

**S.B.B. alias Appasaheb Jedhe Arts, Commerce & Science College
Pune-2**

First Term Internal Assessment-2016-17

Subject: Physical & Inorganic Chemistry (Paper-I)

Class:-F.Y.B.Sc

Marks:-10

Date:-.....

Time: - 40 Min.

Roll no..... Name of candidate..... sign of supervisor.....

Note: - 1) All questions are compulsory.

- 2) Each question carries half mark.
 - 3) Negative marking for MCQ & True/False type of question.

Q.1 (A) MCQ.

Q.2 True/False

- 1) A catalyst is a substance which alters speed of reaction.

2) Lyophobic colloids are reversible

3) Viscosity of a liquid increases with temperature.

4) Soap & detergents are emulsifying agents.

Q.3 Answer the following.

1) Define the term Molarity.

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2) What are the types of emulsions?

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3) What is Tyndall effect?

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4) Define Positive catalysis.

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5) Define the term cataphoresis

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6) Define Vapour Pressure of liquid.

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.....

Q.4 Match the following:

A

- 1) Viscosity
- 2) Purification of colloids
- 3) Ideal gas equation
- 4) Elastic gel

B

- a) $PV = nRT$
- b) Fruit jams
- c) Viscometer
- d) Ultra filtration

1)..... 2)..... 3)..... 4).....

S.B.B Alias AppasahebJedhe Arts, Commerce & Science College Pune-2

First term Internal Assessment 2016-17

Subject: Organic & Inorganic Chemistry (Paper-II)

Class: - F.Y.BSc.

Marks: - 10

Date: -

Time: - 40 Min

Roll No..... Name Candidate..... Sign of Supervisor.....

Note: - 1) All questions are compulsory.

2) Each question carries half mark.

3) Negative marking for MCQ & True/False type of questions.

Q1. MCQ

- 1) Thermal decomposition of hydrocarbons in the absence of air into alkene and alkane is called _____
a) Combustion b) Cracking c) Dehydrogenation d) Dehydration
- 2) Dehydrohalogenation of an alkyl halide is an _____
a) Addition reaction b) Substitution reaction c) Elimination reaction
d) Oxidation reaction
- 3) Chemically similar compound differing by $-CH_2-$ group are called
a) Isomers b) Paraffins c) Alkanes d) Homologous
- 4) The reaction which are favored by light are called _____
a) Exothermic reaction b) Endothermic reaction c) Photochemical reaction
d) Thermochemical reactions
- 5) Lindlar catalyst is _____
a) H_2/Pt b) $Na-Hg/H_2O$ c) $Zn-Hg/HCl$ d) $H_2/Pd, BaSO_4$
- 6) Antimarkownikoff's addition take place in the presence of _____
a) Oxygen b) Peroxide c) Light d) Ozone

Q2. True or False.

- 1) Alkene containing unsaturated hydrocarbons.
- 2) Cis-isomer is less stable than trans- isomer.
- 3) Reaction of alkyl halide with Sodium yield ether.
- 4) Alkyl halides when treated with strong base to give alkene.

Q3. Answer the following.

1) What is combustion?

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2) Draw the structure of 2,5 dimethyl hexane.

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3) What is pyrolysis?

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.....

4) What is Saytzeff rule?

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.....
.....

5) Define the term dehydrogenation.

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.....

6) What are alkanes?

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.....
.....

Q4 Match the following.

Part A

- 1) Alkane
- 2) Alkene
- 3) Methyl Magnesium Bromide
- 4) Pentane

Part B

- a) C_5H_{12}
- b) $CH_3\text{-MgBr}$
- c) C_nH_{2n}
- d) C_nH_{2n+2}

1.....

2.....

3.....

4.....

S.B.B. alias Appasaheb Jedhe Arts, Commerce & Science College, Pune-2

Second Term Internal Assessment-2016-17
Subject: Physical & Inorganic Chemistry Paper-I

Class:-F.Y.BSc

Marks:-10

Date:-.....

Time: - 40 Min.

Roll No..... Name of candidate..... sign of supervisor

Note: - 1) All questions are compulsory.
2) Each question carries half mark.
3) Negative marking for MCQ & True/False type of question.

Q.1 MCQ.

Q.2 True/False:

- 1) All natural processes are reversible.

2) For Balmer series $n_1=3$

3) sigma bond is stronger than Pi bond.

4) The bond in NaCl is ionic bond.

Q.3 Answer the following

1) Define Sigma bond.

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.....

2) State Third law of thermodynamics.

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.....

3) Define the term overlap.

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.....

4) Write Heisenberg's Uncertainty principle.

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.....

5) Define Co-ordinate bond.

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.....

6) Draw the structure of PCl_5 molecule.

Q.4 Match the following:

A

- 1) CH_4 molecule
- 2) Carnot cycle
- 3) Spontaneous process
- 4) Pi bond

B

- a) Cyclic process
- b) Collateral overlap
- c) Tetrahedral shape
- d) Downhill flow of water

Ans.: - 1)..... 2)..... 3)..... 4

S.B.B Alias AppasahebJedhe Arts, Commerce & Science College Pune-2

Second Term Internal Assessment 2016-17

Subject: Organic & Inorganic Chemistry (Paper-II)

Class: - F.Y.BSc.

Marks: - 10

Date: -

Time: - 40 Min

Roll No..... Name Candidate..... Sign of Supervisor.....

Note: - 1) All questions are compulsory.

- 2) Each question carries half mark.
- 3) Negative marking for MCQ & True/False type of questions.

Q1. MCQ

- 1) Alkyl halide can be prepared from alcohols by action of _____
a) PCl_3 b) PCl_5 c) SOCl_2 d) All of the above
- 2) Grignard reagent is _____
a) Dehydrating agent b) Hydrolysing agent c) Organo-metallic compound
d) Oxidizing agent
- 3) An alkyl halide may be converted into an alkene by
a) Substitution b) Decomposition c) Addition d) Elimination
- 4) The reaction between an alcohol and carboxylic acid is known as _____
a) Neutralization b) Dehydration c) Esterification d) None of these
- 5) Primary, Secondary and Tertiary alcohols can be distinguished from each other by _____
a) Victor-Meyer Test b) Lucas Test c) Hoffmann Test d) Kolbe's Test
- 6) Rosenmund reaction is useful for the conversion of _____
a) Amides to Amines b) Ketones to Alkanes c) Acid Chloride to Aldehydes d) None of these

Q2. True or False.

- 1) An alkyl halide is converted into an alcohol by addition reaction.
- 2) Monohalogen derivatives of alkane are known as Haloforms.
- 3) Reaction of alkyl halide with sodium alkoxide yield ether.
- 4) Benzaldehyde does not undergoes aldol condensation.

Q3. Answer the following.

1) What are alkyl halides?

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.....
.....

2) What is Markovnikoff's rule?

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.....
.....

3) What are alcohols?

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.....
.....

4) What are unsymmetrical ether?

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.....

5) Write the structure of diethyl ether.

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.....

6) Give one method of preparation of ethanol.

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.....
.....

Q4. Match the following.

Part A

- 1) Methoxy ethane
- 2) Acetone
- 3) 2-iodo propane
- 4) Methyl magnesium bromide

Part B

- a) Secondary alkyl halide
- b) Grignard reagent
- c) Ketone
- d) Unsymmetrical ether

1.....

2.....

3.....

4.....

**Shri Shivaji Maratha Society's
S.B.B Alias Appasaheb Jedhe College of Arts, Commerce and Science
Shukrawar Peth Pune- 02**

F.Y. B.Sc. Microbiology Internal examination 2016 -17

Term - 1

MB: Introduction to Microbiology

Name of the Candidate: **Roll No.:**

Max. Marks: 10

Date:

Roll No. :

Time: 40 Min.

Sign of Junior Supervisor:

Q. 1. Choose the Correct Alternative (2^{1/2})

Q.2. Match the following **(2^{1/2})**

- | | |
|---------------------------|--------------------------|
| 1. Elie Metchnikoff | a. Partial Sterlization |
| 2. Louis Pasteur | b. Edward Jenner |
| 3. Father of Microbiology | c. Theory of Abiogenesis |
| 4. Vaccination | d. Joseph Lister |
| 5. Aristotle | e. Phagocytosis |

f. Antony Van Leeuwenhoek

Ans: 1..... 2..... 3..... 4..... 5.....

Q.3. Define the following terms **(2^{1/2})**

1. Fermentation -

.....
.....
.....

2. Chemotherapy -

.....
.....
.....

3. Medical Microbiology –

.....
.....
.....

4. Pasteurization –

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.....

5. Antisepsis –

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.....
.....

Q. 4. Answer the following **(2^{1/2})**

1. State the Germ Theory of Diseases.

.....
.....

2. Name the scientist who contributed to the discovery of microscope.

.....
.....

3. Enlist the enzymes produced in the microbiological industry.

.....
.....

4. Name any 4 animal/human viruses.

.....
.....

5. Draw diagram of Tyndall's experiment **OR** Redi's experiment

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S.B.B Alias Appasaheb Jedhe College of Arts, Commerce and Science
Shukrawar Peth Pune- 02
F.Y. B.Sc. Microbiology Internal examination 2016 -17
Term - II
MB: Introduction to Microbiology

Name of the Candidate: Roll No. :

Max. Marks: 10 Time: 40 Min.

Date: _____ Sign of Junior Supervisor: _____

All the questions are compulsory

Each question carries half mark

Q. 1. Choose the Correct Alternative (2^{1/2})

1. The bond present between two nucleotides of nucleic acids are

- | | |
|------------------------|--------------------|
| a) Peptide bond | b) Glycosidic bond |
| c) Phosphodiester bond | d) Thioester bond |

2. The two purines found in DNA are..... and.....

- | | |
|------------|------------|
| a) A and T | b) A and G |
| c) U and C | d) C and T |

3. are obligatory, intracellular parasites and pathogenic to human.

- | | |
|----------------------------|----------------------|
| a) <i>Escherichia coli</i> | b) <i>Rickettsia</i> |
| c) <i>Clostridium</i> | d) <i>Salmonella</i> |

4. The solution of pH 4 is times more acidic than the solution of pH 6.

- | | |
|---------|--------|
| a) 10 | b) 2 |
| c) 1000 | d) 100 |

5. The cell wall of Fungi is mainly composed of

- | | |
|--------------|-----------|
| a) Chitin | b) Starch |
| c) Cellulose | d) Lignin |

Q.2. Match the following (2^{1/2})

- | | |
|--|---------------------------------|
| 1. <i>Plasmodium vivax</i> | a. Lactose |
| 2. Disaccharide | b. Circular SS RNA molecule |
| 3. Viroid | c. <i>Rickettsia rickettsii</i> |
| 4. Rocky Mountain Spotted Fever | d. Female Anopheles Mosquito |
| 5. Bergey's Manual of Determinative Bacteriology | e. Glucose |
| | f. Classification of Bacteria |

Ans: 1 2 3 4 5

Q.3. State whether the following statements are True or False

(2^{1/2})

1. Buffer is the solution which resists change in pH.
2. Prions are infectious Nucleic acids.
3. Starch is made up of amylose and amylopectin.
4. Amoeba has pseudopodia as locomotory organs.
5. Gram negative bacterial cell wall contains high % of peptidoglycan than Gram positive bacteria.

Q. 4. Answer the following

(2^{1/2})

1. Define Lipids and give 2 examples of Lipids.

2. Name the two sugars present in the peptidoglycan

3. What is RNA? Enlist the 3 types of RNA.

4. Write the full form of - ICTV

5. Enlist the different types of spores in Fungi

**SHREE SHIVAJI MARATHA SOCIETY'S
 SAMAJBHUSHAN BABURAO ALIAS APPASAHEB JEDHE COLLEGE, PUNE
 Second Term Internal Assessment (Zoology-1)
 2016-2017
 ZY-101: ANIMAL SYSTEMATICS AND DIVERSITY 1**

Class: F.Y.B.Sc.

Date: /02/2017

Total Marks: 10

Roll no.Name of Student

Time: 40 minutes

Note: THERE IS NEGATIVE MARKING

Sign of Supervisor: *Mande*

Q. 1) Multiple choice questions.

2 1/2 Marks

1) The movement of fishes from one place to another in search of food and water is called as.....

- A) Climatic migration B) Anadromous migration
- C) Catadromous migration D) Alimentary migration

2) Each testis consists of coiled structures called.....

- A) Seminiferous tubules B) Vasa efferentia C) mesorchium D) Urinogenital duct

3) All chordates have..... Symmetry.

- A) Diploblastic B) Triploblastic C) Both A&B D) none of these.

4) During the amplexus frog release their eggs in bunches or groups in the surrounding water, this process is known as.....

- A) Spawning B) Fertilization C) None D) Both A&B

5) Female reproductive system consists of.....

- A) ovaries B) oviduct C) fat bodies D) cloaca E) all the above.

Q. 2. State True/False

2 1/2 Marks

- a) Spinal cord is the pathway for the conduction of impulses from different body parts to brain or vice versa.
- b) Central nervous system of the chordates is situated dorsally in the body.
- c) Fat bodies provide nourishment to the developing sperm.
- d) When fishes migrate from one freshwater habitat to another in search of food or for spawning, it's called potamodromous migration.

e) Sperms are produced by the process of oogenesis.

Q.3 Match the Following.

2^{1/2} Marks.

- 1) Hemichordata
- 2) Anadromous
- 3) Urochordata
- 4) Oceanodromous
- 5) Cephalochordata

- A) Amphioxus.
- B) Salpa
- C) Balanoglossus
- D) sea to fresh water
- E) migrate in sea

Ans. A)..... B)..... C)..... D)..... E).....

Q.4 Answer the following

2^{1/2} Marks.

A) Distinguish between male and female frog.

B) Catadromous migration.

C) Enlist the parts and organs involved in Brain of frog.

D) Give the features of Ganhostomata.

E) Enlist the parts and organs involved in male & female reproductive system of frog.

**SHREE SHIVAJI MARATHA SOCIETY'S
SAMAJBHUSHAN BABURAO ALIAS APPASAHEB JEDHE COLLEGE, PUNE
Second Term Internal Assessment (Zoology) Paper II
2016-2017
ZY-101: INTRODUCTION TO CELL BIOLOGY AND GENETICS**

Class :F.Y.B.Sc.

Date : /02/2017

Roll no.Name of Student Sign of Supervisor.....

Total Marks : 10

Time : 40 minutes

Note: There is negative marking system

Q. 1) Multiple choice questions. 2^{1/2} Marks

1) In blood group 'A',antigen present on surface of RBC andantibodies are present in blood plasma.

- A) B / anti-B(a) B) B / anti-A(a) C) No antigen / a,b antibody D) A,B / No antibody

2) Sequence of phases in mitosis is

- A) Telophase → Anaphase → Metaphase → Prophase
B) Prophase → Metaphase → Anaphase → Telophase
C) G1 → S → G2 → M
D) Metaphase → Anaphase → Telophase → Prophase

3) Monohybrid test cross ratio is.....

- A) 2:1 B) 9:3:3:1 c) 1:1 D) 3:1

4) In cell cycle , DNA synthesis takes place inphase.

- A) G1 phase B) G2 phase C) S phase D) M phase

4) The gene which inhibit the expression of another non-allelic gene is called.....and the gene which is masked (covered) is called.....

- A) Hypostatic/ epistatic B) epistatic / Hypostatic
C) Supplementary / complementary D) complementary / supplementary

5)..... is regarded as father of genetics..

- A) Bateson B) Morgan C) Watson D) Mendel

Q. 2. State True/False

2^{1/2} Marks

1. Transmission of characters from one generation to another or from parents to offsprings is called as variation.....

2 .During Metaphase the chromosome shows distinct lining up at equatorial plane.....

3. Blood group 'O' is the universal acceptor while blood group 'A' is universal donor.....

4. A cross between heterozygous F1 hybrid with its recessive homozygous parent is called as test cross or back cross.....

5. Variations are the differences between parent and offsprings

Q. 3. Match the following:

A

- 1) Homozygous
- 2) Heterozygous
- 3) Phenotype
- 4) Allele
- 5) Genotype

2 1/2 Marks

B

- A) An individual possess dissimilar alleles
- B) 2 or more alternative forms of gene
- C) Genetic make up of an individual
- D) External appearance of individual
- E) An individual possess similar alleles

1)..... 2)..... 3)..... 4)..... 5).....

Q. 4) Answer the following.

2 1/2 Marks

1. What is erythroblastosis foetalis?

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.....
.....
.....

2. What is co-dominance? Write the ratio.

.....
.....
.....

3. What is Lethal gene?

.....
.....
.....

4. Enlist the contrasting characters of *Pisum sativum* which are considered for experiments by Mendel.

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.....
.....

5. If a man having blood group 'A' (heterozygous) when marries with a woman having blood group 'AB', What will be the blood groups of their childrens?

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.....
.....

SHREE SHIVAJI MARATHA SOCIETY'S
SAMAJBHUSHAN BABURAO ALIAS APPASAHEB JEDHE COLLEGE, PUNE
First Term Internal Assessment (Botany II)
2016-2017

Class: F.Y.B.Sc.

Date: /09/2016

Roll no. Name of Student Sign of Supervisor.....

Total Marks: 10

Time: 40 minutes

Q. 1) Multiple choice questions.

2 $\frac{1}{2}$ Marks

1) Fodder industry depends on.....

- A) Medicinal plant B) Timber C) Gum D) none of these

2) Mapro multinational companies famous for.....

- A) Strawberry B) ketchup C) pasta D) soup

3)..... is very often used to add colour and flavour to food products

- A) Hirda B) Acacia C) Saffron D) All of these

4) Common name of *Melia azadirachata*.....

- A) Rose B) Teak C) Neem D) Mango

5) Hirda, Beheda and Amla are used to make.....

- A) Turmeric B) Triphala churna C) Maha shudarshan churna D) None

Q. 2. State True/False

2 $\frac{1}{2}$ Marks

- a) Anticancerous drugs obtained from *Catharanthus roseus*
- b) A mixture of different types of food grains and minerals is called sugrass
- c) Major textile fibre yielding plant is Agave
- d) *Adathoda vasica* is medicinal plant
- e) The common name of *Tectona grandis* is Neem

Q. 3) Define

2 $\frac{1}{2}$ Marks

- a) Industrial Botany

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.....
.....

- b) Timber industry

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.....
.....

c) Fibre industry

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.....
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d) Fodder

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.....
.....

e) Gum

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.....
.....

Q. 3) short note

2 $\frac{1}{2}$ Marks

a) Enlist dyes resources

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.....
.....

b) Medicinal industry

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.....
.....

c) Enlist two resources of food industry

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.....
.....

d) Enlist two resources of timber industry

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.....
.....

e) Enlist the uses of *Aloe vera*

.....
.....
.....

SHREE SHIVAJI MARATHA SOCIETY'S
SAMAJBHUSHAN BABURAO ALIAS APPASAHEB JEDHE COLLEGE, PUNE
Second Term Internal Assessment (Botany -II)
2016-2017

Class: F.Y.B.Sc.

Date: /02/2017

Roll no. Name of Student Sign of Supervisor.....

Total Marks: 10

Time: 40 minutes

Q. 1) Multiple choice questions.

2 1/2 Marks

1) is method of preserving food in which the food is processed and sealed in an airtight container.

- A) Canning B) Harvest C) Handling D) none of these

2) *Azotobacter* is a bacterium that freely lives in the environment and has ability to fix the atmospheric..... into the soil.

- A) Oxygen B) Hydrogen C) Nitrogen D) Phosphorous

3) A solid gel made from fruit pulp or juice from a single fruit or from combination of fruit is called.....

- A) Ketchup B) pickle C) Jam D) Chips

4)are food or parts of food which provide medical or health benefits including prevention and treatment of diseases.

- A) Nutraceutical B) Decoction C) Cosmeceutical D) none of these

5) A mixture of powder herbs and or minerals used in Ayurvedic medicine is.....

- A) Arishta B) Churna C) Asava D) Decoction

Q. 2. State True/False

2 1/2 Marks

- a) Cold storage is special kind of rooms in which very low temperature is maintained with the help of instruments.
- b) Biofertilizer are used to improve the fertility of the soil.
- c) *Rhizobium* is gram positive soil bacteria.
- d) The dried yeast extract is being sold in the market which is rich in Vitamin B-complex.
- e) Shatavri roots are used as galactogogue and as diuretic.

Q.3) Match the pair

2^{1/2} Marks

Fungi	Uses
1) <i>Penicillium</i>	a) Effect on the immune system
2) <i>Trichoderma</i>	b) Citric acid production
3) <i>Aspergillus</i>	c) Antibiotics production
4) <i>Saccharomyces</i>	d) Disease control
5) <i>Ganoderma</i>	e) Bakery production

1) 2)..... 3)..... 4)..... 5).....

Q. 4) Define / explain

2^{1/2} Marks

a) Mycology industry?

.....
.....
.....

b) Commercial significance of Alma?

.....
.....
.....

c) Write note on phosphate solubilising biofertilizer?

.....
.....
.....

d) Define Asava?

.....
.....
.....

e) What are fruit processing?

.....
.....
.....

Shri Shivaji Maratha Society's
S.B.B. Alias Appasaheb Jedhe College, Pune-411002.

INTERNAL ASSESSMENT EXAMINATION - 1
(2016-17)

Class : F.Y.B.Sc.

Subject : Botany Paper-1

Supervisors sign

Date:

Name:-

Roll no :

N.B.1. All questions are compulsory.

2. There shall be negative marking system for Q.1 and Q.2

3. Each question carries ½ marks.

Q.1 Multiple Choice Questions.

1. Five kingdom system is proposed by -----.

- | | |
|-------------|--------------|
| a) Fritch | b) Whittakar |
| c) Linneous | d) None |

2. Higher cryptogamic group is ----- .

- | | |
|-----------------|----------------|
| a) Pteridophyta | b) Thallophyta |
| c) Bryophyta | d) None |

3. ----- is known as plant amphibian.

- | | |
|------------------|---------------|
| a) Angiosperms | b) Bryophytes |
| c) Pteridophytes | d) None |

4. ----- are symbiotic organisms.

- | | |
|-----------|----------|
| a) Lichen | b) Algae |
| c) Fungi | d) None |

5. *Albugo* is known as -----.

- | | |
|---------------|---------------|
| a) Brown rust | b) White rust |
| c) Black rust | d) None |

Q.2. Match the following

- | | | |
|-----------------|-------|------------------------|
| 1. Thallophyta | ----- | a) <i>Cycas</i> |
| 2. Bryophyta | ----- | b) <i>Hibiscus</i> |
| 3. Pteridophyta | ----- | c) <i>Spirogyra</i> |
| 4. Gymnosperm | ----- | d) <i>Nephrolepies</i> |
| 5. Angiosperm | ----- | e) <i>Riccia</i> |

Q.3. Define.

1. Biodiversity:-----

2 Anatomy:-----

3. Morphology:-----

4. Fragmentation:-----

5. Karyogamy:-----

Q.5. Short note.

1. *Albugo*

2. *Riccia*

3. Angiosperm

4. Gymnosperm

5. Draw a labelled diagram of *Agaricus*