

Subject Code **0215**

BIOTECHNOLOGY- DSE-III (BACK)

Question Booklet No.

Signature of Invigilator	To be filled in by candidate by ball-point pen only	OMR Sl. No. _____
	Roll No. _____	_____
Time of Examination	Declaration : I have read and understood the instructions given below.	Full Marks : 80/50
Date of Examination	Full Signature of Candidate	
	Name of Candidate	

Number of Questions in the Booklet } **50/40**



UU 6th Semester Examination, 2020

INSTRUCTIONS TO CANDIDATES

- Immediately after getting the booklet read instructions carefully mentioned on the front and back page of the Question Booklet. Do not open the seals unless asked by the Invigilator.
- Write your Roll No., OMR Response Sheet No., in the specified places given above and put your signature.
- Write the subject code of the booklet in your OMR Sheet.
- Make all entries in the OMR Response Sheet as per the given instructions; otherwise OMR Response Sheet will not be evaluated.
- After opening the seals, ensure that the Question Booklet contains total no. of pages as mentioned above and printing of all the **50 / 40** questions are proper. If any discrepancy is found, inform the invigilator within **15** minutes and get the correct Question Booklet.
- For each question in the Question Booklet choose the correct option from the given four alternatives and darken the same circle in the OMR Response Sheet with Black or Blue ball-point pen.
- Darken the circle of correct answer properly; otherwise answers will not be evaluated. The candidate will be fully responsible for it.
- If more than one option is darken foe a particular question, then it will be treated as wrong answer.
- After completion of the examination, only OMR Response Sheet is to be handed over to the invigilator.

THERE IS NO NEGATIVE MARKING FOR WRONG ANSWER

BIOTECHNOLOGY-DSE-III (BACK)

(Answer any 40 questions)

- 1 Oil spill is the release of _____ into environment due to human activity
 - (A) Kerosene
 - (B) Liquid petroleum hydrocarbon
 - (C) Textile dye
 - (D) Sludge
- 2 Restoration of oil polluted environment by the use of natural microbial biodegradation is called as
 - (A) Bioremediation
 - (B) Phytoremediation
 - (C) Chemoremediation
 - (D) Biodegradation
- 3 Lignin occurs in tight association with _____ and _____
 - (A) Cellulose and mannose
 - (B) Cellulose and glucose
 - (C) Hemicellulose and cellulose
 - (D) Sucrose and xylulose
- 4 Which of the site is considered as a natural source of heavy metals?
 - (A) Steel industry
 - (B) Medicinal waste
 - (C) Weathering of minerals
 - (D) Herbicides
- 5 Which of the following result from the incomplete combustion of organic mater in natural wild fire?
 - (A) Alkanes
 - (B) Polycyclic aromatic hydrocarbons
 - (C) Petroleum hydrocarbons
 - (D) Branched alkanes
- 6 Which is considered as the primary degrader of spilled oil environment?
 - (A) Yeast
 - (B) Bacteria
 - (C) Fungi
 - (D) Phytoplanktons
- 7 DDT is considered as popular orgono chlorines
 - (A) Herbicides
 - (B) Insecticides
 - (C) Fungicides
 - (D) Nematicides
- 8 Phytoremediation differs from traditional soil remediation in that it attempt to
 - (A) Change the composition of soil microbes to one that enhances crop growth
 - (B) Remove pollutant from the soil through accumulation in plant material that can be removed
 - (C) Use secretion of chelator by plant to bind up specific toxin in soil
 - (D) Have plants remove dangerous soil microbes by digesting.
- 9 which of the statement is not true about bioremediation?
 - (A) It can destroy a wide variety of contaminants
 - (B) It can be carried out without transfer of contaminants
 - (C) It is not a natural process
 - (D) It is cost effective

- 10 Which of the statement compound is massively used in manufacturing of pesticides and herbicides?
- (A) Chlorinated hydrocarbons
 - (B) Petroleum hydrocarbons
 - (C) Small cyclic arylcarbon
 - (D) Lignocelluloses
- 11 What does basic BSL1 biosafety level indicates?
- (A) Not generally contaminated
 - (B) Pathogenic
 - (C) Community pathogen
 - (D) Extreme pathogenic
- 12 Bio safety level _____ is appropriate for work involving microbes which can cause serious disease via the inhalation route:
- (A) BSL1
 - (B) BSL2
 - (C) BSL3
 - (D) BSL4
- 13 GMP regulations are regulated by US FDA under which authority?
- (A) Federal Food Authority
 - (B) Federal Food Drug and Cosmetic Act
 - (C) Federal Food and Drug Act
 - (D) Food and drug authority USA
- 14 Good Laboratory Practices is first introduced by whom and when?
- (A) US Govt. , 1978
 - (B) US FDA , 1981
 - (C) International co-operation of GLP ,1970
 - (D) Both a and c
- 15 SOP stand for_____
- (A) Standard Operating Procedure
 - (B) Strict Operational Protocol
 - (C) Standard operational protocol
 - (D) Standard official process
- 16 Which is not included in study director's responsibilities?
- (A) Sign and date the final report to indicate acceptance of responsibility for validity of the data.
 - (B) Ensure the termination of study
 - (C) Ensure all data generated are fully documented and recorded
 - (D) Ensure that study plans and SOP are available to personnel conducting study.
- 17 GLP stands for_____
- (A) Good Laboratory Practice
 - (B) Good Learning Process
 - (C) Good Learning Practice
 - (D) Good lab Process
- 18 The hazardous wastes can be broadly classified into:
- (A) Chemical, Radioactive, and Sharp material
 - (B) Chemical , Radioactive ,Biohazards and sharp material
 - (C) Chemical and radioactive.
 - (D) None of these

- 19 GMP is the abbreviated form of
 (A) Good Manufacturing Practices
 (B) Good Manufacturing Process
 (C) Good Manufacturing Protocol
 (D) Good Manufacturing Procedure
- 20 Aerosols cans are considered as _____ waste
 (A) Radioactive waste
 (B) Chemical waste
 (C) Hazardous waste
 (D) Both B and C
- 21 Gene therapy involves replacement of _____ genes with a healthy copy
 (A) Coding gene
 (B) Mutated gene
 (C) Silenced gene
 (D) Dominant gene
- 22 Which is not a type of gene therapy?
 (A) Somatic gene therapy
 (B) Germinal gene therapy
 (C) Somatic in vivo gene therapy
 (D) Mutational gene therapy
- 23 The process of producing a DNA copy from RNA is known as:
 (A) DNA reversion
 (B) RNA reversion
 (C) Reverse transcription
 (D) DNA methylation
- 24 Which of the following is not a non viral method of gene therapy?
 (A) Gene therapy through retrovirus
 (B) Gene gun
 (C) Sonoporation
 (D) Electroporation
- 25 Human germline engineering is the process by which genome is edited _____ cells and it is _____
 (A) Germline , heritable
 (B) Somatic heritable
 (C) Somatic mutated
 (D) Germline inheritable
- 26 Which of the following editing technique is based on bacterial immunity?
 (A) Retrovirus infection
 (B) CRISPR /CAS9
 (C) Electroporation
 (D) Adenovirus infection
- 27 Which is the chemical method of gene therapy?
 (A) Sonoporation
 (B) Magnetofection
 (C) Oligonucleotides
 (D) Gene gun
- 28 Genetic modification is
 (A) Altering the genetic makeup
 (B) Mutating the genetic makeup
 (C) Knocking out the genes
 (D) Inserting transposons
- 29 In somatic cell line gene therapy _____ is used to treat diseases
 (A) Therapeutic DNA
 (B) RNA
 (C) Protein
 (D) Both a and b
- 30 Which is not the chemical method of gene therapy ?
 (A) Oligonucleotide
 (B) electroporation
 (C) Lipoplexes
 (D) Dendrimers

- 31 Why the gram negative bacteria don't appear violet in colour under microscope?
- (A) Due to absence of peptidoglycan layer
 - (B) Their cell wall don't absorb secondary stain
 - (C) The outer membrane contains lipopolysaccharides
 - (D) Cell membrane have porins which leak primary stain
- 32 *E. coli* frequently found in
- (A) Faecal matter
 - (B) Pure water
 - (C) Polluted air
 - (D) Plants roots
- 33 *Neisseria gonorrhoea* is a
- (A) Gram negative rod shaped bacillus
 - (B) Gram positive rod shaped bacillus
 - (C) Gram negative staphylococcus
 - (D) Gram negative diplococcus
- 34 Which of the following disease is not caused by *Pseudomonas aeruginosa*?
- (A) Septic shock
 - (B) Pneumonia
 - (C) Urinary tract infection
 - (D) Diarrhoea
- 35 *Pseudomonas aeruginosa* is a
- (A) Obligate aerobes
 - (B) Obligate anaerobes
 - (C) Facultative anaerobes
 - (D) Obligate parasite
- 36 *Neisseria meningitidis* caused
- (A) Meningococcal meningitis
 - (B) Pneumococcal meningitis
 - (C) Epiglottitis
 - (D) Osteomyelitis
- 37 Typhoid fever caused by
- (A) *Neisseria meningitidis*
 - (B) *Salmonella typhi*
 - (C) *E. coli*
 - (D) *Bacillus cereus*
- 38 Which of the following selective medium is used for determination of *Shigella dysenteriae*?
- (A) Blood agar
 - (B) Hektoen enteric agar
 - (C) Skimmed milk agar
 - (D) UTI agar
- 39 Which compound of the *Neisseria meningitidis* act as endotoxin?
- (A) Lipooligosaccharide
 - (B) Capsules
 - (C) Peptidoglycan layer
 - (D) Fimbriae
- 40 What is the diagnostic test of typhoid fever?
- (A) Widal test
 - (B) Acid fast stain
 - (C) Blood glucose test
 - (D) Urine culture test

- 41 *Yersinia pestis* cause which disease
(A) Typhoid
(B) Tetanus
(C) Plague
(D) Measles
- 42 *Brucella abortus* is classified under which domain
(A) Bacteria
(B) Virus
(C) Fungi
(D) Mold
- 43 *Haemophilus influenzae* was first described by:
(A) Alexander flaming
(B) Robert Koch
(C) Richard Pfeiffer
(D) Louis Pasteur
- 44 *Vibrio cholerae* infects which parts of body?
(A) Lungs
(B) Liver
(C) Gall bladder
(D) Intestine
- 45 *Mycoplasma pneumoniae* infection are treated by which chemotherapy agents?
(A) Tetracycline, ketolides, fluoroquinolone
(B) Metroindazole, Norflox, Aspirin
(C) Rimpcin, serratopeptidase, doxycycline
(D) Streptomycin, ofloxacin, etambutol
- 46 *Treponema pallidum* can be detected by which stain
(A) Acid fast stain
(B) Gram's stain
(C) Dieterle stain
(D) Giemsa stain
- 47 Which therapeutic agent is used to treat rickettsiae infection?
(A) Penicillin
(B) Doxycycline
(C) Tetracycline
(D) Erythromycin
- 48 Chlamydia infection is transmitted by
(A) Airborne transmission
(B) Droplet transmission
(C) Sexual transmission
(D) Oral transmission
- 49 what are the symptoms of *Vibrio cholerae* infection?
(A) Diarrhoea and vomiting
(B) Problem in breathing
(C) Muscle pain
(D) Chest pain
- 50 *Treponema pallidum* causes which disease?
(A) Typhoid
(B) Syphilis
(C) Gonorrhoea
(D) Chlamydia

