MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	: **III (New)**	**Term**	: **I**	**Academic Year**	: **2018-19**
Course No.	: AGRO 234	**Title**	: **Crop Production Technology –I (*Kharif* Crops)**		
Credits	: 2 (1+1)				
Day & Date	: Wednesday, 21.11.2018	**Time**	: 9.00 to 11.00	**Total Marks**	: **40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Explain in detail the cultivation practices of lowland rice on the following points.

a) Wet nursery preparation
b) Transplanting of seedlings
c) Nutrient management
d) Harvesting and yield

Q.2 Describe the cultivation practices of *Kharif* sorghum (grain purpose) on the following points.

a) Seed bed preparation
b) Seed and sowing
c) Interculturing
d) Harvesting and yield

Q.3 Describe in detail the cultivation of groundnut on the following points.

a) Seed and sowing
b) Nutrient management
c) Inter-cultivation
d) Sign of maturity and harvesting

Q.4 Explain in detail the cultivation practices of pigeon pea on the following points.

a) Soil and seedbed preparation
b) Seeds and sowing
c) Nutrient management
d) Harvesting and yield

Q.5 Prepare the leaflet on cultivation of fodder maize.

Q.6 Describe the cultivation practices for irrigated hybrid cotton on the following points.

a) Seed and sowing
b) Nutrient management
c) Weed management
d) Harvesting and yield

Q.7 Explain in detail the cultivation of soybean on the following points.

a) Soil and climate
b) Seed and sowing
c) Improved varieties.
d) Harvesting and yield

Q.8 Explain in detail the cultivation practices of black gram (urd bean) on the following points.

a) Soil and climate
b) Seed and sowing
c) Manures and fertilizer
d) Harvesting and yield

(P.T.O.)

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Q.9 Describe sowing method, harvesting and yield of the following crops.(Any two)

a) Cowpea for fodder

b) Hybrid Napier

c) Fodder sorghum

Q.10 Write short notes (Any two).

a) Importance of oilseeds.

b) Seed and sowing of sesame

c) Retting of jute.

SECTION "B"

Q.11 Match the following pairs.

'A'	'B'
1) Horse gram	a) *Vigna unguiculata*
2) Kidney bean	b) *Phaselous mungo*
3) Black gram	c) *Phaseolus aconitifius*
4) Cow pea	d) *Dolichus biflorus*

Q.12 Fill in the blanks.

1) In pulse crops_____ bio-fertilizer is used for N fixation.

2) _____ is the botanical name of finger millet.

3) The origin of groundnut is _____.

4) Kodo millet and finger millet are useful for_____ patients.

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	: **III (New)**	**Term**	: **I**	**Academic Year**	: **2018-19**
Course No.	: AGRO 235	**Title**	:	**Rainfed Agriculture and Watershed Management**	
Credits	: 2 (1+1)				
Day & Date	: Tuesday, 13.11.2018	**Time**	: 9.00 to 11.00	**Total Marks**	: **40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Write in brief about agronomic measures for soil and water conservation in rainfed agriculture.

Q.2 Define drought. Give the classification of drought. Explain agricultural drought.

Q.3 Define watershed. Enlist different principles of watershed management.

Q.4 Define the term antitranspirant. Describe different types of antitranspirants.

Q.5 Explain in brief the crop adaptation to drought.

Q.6 Define the term water harvesting. Describe in short the techniques of water harvesting.

Q.7 What is contingency planning? Suggest contingency crop plan under delayed monsoon.

Q.8 What do you mean by rainfed agriculture? Explain dryland farming and rainfed farming.

Q.9 Explain climatic conditions prevalent in rainfed areas.

Q.10 Write short notes (Any Two).

a) Stubble mulch

b) Problems of rainfed agriculture in India

c) Factors affecting watershed management

SECTION "B"

Q.11 Define the following terms.

1) Meteorological drought
2) Alternate land use systems
3) Crop geometry
4) Terracing

Q.12 Fill in the blanks.

1) International Crops Research Institute for Semi-Arid Tropics (ICRISAT) is located at _____.
2) In India, bulk of rainfall is received from _____ monsoon.
3) _____ grass is widely recommended as vegetative barrier in watershed.
4) _____farming is also known as water harvesting.

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	: **III (New)**	**Term**	: **I**	**Academic Year**	: **2018-19**
Course No.	: BIOCHM 231	**Title**	: **Fundamentals of Plant Biochemistry and Biotechnology**		
Credits	: 3(2+1)				
Day & Date	: Monday, 12.11.2018	**Time**	: 9.00 to 12.00	**Total Marks**	: **80**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 a) Define biomolecules, enlist the biomolecules of life and state the characteristics.

b) Give scope and importance of biochemistry in Agriculture.

Q.2 a) Define the term carbohydrate. How are carbohydrates classified on the basis of behavior upon hydrolysis?

b) Define fatty acids. Write down the functions of fatty acids.

Q.3 a) What are lipids chemically? How are they classified?

b) Define glycoside. Give classification of glycoside.

Q.4 a) What is meant by essential amino acids? Classify amino acids on the basis of composition with suitable examples.

b) Describe β- oxidation of fatty acids with generation of ATP molecules.

Q.5 a) What are proteins? Classify proteins on the basis of composition with suitable examples.

b) Define nucleic acids? State the functions of nucleic acids.

Q.6 a) Classify enzymes as per IUB systems of classification. Explain the factors which affect enzyme activities.

b) Differentiate between reducing sugar and non-reducing sugar.

Q.7 a) Enlist various methods of gene transfer.

b) Explain in detail *agrobacterium* mediated transformation with suitable diagram.

Q.8 a) Define somaclonal variation.

b) Give the applications and causes of somaclonal variation.

Q.9 Define molecular marker. Write down molecular marker applications.

Q.10 Define micropropagation. Explain in detail the applications of micropropagation.

(P.T.O.)

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SECTION "B"

Q.11 Define the following terms.

1) Buffer
2) Rancidity
3) Mutarotation
4) Disachharides
5) Phospholipid
6) Restriction enzyme
7) Callus
8) Cybrid

Q.12 Give contribution of the following scientists.

1) Antoine Lavoisier
2) Berzelius
3) F. Laibach
4) H.G. Khorana
5) G. Haberlandt
6) Guha and Maheshwari
7) Watson and Crick
8) Louis Pasteur

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc. (Hons.) Agriculture/Forestry

Semester	**: III (New)**	**Term**	**: I**	**Academic Year**	**: 2018-19**
Course No.	**: COMP 231**	**Title**	**: Agri-Informatics**		
Credits	**: 2 (1+1)**				
Day & Date	**: Saturday, 17.11.2018**	**Time**	**: 9.00 to 11.00**	**Total Marks**	**: 40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Define software. Describe the types of software with four examples of each.

Q.2 Differentiate between impact and non-impact printer. Enlist the examples of impact printer.

Q.3 Write in brief about Berlo's model of communication and describe in short 'Source' element.

Q.4 Define byte. Describe the types of memory with examples.

Q.5 Describe in short binary and hexadecimal number systems.

Q.6 Enlist any two spreadsheet softwares. What is the difference between absolute cell and relative cell referencing?

Q.7 What is RDBMS? Give its important features. State any two RDBMS softwares.

Q.8 Enlist different input and output devices. Describe VDU.

Q.9 Describe your views on 'Smartphone applications in Agriculture'.

Q.10 Enlist any six options (tools) available under 'Insert menu' of word processing software. Describe 'Insert Table' option.

SECTION "B"

Q.11 Fill in the blanks.

1) C1: C15 is called _____ range in electronic spreadsheet software.
2) Copying file from your computer to internet is called _____.
3) _____ are individual dots or picture elements that form images on monitor.
4) The insertion point is also called _____.

Q.12 Match the following pairs.

'A'	'B'
1) PPM	a) DBMS command
2) APPEND	b) DOS command
3) GUI	c) Windows OS
4) DEL	d) Speed of printer
	e) Internet

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	**: III (New)**	**Term**	**: I**	**Academic Year**	**: 2018-19**
Course No.	**: ENGG 232**	**Title**	**: Farm Machinery and Power**		
Credits	**: 2 (1+1)**				
Day & Date	**: Thursday, 22.11.2018**	**Time**	**: 9.00 to 11.00**	**Total Marks**	**: 40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Define farm mechanization. Write its benefits and limitations.

Q.2 Differentiate between two stroke and four stroke engine on any four points.

Q.3 Explain the working of two stroke engine with neat sketch.

Q.4 Calculate the cost of seeding one hectare area of land with bullock drawn seed drill of 5 x 22 cm size. The speed of the bullock is 3 km/hr. Hire charges of bullocks is Rs. 500 per pair per day, hire charges of seed drill is Rs. 300 per day and wages of operator is Rs. 300 per day of 8 hours.

Q.5 Classify the plant protection equipments. Write the functions and purpose of sprayer.

Q.6 Calculate the total time required to harvest 8 hectares of grass by means of 2.5 m wide mower operated at 3.5 km/h assuming the field efficiency is 85 %.

Q.7 A two stroke four cylinder engine has cylinders of 28 cm diameter, stroke bore ratio as 1.7, clearance volume as 2200 cm^3, engine speed 300 rpm, mean effective pressure 7 kg/cm^2 and mechanical efficiency is 80%. Calculate: a) IHP b) BHP c) Swept volume and d) Compression ratio.

Q.8 Find the operating cost in Rs per hour of a tractor purchased at Rs 8,80,000/-. Fuel consumption of tractor is 6 litter per hour. Cost of fuel is Rs 65/lit and wages of driver is Rs 480 per day of 8 hours. Assume the life of tractor as 10 years with 1000 hours annual use and interest rate as 13.5 per cent. Make necessary assumptions.

Q.9 Differentiate diesel engine and petrol engine on the basis of thermal efficiency, compression ratio and body weight and compression pressure inside the cylinder.

Q.10 What is the purpose of engine cooling? What are the different methods of engine cooling?

(P.T.O.)

SECTION "B"

Q.11 Define the following terms.

1) Stroke

2) Four stroke cycle engine

3) Tilt angle

4) Vertical clearance

Q.12 Fill in the blanks.

1) A_____ is provided at one end of the crankshaft for smothering the uneven torque produced by the engine.

2) _____plough is very useful for ploughing along hillsides where it is necessary to turn all furrows down hill due to slope of land.

3) _____is opening the upper crust of the soil, inversion of soil and breaking the clods.

4) _____is walking type tractor.

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B.Sc. (Hons.) Agriculture

Semester	: **III (New)**	**Term**	: **I**	**Academic Year**	: **2018-19**
Course No.	: ENTO 232	**Title**	: **Insect Ecology and Integrated Pest Management**		
Credits	: 2(1+1)				
Day & Date	: Friday, 16.11.2018	**Time**	: 9.00 to 11.00	**Total Marks**	: **40**

Note :
1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Define insect ecology. Explain effect of temperature on insect population.

Q.2 Enlist causes of insect pest outbreak and describe any two.

Q.3 Describe in brief cultural method of pest management with suitable examples.

Q.4 Classify insecticides on the basis of chemical nature by giving single example of each group.

Q.5 Enlist categories of pest and describe any two.

Q.6 Enlist the characteristics of an ideal parasitoid.

Q.7 Define insecticide formulation. Enlist its types and describe EC formulation.

Q.8 State first-aid treatments used in early stages of insecticide poisoning cases.

Q.9 Define IPM. Enlist its tools and describe importance of IPM.

Q.10 Write short notes (Any Two).

a) Environment and its components
b) Concept of balance of life
c) Mechanism of host plant resistance

SECTION "B"

Q.11 Do as directed.

1) Sun drying of grains is _____ method of pest management (Fill in the blank).
2) The 'Insecticide Act' passed in the year 1968 in India (State true or false).
3) Bagging of fruit is (mechanical/physical/cultural) method of pest management. (Select appropriate word).
4) State the function of nozzle.

Q.12 Define the following terms.

1) Habitat
2) Repellant
3) Antidote
4) Phytotoxicity

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture / Forestry

Semester	: III (New)	**Term**	: I	**Academic Year**	: 2018-19
Course No.	: ESDM 231/ EVS 231	**Title**	:	**Environmental Studies and Disaster Management**	
Credits	: 3(2+1)				
Day & Date	: Monday, 19.11.2018	**Time**	: 9.00 to 12.00	**Total Marks**	: 80

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 a) Describe scope and importance of environmental science.

b) Write in brief about population explosion.

Q.2 Explain in detail about the food chain.

Q.3 a) Define Natural Resources. Enlist the classification of Natural Resources.

b) Give the classification of Natural Resources based on exhaustibility.

Q.4 a) Enlist the different effects of Modern Agriculture.

b) Write in brief about fertilizer-pesticide problems.

Q.5 a) What are the specific objectives of conservation of biodiversity?

b) Write in brief about *in-situ* conservation of biodiversity.

Q.6 Describe in detail the role of an individual in prevention of pollution.

Q.7 Enlist various environmental conservation Acts. Explain in detail Forest Conservation Act.

Q.8 What is natural disaster? Give in detail it's types and effect of landslides.

Q.9 Define air pollution. Explain air pollution cause, effects and control measures.

Q.10 Write short notes (Any Two).

a) Acid rain
b) Role of NGO in disaster management
c) Noise pollution
d) Ecological pyramids

SECTION "B"

Q.11 Define the following terms.

1) Disaster management
2) Climate change
3) Soil erosion
4) Ecosystem
5) Biodiversity hotspot
6) Ecology
7) Food web
8) Omnivore

(P.T.O.)

Q.12 Do as directed.

1) Abiotic component of ecosystem comprises of non-living things. (True/False)

2) The major benefits of dams are hydroelectricity generation. (True/False)

3) The major problem of malnutrition is a progressive emaciation caused by lack of protein and calories called _____. (Fill in the blank)

4) The apex body for Disaster Management in India headed by the Prime Minister of India, is _____. (Fill in the blank)

5) The main source of water for the Himalayan Rivers such as Ganga, Brahmaputra and Indus are _____. (Fill in the blank).

6) The long form of IAEM is _____.

7) IPCC stands for _____.

8) NEPA is the abbreviation of National _____Protection Act.

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	**: III (New)**		**Term**	**: I**	**Academic Year : 2018-19**
Course No.	**: GPB 232**		**Title**	**: Fundamentals of Plant Breeding**	
Credits	**: 2 (1+1)**				
Day & Date	**: Wednesday, 14.11.2018**	**Time**	**: 9.00 to 11.00**	**Total Marks**	**: 40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Define plant breeding and explain in brief the general objectives of plant breeding.

Q.2 Define heterosis, enlist genetic basis/theories of heterosis and explain in detail over dominance hypothesis.

Q.3 What is male sterility? Give its types and explain in detail Cytoplasmic Genetic Male Sterility.

Q.4 Describe in detail the procedure of mutation breeding and enlist its application in crop improvement.

Q.5 Write short notes (Any Two).

a) Pedigree breeding method and its features

b) Hardy and Weinberg law

c) Plant Introduction

Q.6 Differentiate between (Any Two).

a) Broad sense heritability and narrow sense heritability.

b) Synthetics and composites.

c) Genetic assortative and Genetic disassortative.

Q.7 What is wide hybridization? Give its types and explain in brief barriers to wide hybridization.

Q.8 a) What is clone? Discuss the various characteristics of clones.

b) What is aneuploidy? Give its application in crop improvement.

Q.9 Answer the following questions.

a) Give classification of self-incompatibility on the basis of flower morphology.

b) Give the characteristics of pure line.

c) Enlist the various types of recurrent selection.

d) Enlist the breeding methods for cross pollinated crops.

Q.10 Define backcross. Explain in brief the merits and demerits of backcrossing.

(P.T.O.)

SECTION "B'

Q.11 Give contribution of the following scientists.

1) Patel C.T.
2) Shull G.H. (1914)
3) Borlaug N.E.
4) Rimpu

Q.12 Define the following terms.

1) Acclimatization
2) Inbreeding depression
3) Variation
4) Test cross

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	: **III (New)**	**Term**	: **I**	**Academic Year**	: **2018-19**
Course No.	: HORT 232	**Title**	: **Production Technology for Vegetable and Spices**		
Credits	: 2(1+1)				
Day & Date	: Thursday, 15.11.2018	**Time**	: 9.00 to 11.00	**Total Marks**	: **40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Write in detail about importance of vegetable cultivation in India.

Q.2 Write about cultivation of cucumber in respect of the following aspects.

a) Soil and climate
b) Use of growth regulators
c) Manures and fertilizers
d) Harvesting indices and yield

Q.3 Write about cultivation of tomato on the following aspects.

a) Soil and climate
b) Seed rate and raising of seedlings
c) Varieties
d) Harvesting and yield

Q.4 Write short notes.

a) Raising of seedlings of vegetable crops
b) Maturity indices of watermelon

Q.5 Describe in brief the cultivation practices of onion on the following points.

a) Soil and climate
b) Planting season and seed rate
c) Manures and fertilizers
d) Harvesting and yield

Q.6 Write short notes.

a) Processing of white pepper
b) Harvesting and processing of cinnamon

Q.7 Write in detail cultivation of ginger on the following points.

a) Propagation and planting
b) Varieties
c) Harvesting and yield
d) Curing

Q.8 Describe in brief the cultivation practices of potato on the following points.

a) Soil and climate
b) Planting season and seed rate
c) Earthing up
d) Improved varieties

(P.T.O.)

Q.9 Write in detail cultivation of nutmeg on the following points.

a) Soil and climate

b) Propagation and planting method

c) Varieties

d) Plant part used

Q.10 Write about cultivation of okra on the following aspects.

a) Soil and climate

b) Seed rate and spacing

c) Manures and fertilizers

d) Harvesting and yield

SECTION "B"

Q.11 Fill in the blanks.

1) Botanical name of drumstick is _____.

2) Cardamom is known as _____ of spices.

3) _____ is the cultivar of ridge gourd which produces hermaphrodite flowers.

4) _____ is a variety of garden pea released by MPKV, Rahuri.

Q.12 Match the following pairs.

'A'	'B'
1) Triple disease resistant variety of tomato	a) Moraceae
2) Variety of tomato susceptible to bacterial wilt	b) Arka Abha
3) Bread fruit	c) Arka Rakshak
4) Cinnamon	d) Pusa Ruby
	e) Lauraceae

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc. (Hons.) Agriculture

Semester	**: III (New)**	**Term**	**: I**	**Academic Year**	**: 2018-19**
Course No.	**: PATH 232**	**Title**	**: Principles of Integrated Disease Management**		
Credits	**: 2(1+1)**				
Day & Date	**: Friday, 23.11.2018**	**Time**	**: 9.00 to 11.00**	**Total Marks**	**: 40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Define IPM. Describe basic principles and advantages of IPM.

Q.2 Define Plant Disease. Write in detail about economic importance of plant diseases.

Q.3 What is Pest Risk Analysis? Describe different stages of pest risk analysis.

Q.4 What is diagnosis? Describe different steps involved in plant disease diagnosis.

Q.5 Define plant disease resistance. Comment on different types of disease resistance.

Q.6 What is integrated plant disease management? Describe IPDM strategy adopted for rice crop.

Q.7 Define plant quarantine. Describe different types of plant quarantine with suitable examples.

Q.8 What is survey and surveillance? Mention the objectives of surveillance and describe different types of survey.

Q.9 Comment on safety issues or guidelines in pesticide uses.

Q.10 Write short notes (Any Two).

a) Biological control of plant disease b) Tools of IPM

c) Conventional pesticides for plant disease management

SECTION "B"

Q.11 Fill in the blanks.

1) NPPO stands for _____.

2) The plant disease responsible for Irish Famine was_____.

3) The scientific or experimental evidence of disease is called _____.

4) The commercial fungal biocontrol agent used in plant disease management is _____.

Q.12 Match the following pairs.

'A'	'B'
1) ISPM	a) Bacterial biocontrol agent
2) *Pseudomonas fluorescens*	b) Death of tissue
3) Necrosis	c) Rachel Carson
4) Silent Spring	d) International standards of Phytosanitary measures

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	**: III (New)**	**Term**	**: I**	**Academic Year**	**: 2018-19**
Course No.	**: STAT 231**	**Title**	**: Statistical Methods**		
Credits	**: 2(1+1)**				
Day & Date	**: Saturday, 24.11.2018**	**Time**	**: 9.00 to 11.00**	**Total Marks**	**: 40**

Note : 1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 State the probability mass function of Binomial and Poisson's distribution. State the properties of Normal probability distribution.

Q.2 Explain complete analysis of variance (ANOVA) of one way classification.

Q.3 What are the characteristics of ideal measures of central tendency? State the merits and demerits of Arithmetic Mean.

Q.4 What is correlation? List out types of correlations. Discuss the method of studying correlation by using 'scatter diagram'.

Q.5 What is meant by 'measures of dispersion'? Write formula (with specification of terms used) for standard deviation of individual series and continuous frequency distribution.

Q.6 State five different steps followed in testing a hypothesis. Explain method of testing mean of single population (t-test for single sample).

Q.7 Write short notes (Any two).

a) Method of finding/selecting best fit line (best fit line)

b) Two types of errors in testing hypothesis

c) Classification and its types.

Q.8 What is Random experiment, Simple event, Compound events and Mutually exclusive events?

Q.9 Give two definitions of 'Statistics'. Enlist and explain limitations of 'Statistics'.

Q.10 Differentiate between correlation and regression. Write relationship between correlation coefficient and regression coefficients.

(P.T.O.)

SECTION "B"

Q.11 Complete the following sentences by choosing correct alternative

1) The value of regression coefficient lies in between_____

a) -1 to +1 b) 0 to +1 c) -1 to 0 d) - ∞ to + ∞

2) The Geometric Mean for the series 10, 1, 2, 0, 7 is_____.

a) 0 b) 2 c) 4 d) 5

3) The value of _____ can be determined by ogive curves.

a) Arithmetic Mean b) Geometric Mean c) Median d) Mode

4) Skewness and Kurtosis are the types of Measures of_____.

a) Central tendency b) Correlation c) Regression d) Dispersion

Q.12 Answer in one sentence.

1) Which measure of central tendency can be determined by Histogram?

2) What is meant by 'Statistics'?

3) What are the methods of sampling?

4) What is the level of significance?

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