

Poonam Tomar

परीक्षार्थी का पूरा नाम

कक्ष निरीक्षक का नाम

परीक्षार्थी द्वारा सम्पूर्ण विवरण लिखें एवं हस्ताक्षर करें।



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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 19  
(Name of Exam) (Year 20.....) भाग/सेमेस्टर II Sem  
(Part / Semester)  
विषय Zoology  
(Subject) प्रश्न-पत्र/पाठ्यक्रम Biostatistics & Bioinformatics  
(Paper / Course) पेपर कोड नं. M-2062  
(Paper Code No.)  
परीक्षा का दिन Wednesday  
(Day of Examination) दिनांक 1/05/19  
(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   | 2    | 1     | 1    |     |      |       |        |      |     | 2   |
| 2                       | 2   | 2    |       |      |     |      |       |        |      |     | 4   |
| 3                       | 4   | 3    |       |      |     |      |       |        |      |     | 7   |
| 4                       |     |      |       |      |     |      |       |        |      |     |     |
| 5                       |     |      |       |      |     |      |       |        |      |     |     |
| 6                       |     |      |       |      |     |      |       |        |      |     |     |
| 7                       |     |      |       |      |     |      |       |        |      |     |     |
| 8                       |     |      |       |      |     |      |       |        |      |     |     |
| 9                       |     |      |       |      |     |      |       |        |      |     |     |
| 10                      |     |      |       |      |     |      |       |        |      |     |     |
| 11                      |     |      |       |      |     |      |       |        |      |     |     |
| 12                      |     |      |       |      |     |      |       |        |      |     |     |
| 13                      |     |      |       |      |     |      |       |        |      |     |     |
| 14                      |     |      |       |      |     |      |       |        |      |     |     |

प्राप्तांक

|              |           |
|--------------|-----------|
| (शब्दों में) | अंकों में |
|--------------|-----------|

जाँचकर्ता के हस्ताक्षर एवं तिथि

परीक्षक के हस्ताक्षर एवं तिथि



R

Date Stamp to be affixed here

मार्गदर्शक

(परीक्षार्थी द्वारा भरा जाए)

परीक्षा का नाम M.Sc  
विषय Zoology  
प्रश्न पत्र Biostatistics & Bioinformatics  
परीक्षार्थी का अनुक्रमांक (Roll Number) 1890182340  
उत्तर-पुस्तिका क्रमांक KM-I-01-

Grid for marking answers (A-Z, 0-9)

- (परीक्षार्थी की श्रेणी)
- संस्थागत
  - व्यक्तिगत
  - बैक पेपर
  - अंक सुधार
  - भूतपूर्व
  - एकल विषय

नामांकन संख्या (Enrollment Number) M 15533860

पेपर कोड H-2062

परीक्षार्थी का पूरा नाम Poonam Tomar

कक्ष निरीक्षक का नाम Ag

# Section - A

Ans = 5 DDBJ :- DNA Data base of Japan

(DDBJ) is a biological database of the DNA sequence of the Nucleotide Genetic Institute. It is located of International Nucleotide Database Sequence of Collaboration in the Shizuoka prefecture of Japan.

DDBJ is the officially collected DNA sequence and protein.

Ans=3 Gene bank  $\Rightarrow$  The database sequence<sup>2</sup>  
of the research of  
DNA and RNA.  
Gene bank are the research of  
DNA sequence.  
In October 1992.

Ans=2 Two genetic Disorder

- ① Turner syndrome  $\Rightarrow$  ① Mostly short face
- ② Mostly retarded
- ③ Short height

② Super male  $\Rightarrow (45 + XY)$

- This is criminal syndrome.
  - short life
  - Mentally Retarded.
- Chromosomal Defect

Ans = 1 Hypothesis  $\Rightarrow$  any person is a  
class of a species.

Hypothesis are the two types :-

① Null - Hypothesis

② Alternative hypothesis.



# Introduction Section $\Rightarrow$ 13

8.

SWISS-PORT SWISS-PORT are the resource of protein, knowledgebase (UniProt KB) of the hub for the collection or functional Database.

If consists of the two type:-

SWISS-PORT

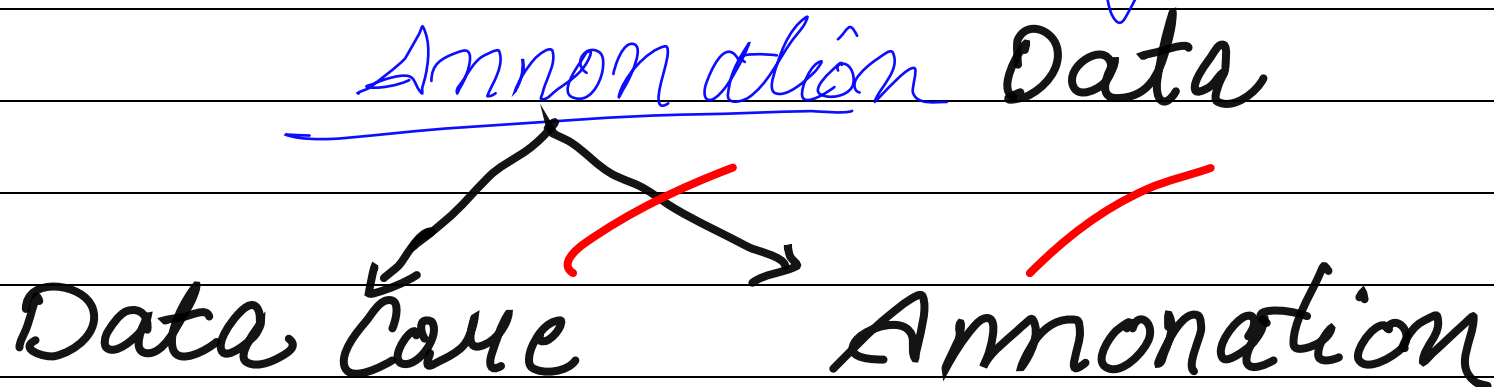
TrEMBL

1. SWISS-PORT  $\Rightarrow$  Resource of protein

knowledgebase (UniProt-KB) The centre of hubs

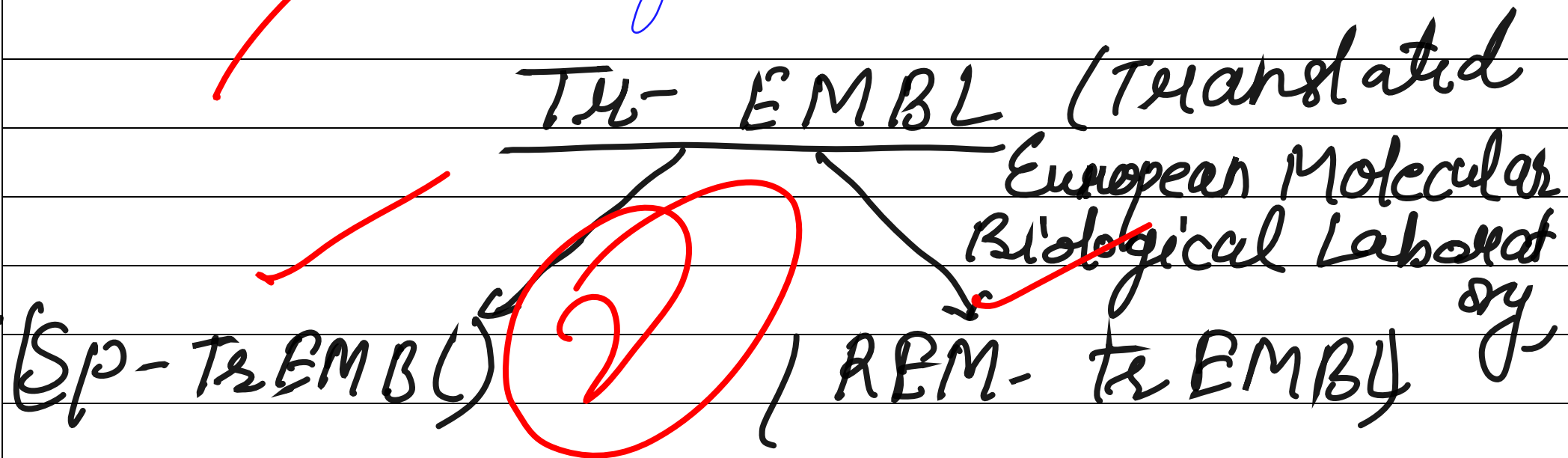
SWISS-PORT are the four type :-

1. Annotation
2. Documentation
3. Minimal Redundancy



1. Data Core :- Data Core the research of protein for the collect and functional.

2. Annotation :- Annotation are the collect for the protein and DNA sequence.



(Scans-PORT to EMBL)

(Remaining-  
(to EMBL)

Ans=7      Components of Computer

Computer is a electronic machine.  
Computer has most popular  
machine.

Discovered by Charles Babbage.

There have five fundamental  
Components of Computer



1. ~~Input device~~ Unit ✓
2. Output Unit ✓
3. Memory and storage unit ✓
4. CPU (Central processing Unit) ✓
5. ALU (Arithmetic Logic Unit) ✓

1. Input unit  $\Rightarrow$  Input unit has devices of the computer. first

First Components of Computer. It is very important unit.

Computer is a processing unit.

2. Output unit; Output unit are the device for the ~~computer~~. ? ~~Example~~

3. CPU (Central processing unit)  
 Central processing unit brain  
of computer.

## 4. Memory and Storage unit

These are Computer of memory  
Computer has a electronic  
Machine.

All file in the storage  
and storage unit. the Memory

⑧ ALU (Arithmetic Logic Unit)

ALU are the two types :-

1. Arithmetic

2. Logic

# Section = C

10  
Sequence Database :->

## Summary

① Introduction ✓

② Types of Sequence Database

① Specialized Database ✓

② Generalised Database ✓

③ Genebank ✓

④ DDBJ ✓

⑤ EMBL ✓



Introduction ⇒ Sequence database are the search of DNA and RNA sequence database.

• Sequence database are the collect for the testing of DNA and RNA of the hub for the research.

• Sequence database are the resource of (knowledge base) UniPORT sequence.

Database are the collect of DNA and RNA.

Sequence database are the two types.

1. Specialised data base

2. Generalised data base

3) Gene bank  $\Rightarrow$  sequence database

are the collect DNA and RNA  
Sequence. in October 1992.

④ DDBT  $\Rightarrow$  DNA Database of Japan

(DDBT) is the biological database

it is a located in National Institute Genetic in the Shizuoka prefecture of database.

It exchange its the International Nucleotide Database sequence of collaboration! (INDB) at the

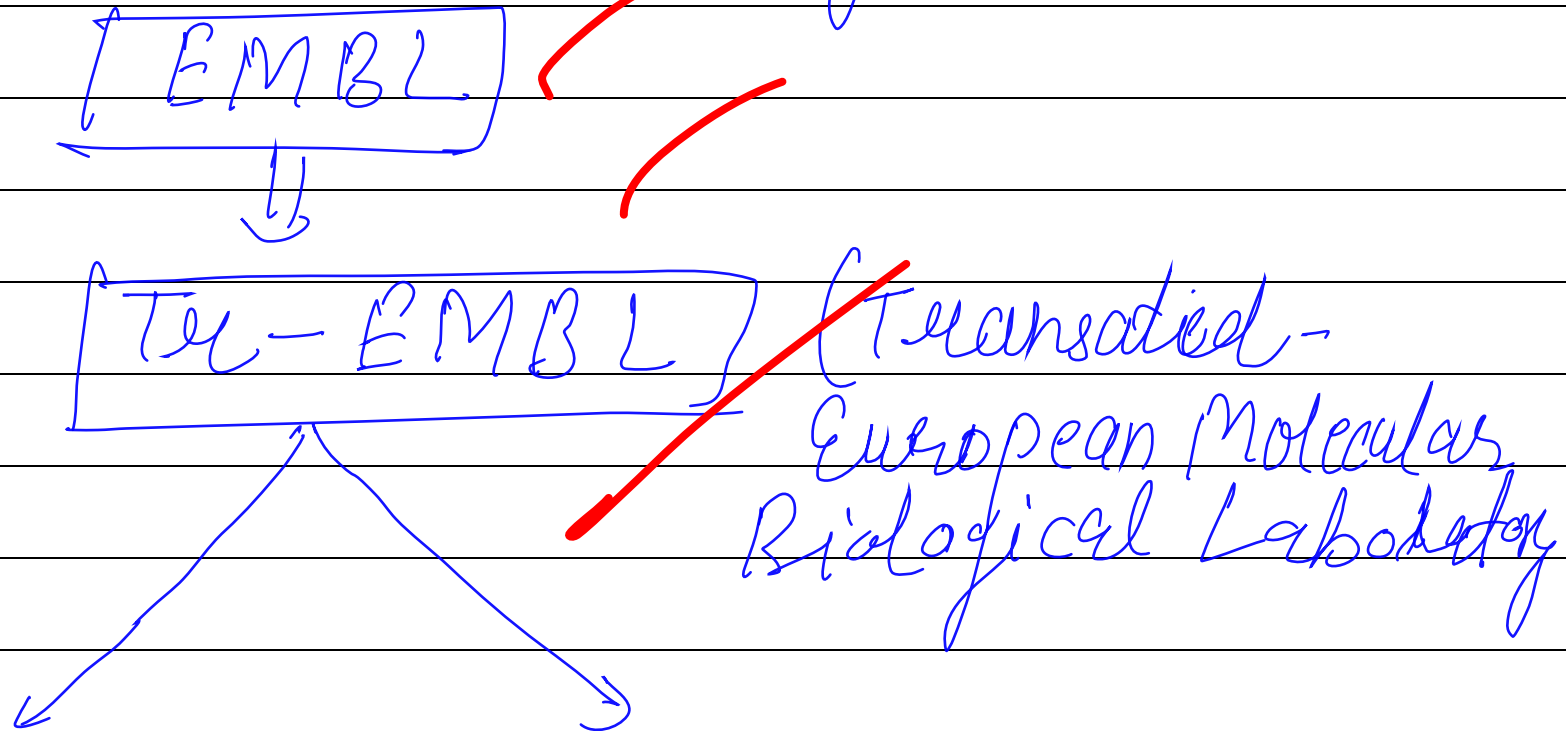
European Molecular biological Laboratory.

with the European Molecular  
bioinformatics ~~Institutes~~ on the  
daily basis.

There are any three time  
and gene V bank of  
DDBJ.

⑤ EMBL  $\Rightarrow$  European Molecular  
Biological Laboratory

$\Rightarrow$  EMBL are the two types :-

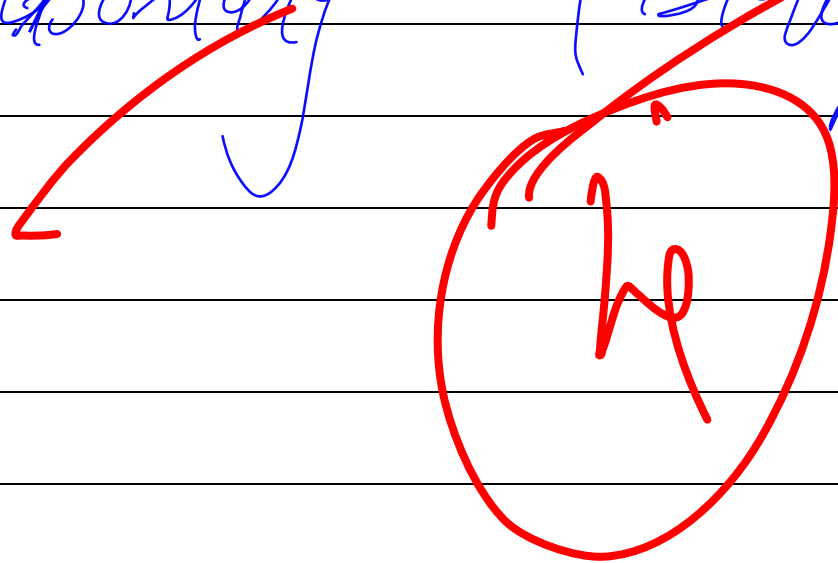


Sp-EMBL

REM-EMBL

Swiss-PORT (sp)  
European Molecular  
Biological Laboratory

REM - Remaining  
European Molecular  
Biological Laboratory





$$\underline{\text{Ans} = 9}$$

| C.I   | f          | x  | fx          |
|-------|------------|----|-------------|
| 0-10  | 10         | 5  | 50          |
| 10-20 | 15         | 15 | 225         |
| 20-30 | 5          | 25 | 125         |
| 30-40 | 8          | 35 | 280         |
| 40-50 | 12         | 45 | 540         |
| 50-60 | 18         | 55 | 990         |
| 60-70 | 21         | 65 | 1365        |
| 70-80 | 11         | 75 | 825         |
|       | <u>100</u> |    | <u>4200</u> |

$$\text{Mean} = \frac{4200}{100} = 42$$

Median :- 10, 15, 5, 8, 12,  
18, 21, 11

5, 8, 10, 11, 12, 15, 18,  
21

~~Group Interval formula to be used~~

$\left[ \frac{n+1}{2} \right]^{\text{th}}$  item value +  $\left[ \frac{n+1}{2} \right]^{\text{th}}$  item value

21 <sup>median</sup>

$$= \left( \frac{84}{2} \right)^{\text{th}} \text{ item value} + \left( \frac{8+1}{2} \right)^{\text{th}} \text{ item value}$$

~~$$= (4)^{\text{th}} \text{ item value} + (5)^{\text{th}} \text{ item value}$$~~

$$= 11 + 12$$

$$= 23 \quad \text{Median}$$

$$\text{Mode} = 3 \text{ Median} - 2 \text{ Mean}$$

$$= 3 \times 23 - 2 \times 42$$

$$= 69 - 84$$

$$\boxed{\text{Mode} = -15}$$

B

Section = A

Ans = 4    http <sup>q.2)</sup> ⇒ Hypertext transfer  
protocol.





































