ARKAJAIN University Jharkhand

1st Semester Examination –2021-22

Subject	: Environmental Sciences	Roll No	: ....
Course	: B.Sc. Biotechnology		
Full Marks	: 35	Time	: 3 Hours.

Instructions to the Candidates:

- Read the question paper very carefully.
- Start writing from 2nd page onwards; <u>Don't Write On The 1st Page Backside.</u>
- Question Paper is divided into Three Parts –A, B & C.
- Part-A is containing 5 multiple choice questions & 5 very Short Answer Question.
- Part- B containing FOUR questions out of which TWO questions are to be answered.
- Part- C containing THREE questions out of which ONE question is to be answered.
- Do not write anything except your Roll No. on the question paper.
- Possession of <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers</u>.

PART A

A] MULTIPLE CHOICE QUESTIONS   (5x1=5)

1. Any Energy flow in an ecosystem is

a) Unidirectional
b) Bidirectional
c) Multidirectional
d) None of the above

2. Chipko movement was initiated by

a) Sundarlal Bahuguna
b) Salim Ali
c) M.C Mehta
d) None of the above

3. Fossil fuels are–

a) Renewable
b) Non-renewable
c) Exhaustible
d) None of above

4. The 3 "R" Principle in waste management involves

a) Reduce, Regain, Reuse
b) Reduce, Reuse, Recycle
c) Reduce, Reform, Reset
d) Reduce, Retain, Regain

5. Sustainable development includes

    a) Environmental development

    b) Economical development

    c) Social development

    d) All of these

B] VERY SHORT QUESTION   (5x2=10)

    a) Food chain

    b) National parks

    c) Family Welfare Program

    d) Biofuel

    e) Renewable energy

PART B

ANSWER ANY TWO OUT OF FOUR   (2x5=10)

1. Discuss scope and importance of multidisciplinary nature of environmental studies.

2. Explain the followings.

    a)   Family welfare program.

    b) Poverty and Environment

3. What is in-situ and ex situ-conservation? Write one examples for each.

4. Give a brief account of renewable and nonrenewable energy resources with examples.

PART C

ANSWER ANY ONE OUT OF THREE   (1x10=10)

1. Briefly describe the structure and functional components of an ecosystem.

2. What do you mean by sustainable development? Describe in detail two example of sustainable development.

3. What is an Ecosystem? Describe aquatic ecosystem in detail.

Subject	: Entrepreneurship Development	Roll No	: ....
Course	: B. Sc. Biotechnology		
Full Marks	: 35	Time	: 3 Hours.

Instructions to the Candidates:

- Read the question paper very carefully.
- Start writing from 2nd page onwards; <u>Don't Write On The 1st Page Backside.</u>
- Question Paper is divided into Three Parts –A, B & C.
- Part-A is containing 5 multiple choice questions& 5 very Short Answer Question.
- Part- B containing FOUR questions out of which TWO questions are to be answered.
- Part- C containing THREE questions out of which ONE question is to be answered.
- Do not write anything except your Roll No. on the question paper.
- Possession of <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers</u>.

PART A

A] MULTIPLE CHOICE QUESTIONS   (5x1=5)

1. Size of business unit can be measured in tems of

a. Labour employed

b. power used

c. Volume of output

d. All of these

2. Which one will be biggest in size

a. Firm

b. Plant

c. Lndustry

d. All are of same size

3. Unlimited liablity and two or more persons are characterstics of

a. joint stock company

b. sole properitors

c. partnership

d. all of these

4. Program for developing entreprenual skill is

a. EVP

b.EDP

c. EPM

d.EPP

5. Characteristics of good business opportunity is/are

a. Wide market gap between demand and supply

b. Reliable return

c. Less gap between demand and supply

d. Both a and b

B] VERY SHORT QUESTION

(5x2=10)

    a) Project identification
    b) Optimum firm
    c) Entrepreneur
    d) Fabian entrepreneur
    e) HUF

PART B

ANSWER ANY TWO OUT OF FOUR

(2x10=10)

    1. What are characteristics of an ideal entrepreneur?

    2. Discuss demerits of partnership

    3. Discuss Importance of Entrepreneurship development Program

    4. Discuss sickness in small scale industry

PART C

ANSWER ANY ONE OUT OF THREE

(1x10=10)

    1. Discuss problems of entrepreneurship

    2. Discuss features , merits and demerits of Joint stock company

    3. Define Project Report, Discuss its objective and characteristics

Subject	: English	Roll No	: ....
Course	: B.Sc. Biotechnology		
Full Marks	: 35	Time	: 3 Hours.

Instructions to the Candidates:

- Read the question paper very carefully.
- Start writing from 2ⁿᵈ page onwards; <u>Don't Write On The 1ˢᵗ Page Backside.</u>
- Question Paper is divided into Three Parts –A, B & C.
- Part-A is containing 5 multiple choice questions & and 5 very Short Answer Question.
- Part- B containing FOUR questions out of which TWO questions are to be answered.
- Part- C containing THREE questions out of which ONE question is to be answered..
- Do not write anything except your Roll No. on the question paper.
- Possession of <u>Mobile Phones</u> or any kind of <u>Written Material</u>, <u>Arguments with the Invigilator</u> or <u>Discussing with Co-Student</u> will comes under <u>Unfair Means</u> and will <u>Result</u> in the <u>Cancellation of the Papers.</u>

PART A

A]   MULTIPLE CHOICE QUESTIONS   (5x1=5)

1. The passive of 'One should perform one's prayers' is……..
a. One's prayers should be performed.
b. Prayers are performed.
c. Prayers should be performed.
d. One's prayers should be performed by one.

2. I want to buy .... laptop computer next week.
a. A
b. An
c. The
d. Some

3. _____ didn't change even at the end of the story.

a. Mini's attitude towards life

b. Kabuliwala's Unconditional love towards Mini

c. Mini's father's attitude towards kabuliwala

d. Hatred of Kabuliwala for Mini

4. The poet of the poem 'Ode to Duty' is……..
a. William Blake
b. W.B. Yeats
c. William Wordsworth
d. Byron

5. Either the sculpture or the paintings ......in the museum today.

a. Was

b. Are

c. Be

d. Is

B] VERY SHORT QUESTION

(5x2=10)

a) What are the uses of studies as specified by Bacon?

b) What does the poet mean by 'Poor lovers forget long ages of anguish'?

c) Write the central theme of the poem 'Ode to Duty'.

d) Mention the characters of the story *Kabuliwala*.

e) What are the main advantages of study?

PART B

ANSWER ANY TWO OUT OF FOUR

(2x5=10)

1. 'Studies serve for ability'. What does Bacon mean by it?

2. Discuss the themes of the play 'Arms and the Man'.

3. Who came in large numbers when the grandmother died and why?

4. What were the three reasons the author's grandmother was disturbed when he started going to the city school?

PART C

ANSWER ANY ONE OUT OF THREE

(1x10=10)

1. How does the poem 'Can Life be a Blessing' explore the possibilities of happiness?

2. Describe the special bond Mini and Kabuliwala shared with each other.

3. Critically analyze the poem 'A grey Haze over the Rice Fields'.

Subject	: Cell Biology	Roll No	: ....
Course	: B.Sc. Biotechnology		
Full Marks	: 60	Time	: 3 Hours.

Instructions to the Candidates:

- **Read the question paper very carefully.**
- **Start writing from 2ⁿᵈ page onwards; Don't Write On The 1ˢᵗ Page Backside.**
- **Question Paper is divided into Three Parts –A, B & C.**
- **Part-A is containing 10 multiple choices questions & and 5 very Short Answer Question.**
- **Part- B containing SIX questions out of which FOUR questions are to be answered.**
- **Part- C containing FOUR questions out of which TWO question is to be answered.**
- **Do not write anything except your Roll No. on the question paper.**
- **Possession of Mobile Phones or any kind of Written Material, Arguments with the Invigilator or Discussing with Co-Student will comes under Unfair Means and will Result in the Cancellation of the Papers.**

PART A

A] MULTIPLE CHOICE QUESTIONS (10x1=10)

1. The most common unit of measurement in cytology
   a. μ b. nm   c. A^o d. mm.

2. 100 A^o is equal to: -
   a. 10^{-5}cm   b. 10^{-6} cm   c. 10^{-7} cm   d. None of the above.

3. Endoskeleton of case is: -
   a. ER   b. Cytoplasm   c. Nucleus   d. Tubules.

4. The filaments present in cilia and flagella.
   a. Micro tubules   b. Micro filaments   c. Micro fibrils   d. Microvilli.

5. F1-Particle of Mitochondria remain attached to the surface of cristae with the help of: -
   a. Lipid   b. Protein   c. OSCP   d. Mg++.

6. An organelle that has no DNA but capable of duplication is: -
   a. Centriole   b. Centrosphere   c. Centromere   d. Kinetochore.

7. The chemical formula of chlorophyll – a is: -
   a. $C_{55}H_{72}O_5N_4Mg$ b. $C_{55}H_{70}O_6N_4Mg$ c. $C_{35}H_{40}O_5N_4Mg$ d. None.

8. In a trilaminar membrane, the arrangement of lipid (L) and protein (P) is: -
   a. L-P-P-L   b. P-L-L-P   c. P-P-L-L   d. L-P-L.

9. P_{700} is pigment molecule of: -
   a. Chlorophyll-a   b. Chlorophyll-b   c. Carotenoid   d. None of these.

10. Ribosomes are composed of: -
    a. DNA and Protein   b. rRNA and protein
    c. Nucleoprotein + Mg^{++}+tRNA   d. DNA, rRNA and protein.

B] VERY SHORT QUESTION   (5x2=10)

a. Prokaryotic ribosome.
b. Biogenesis of Chloroplast.
c. Genome of mitochondria.
d. Biogenesis of golgi complex.
e. Enzymes present in lysosome.

PART B

ANSWER ANY FOUR OUT OF SIX   (4x5=20)

1. Structure of Golgi complex.

2. Structure of chromosome under electron microscope.

3. Structure & function of lysosome.

4. Function of Endoplasmic reticulum.

5. Explain about signal transduction.

6. What is cancer? Explain agents promoting carcinogenesis.

PART C

ANSWER ANY TWO OUT OF FOUR   (2x10=20)

1. Structure and function of mitochondria.

2. Explain the various models about the cell membrane.

3. Define cytoskeleton. Describe the structure and function of microtubules & microfilament.

4. What are macromolecules? Explain the types & functions of macromolecules in brief.