44+XYX$ )  
characteristics: • Criminal band of mind • More aggressive than normal male
- Chromosomal disorders*

3

Gene bank? - collect the DNA sequences at

NCBI. (National Center of Biotechnology Information.)

4

http :- Hyper text transfer Protocol.

5

5

DDBT :- (DNA Data bank of Japan)

it collect the DNA sequence in NIG

National Institute of Genetics. it also a member of (International

Nucleotide Sequence database collaboration)

INSDC. it exchange the data with

European molecular biology laboratory

EMBL at European Bioinformatics Institute. with Gene Bank at (National Center of Biotechnology Information) NCBI - on daily basis

They these bank contain same  
data any time.

