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B.Sc. (Part - III) (Semester - V) (CBCS) Examination, January - 2023**ENGLISH (Compulsory) (Paper - III)****English for Communication****Sub. Code : 79671****Day and Date : Saturday, 07 - 01 - 2023****Total Marks : 40****Time : 2.30 p.m. to 4.30 p.m.**

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.

Q1) A) Choose the appropriate answer and complete the following sentences.

[3]

- a) The devotees, in our country, should go to the pilgrims with their eyes lowered and body couched in _____.
 - i) happiness
 - ii) fear
 - iii) anxiety
 - iv) terror
- b) For more than thirty years Morris has made a study of _____.
 - i) detective fiction
 - ii) his shortcomings
 - iii) safety measures
 - iv) jewellery shops
- c) According to Sudha Murty, _____ is inversely proportional to economic standing.
 - i) writing
 - ii) travelling
 - iii) conversation
 - iv) reading

B) Answer the following questions in one word/phrase/sentence each. [3]

- a) Who are William Morris's favorite writers?
- b) Whom did the pilgrims or travellers lose?
- c) Which award did Sudha Murty receive from Bhopal?

P.T.O.

- Q2) A)** Answer the following questions in three to four lines each. (2 out of 3) [4]
- a) What was the cause of George’s worry in the story?
 - b) Who were the incredible women in Indian history referred by Sudha Murty?
 - c) How was the first stage of pilgrimage?
- B)** Write a short note on the following in about 7-8 sentences. (any one)[4]
- a) The American
 - b) “Enterprise” as a social satire
- C)** Do as directed. [2]
- a) Write the noun form of the word “beautiful”
 - b) Give antonyms of “honest”
- Q3) A)** a) Suppose you have been called for an interview for the post of Chemist. Write a piece of conversation between you and the interviewer. [8]

OR

- b) Read the following advertisement carefully and answer the questions given below the advertisement. [8]

A Fast Growing Pharma Allopathic Company
AREA SALES MANAGER - 02 Posts
HQ - Pune (Independent working)
Candidates must have 3-5 years’ experience in
Pharmaceutical industry as an M.R. or Area Manager.
Walk in for interview on SUNDAY
Date 22nd Sept., 2019 between 09.00 to 02.00 p.m. at
Hotel Natraj, Pune-Bangalore Road, Pune.
Director, Lifeline Health Care Pvt. Ltd.,
Pune, Cell No. 8050399456

- i) What certificates will you take with if you are called for an interview for the post of area sales manager?
 - ii) Suppose you do not have any working experience, how will you answer the question about it?
 - iii) How will you explain you strong points to the interviewers?
 - iv) How will you introduce yourself?
- B) a) Suppose you participated in a N.S.S. residential camp for seven days. Write a Personal Blog describing your experiences there. [8]

OR

- b) Write an email to Municipal Corporation complaining about the bad condition of the roads in your area.

Q4) A) Write a report about your participation in a Cultural Event. [8]

OR

- B) Write a well-organized paragraph on 'My First Experience of Travelling by Train'.



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B.Sc. (Part-III) (Semester - V) (CBCS) (Examination, January - 2023

BOTANY

Genetics and Plant Breeding (Paper - IX)

Sub. Code: 79688

Day and Date : Tuesday, 03 - 01 - 20223

Total Marks : 40

Time : 2.30 p.m. to 4.30 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks
 - 3) Draw neat and labelled diagrams wherever necessary.

Q1) Rewrite the following sentences by choosing correct alternatives. [8]

- a) The tendency of an off spring to resemble with its parent is known as _____
- i) Variation
 - ii) Mutation
 - iii) Heredity
 - iv) Morphology
- b) _____ is known as 'Father of Modern genetics'.
- i) Hugo de Vries
 - ii) Carl Correns
 - iii) Gregor Johann Mendel
 - iv) E. Von Tschermak
- c) Linkage results information of more number of _____.
- i) Parental off springs
 - ii) Recombinant off springs
 - iii) Intermediate individuals
 - iv) Dominant individuals
- d) Morgan used _____ for study of linkage.
- i) *Drosophila*
 - ii) *Neurospora*
 - iii) *Arabidopsis*
 - iv) yeast
- e) The centromere is that part of the chromosome where _____.
- i) Chromatids are attached
 - ii) Replication start
 - iii) Crossing over occurs
 - iv) Linkage occurs

P.T.O.

- f) Law of population inheritance is also known as_____.
- i) Mendel's Law
 - ii) Griffithii's Law
 - iii) Darwin's Law
 - iv) Hardy Weinberg's Law
- g) The first and basic phase of plant breeding is_____.
- i) domestication
 - ii) hybridization
 - iii) genetic engineering
 - iv) distant hybridization
- h) Sonalika and Kalyan Sona are high yielding varieties of_____.
- i) Rice
 - ii) Wheat
 - iii) Maize
 - iv) Sugarcane

Q2) Attempt any two of the following. **[16]**

- i) Explain complementary gene interaction with suitable example.
- ii) Describe in brief any two types of changes in chromosomal structure.
- iii) What is selection? Describe mass selection. Add a note on its advantages.

Q3) Attempt any four of the following. **[16]**

- i) Law of Independent Assortment.
- ii) Crossing over.
- iii) Mutagens.
- iv) Polygenic inheritance.
- e) Male sterility.
- f) Introduction and acclimatization.



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B.Sc. (Part - III) (Semester - V) (CBCS)
Examination, January - 2023
BOTANY (Paper - X)
Microbiology, Plant Pathology and Mushroom Culture
Technology (DSE - E26)
Sub. Code : 79689

Day and Date : Wednesday, 4 - 1 - 2023

Total Marks : 40

Time : 2.30 p.m. to 4.30 p.m.

- Instructions :
- 1) All question are compulsory.
 - 2) Draw neat and labelled diagrams wherever necessary.
 - 3) Figures to the right indicate full marks.

Q1) Rewrite the following sentences by choosing correct alternatives. **[8]**

- a) _____ is used as solidifying agent in culture media.
- i) Dextrose sugar
 - ii) Agar agar
 - iii) Potato pulp
 - iv) Malt extract
- b) The virus mediated bacterial recombination is known as _____
- i) Transduction
 - ii) Conjugation
 - iii) Transformation
 - iv) Recombination
- c) _____ is a bio-pesticide.
- i) DDT
 - ii) Bavistin
 - iii) Nimbidine
 - iv) Sulphur powder
- d) A biocontrol agent used against plant diseases is _____
- i) *Trichoderma*
 - ii) *Bacillus thuringiensis*
 - iii) *Glomus*
 - iv) *Buculovirus*
- e) Abnormal yellowing colour of leaf tissue is called _____
- i) Blight
 - ii) Chlorosis
 - iii) Necrosis
 - iv) Dead patches

P.T.O.

- f) Red rot of Sugarcane caused by _____ causal organism.
- i) *Colletotrichum falcatum*
 - ii) *Colletotrichum capsici*
 - iii) *Colletotrichum gloesporioides*
 - iv) None of above
- g) Mushroom belongs to group of _____
- i) Algae
 - ii) Fungi
 - iii) Bryophytes
 - iv) Angiosperms
- h) Antibiotic 'Penicillin' was discovered by _____
- i) Alexander Flemming
 - ii) Ficher
 - iii) Olive
 - iv) Robert Koch

Q2) Attempt ANY TWO of the following. [16]

- a) Explain methods of synthesis of organic acid.
- b) Describe classification of plant diseases on the basis of symptoms.
- c) Explain in brief the technique for cultivation of Mushroom.

Q3) Attempt ANY FOUR of the following. [16]

- a) Antibiotics
- b) Transduction
- c) Pure culture technique
- d) White rust of crucifer
- e) Seed borne pathogen
- f) *Tricoderma* Biofertilizers



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B.Sc. (Part - III) (Semester - V) Examination, January - 2023

BOTANY

**Cytology and Research Techniques in Biology (Paper-XI)
(DSC-E-27)**

Sub. Code: 79690

Day and Date Thursday, 05 - 01 - 2023

Total Marks : 40

Time : 2.30 p.m. to 4.30 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Draw neat & labelled diagrams whenever necessary.
 - 3) Figures to the right indicates full marks.

Q1) Rewrite the following sentences by choosing the correct alternative. [8]

- a) Nucleus of primitive nature in prokaryotes is called _____.
 - i) nucleoid
 - ii) Cytoplasm
 - iii) matrix
 - iv) plasmid
- b) Cell theory was given by _____ and schwann
 - i) Schleiden
 - ii) Morgan
 - iii) Mendel
 - iv) Watson
- c) Light microscope is also referred to as _____.
 - i) Electron microscope
 - ii) Compound microscope
 - iii) Scanning electron microscope
 - iv) X-ray
- d) In metaphase chromosomes undergo _____.
 - i) Less condensation
 - ii) Maximum condensation
 - iii) no condensation
 - iv) least condensation
- e) _____ is a membrane bound cell organelle containing the genetic material.
 - i) Lysosome
 - ii) Peroxisome
 - iii) Glyoxysome
 - iv) Nucleus
- f) Eukaryotic ribosomes are _____S.
 - i) 30
 - ii) 40
 - iii) 70
 - iv) 80

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B.Sc. (Part - III) (Semester - V) Examination, January - 2023

BOTANY (Paper - XII)

DSC-E-28 : Horticulture and Gardening

Sub. Code : 79691

Day and Date : Friday, 06 - 01 - 2023

Total Marks : 40

Time : 2.30 p.m. to 4.30 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Draw neat & labelled diagrams wherever necessary.
 - 3) Figures to the right indicate full marks.

Q1) Rewrite the following sentences by choosing the correct alternatives : [8]

- a) In _____ scion and root stock is attached till the sprouting of a new plant.
 - i) Whip grafting
 - ii) Air layering
 - iii) 'T' budding
 - iv) Approach grafting
- b) 'Goottee' is an example of _____.
 - i) Grafting
 - ii) Layering
 - iii) Budding
 - iv) Marigold variety
- c) The causal organism of Downey mildev of Rose is _____.
 - i) *Diplodia rosarum*
 - ii) *Sphaerotheca pannosa*
 - iii) *Diplocarpon rosae*
 - iv) *Peronospora sparsa*
- d) _____ is mostly cultivated on large scale in the Polyhouse.
 - i) *Chrysanthemum*
 - ii) Marigold
 - iii) *Gerbera*
 - iv) Rose
- e) Chrysanthemum is an example of _____.
 - i) Loose flowers
 - ii) Cut flowers
 - iii) Cut greens
 - iv) Dried flowers

P.T.O.

- f) _____ is mostly grown by stem cutting.
- i) Marigold
 - ii) Rose
 - iii) *Gerbera*
 - iv) *Dianthus*
- g) Designing of outdoor and public spaces is called _____
- i) Indoor gardening
 - ii) Landscaping
 - iii) Floriculture
 - iv) Hedges
- h) _____ is generally planted as indoor plant.
- i) *Dieffenbachia*
 - ii) *Duranta*
 - iii) *Thuja*
 - iv) *Gerbera*

Q2) Attempt any two of the following : [16]

- a) What is grafting? Explain with suitable diagrams methodology used in Approach grafting.
- b) Explain in brief cultivation practices, pests and disease management of Marigold.
- c) What is bonsai? Explain methods used in preparation of Bonsai.

Q3) Attempt any four of the following. [16]

- a) Importance of horticulture
- b) Marketing of cut flowers
- c) Objectives of Nursery
- d) Patch budding
- e) Brindavan garden
- f) Terrace gardening



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B.Sc. (Part-III) (Semester-VI) (CBCS) Examination, January-2023
BOTANY

DSC-F-25 : Plant Biochemistry and Molecular Biology (Paper - XIII)
Sub. Code : 81680/81882

Day and Date : Tuesday, 03 - 01 - 2023

Total Marks : 40

Time : 10.30 a.m. to 12.30 p.m.

- Instructions :
- 1) All questions are compulsory.
 - 2) Figures to the right indicate full marks.
 - 3) Neat diagram must be drawn wherever necessary.

Q1) Select the correct alternatives from the following. [8]

- a) In sugar ring an additional asymmetric carbon atom is created called as _____
- i) Anomeric carbon
 - ii) Dimeric carbon
 - iii) Trimeric carbon
 - iv) Oligomeric carbon
- b) _____ bond is covalent bond formed by the condensation reaction between a sugar and the -OH group of other compound.
- i) Non-glycosidic
 - ii) Glycosidic
 - iii) Hydrogen
 - iv) Phosphate
- c) Fatty acids are _____ at room temperature.
- i) Vapours
 - ii) Gas
 - iii) Liquid
 - iv) Solid
- d) Bloor classified lipids into _____ groups.
- i) One
 - ii) Two
 - iii) Three
 - iv) Four
- e) Phenyl aniline is an example of _____ amino acid.
- i) Aliphatic
 - ii) Heterochromatic
 - iii) Heterocyclic
 - iv) Aromatic

P.T.O.

