

Seat No. : _____

DK-101

December-2021

B.Sc., Sem.-III

CC-201 : Biotechnology (Concept in Biotechnology)

Time : 2 Hours]

[Max. Marks : 50

- Instructions :**
- (1) All questions in **Section – I** carry equal marks.
 - (2) Attempt any **THREE** questions in Section – I.
 - (3) Question – **9** in **Section – II** is **compulsory**.
 - (4) Draw figures where necessary. Show question number against each answer.
 - (5) Figures in right are marks.

Section – I

1. (A) What is the definition of Biotechnology ? Write major contribution from related fields ? 7
(B) Describe Scope and challenges of Biotechnology after Covid-19 Pandemic. 7
2. (A) Explain area of agriculture and environmental Biotechnology giving suitable examples. 7
(B) Elaborate Health and Medical Biotechnology giving suitable examples. 7
3. (A) Enlist top companies and their sector of working in Biotechnology in Gujarat. 7
(B) Describe the role of ICGEB and GSBTM in promotion of Biotechnology. 7
4. (A) What is Bt Cotton ? Explain development of Bt Cotton in detail. 7
(B) Describe case study of Flavr-savr tomato with illustration. 7
5. (A) Discuss role of BIS and ISO certification in quality control. 7
(B) Explain importance of Entrepreneurship development in biotechnology sector. 7

6. (A) Write significance of automation in Industries. 7
 (B) Discuss briefly GLP. 7
7. (A) Discuss Important provision of 'Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms in India. 7
 (B) Elaborate ethical and social issues related to human cloning. 7
8. (A) Discuss threats from GM crops and role of GEA committee in India. 7
 (B) Explain IPR and patents in detail. 7

Section – II

9. Answer the following : (Any **eight**) 8
- (1) Field of biotechnology which is applied to industrial processes is known as.
 (a) Blue biotechnology (b) Green biotechnology
 (c) White biotechnology (d) Red biotechnology
- (2) Department of Biotechnology was established in-
 (a) 1979 (b) 1986
 (c) 1990 (d) 2004
- (3) Environmental Biotechnology does not involve _____.
 (a) Bioremediation
 (b) The use of microbes to clean up the environment.
 (c) The study of benefits and hazards associated with GMOs.
 (d) Bioterrorism
- (4) CSIR Institute of Microbial Technology is situated at-
 (a) Delhi (b) Chandigarh
 (c) Haryana (d) Bhavnagar
- (5) Which one of the following is an inter-governmental organization.
 (a) DBT (b) CSIR
 (c) ICGEB (d) GSBTM
- (6) What is TQM
 (a) Total Quantity Management
 (b) Total Quality Management
 (c) Total Qualitative management
 (d) None of the above

- (7) Requirements of quality management system are
- (a) Flexibility/control (b) Real intelligence
(c) Enterprise scalability (d) all of the above
- (8) What is GILSP ?
- (a) Good industrial lab search practices
(b) Good industrial lab scale practice
(c) Good Industrial Large-Scale Practice
(d) None of the above
- (9) GLP does not apply on manufacturing of
- (a) vaccines (b) medicines
(c) cosmetics (d) All of the above
- (10) What does QA and QC stand for ?
- (a) Quality Adjustment and Queuing control
(b) Quality Assurance and Quality control
(c) Quality Adjustment and Quality completion
(d) Quality Assurance and Queuing Control
- (11) Dolly the sheep was cloned from which type of differentiated adult cell ?
- (a) Udder (b) Skin
(c) Blood (d) kidney
- (12) To obtain a patent the inventor must give an application to.
- (a) certifying authority (b) Controller of patent
(c) commissioner of patent (d) any of the above
- (13) A patent is valid for
- (a) 20 years (b) 15 years
(c) 60 years (d) 25 years
- (14) When did the WTO come into effect ?
- (a) March 6, 1996 (b) April 8,1994
(c) February 5,1994 (d) January 1,1995
- (15) Indian Government has set up an organization such as _____ to validate GM research.
- (a) CSIR (b) GEAC
(c) GSBTM (d) DBT

- (16) The use of living organisms to degrade environmental pollutants is called
- (a) Microremediation
 - (b) Bioremediation
 - (c) Nanoremediation
 - (d) All of the above
- (17) The first transgenic plant to be produced is _____.
- (a) Tobacco
 - (b) Brinjal
 - (c) Rice
 - (d) Corn
- (18) Which protein is produced by Bt crops ?
- (a) Cry
 - (b) Arb
 - (c) Tet
 - (d) None of the above
- (19) Bureau of Indian Standards works under aegis of
- (a) Department of Heavy Industry
 - (b) Ministry of Commerce and Industry
 - (c) Ministry of Consumer Affairs, Food & Public Distribution
 - (d) Ministry of Micro Small and Medium Enterprises
- (20) Which statement is correct for GMP ?
- (a) GMP is a part of QA but not a part of QC
 - (b) GMP is a part of QC but not a part of QA
 - (c) GMP is a part of both QA and QC
 - (d) GMP is neither a part of QA nor QC
- (21) The nucleus of ____ donor is removed during human cloning.
- (a) Sperm
 - (b) Egg
 - (c) Embryo
 - (d) None of the above
- (22) The correct order of genetic counselling is
- (a) Diagnosis, Prognosis, Treatment
 - (b) Prognosis, Diagnosis, Treatment
 - (c) Pretreatment, Diagnosis, Prognosis
 - (d) Pretreatment, Diagnosis, Treatment
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