Online Examinations (Even Sem/Part-I/Part-II Examinations 2020 - 2021

Course Name - –Animal Biotechnology
Course Code - GEBT401

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Mark only one oval.

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- Bachelor of Physiotherapy
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- Dip.ECE
- DIP.EE
- DIP.CE

- DIP.ME
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- MBA
- M.SC.(BT)
- M.TECH(CSE)
- LLM
- M.A.(JMC)
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- M.SC.(MATH)
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- MCA
- M.SC.(MSJ)
- M.SC.(AM)
- M.SC.CS)
- M.SC.(ANCS)
- M.SC.(MM)
- B.A.(Eng)

Answer all the questions. Each question carry one mark.

9. 1. Cells from kidney tissues cannot survive independently, it requires other surface for attachment and survival.

Mark only one oval.

- anchorage dependent
- anchorage independent
- Suspention dependent
- Suspention independent

10. 2. What is a cell line?

Mark only one oval.

- Multilayer culture
- Transformed cells
- Multiple growth of cells
- Sub culturing of primary culture

11. 3. Which of the following is the characteristics of a normal cell?

Mark only one oval.

- Anchorage independent
- Continuous cell lines
- Dependent on external growth factor
- No contact inhibition

12. 4. Which of the following is NOT the part of growth medium for animal culture?

Mark only one oval.

- Starch
- Serum
- Carbon
- Inorganic salts

13. 5. The foundation for the development of cell culture technique was laid by

Mark only one oval.

- Roux
- Arnold
- Harrison
- Ross

14. 6. The limited replicative capacity of human cells in culture is called

Mark only one oval.

- Brownian effect
- Contact inhibition
- Adherent cells
- Hayflick effect

15. 7. Which of the following is HGPRT+ and survives in HAT medium

Mark only one oval.

- B cells
- Myeloma cells
- Hybrid cells
- Both B cells & Hybrid cells

16. 8. Cells used in feeder layer

Mark only one oval.

- Should have ability to divide
- Have ability to metabolize
- These properties are obtained by exposing cells to irradiation
- All

17. 9. Which of the following is true regarding animal cell culture technique

Mark only one oval.

- Lactic acid is source of carbon
- Cells have high requirement of L-glutamine
- Cholin is necessary for cell adhesion and cytoskeleton
- all

18. 10. Optimum pH required for the growth of mammalian cells is

Mark only one oval.

- 5.3-7.0
- 6.5-7.0
- 7.2-7.4
- 8.1-8.9

19. 11. For culture of avian cells the optimum temperature requirement is

Mark only one oval.

- 37℃
- 40℃
- 42℃
- None

20. 12. Which cell line is used for production of recombinant sex hormones

Mark only one oval.

- BHK cell line
- Vero cell line
- Hela cell line
- CHO cell line

21. 13. Which of the following is most commonly used cell fusing agent

Mark only one oval.

- PEG
- NaNO3
- Sendai virus
- Polyvinyl alcohal

22. 14. Which of the following is easy and rapid method to interpret viability of cells in culture system

Mark only one oval.

- Trypan blue dye exclusion
- Neutral red assay
- Fluorescein dye assay
- all

23. 15. Animal biotechnology involves

Mark only one oval.

- production of valuable products in animals using rDNA technology
- rapid multiplication of animals of desired genotypes
- alteration of genes to make it more desirable
- none

24. 16. Animal cell cultures are used widely for the production of

Mark only one oval.

- Counting microseconds
- Counting number of statements
- Counting number of key operations
- Counting kilobyte of algorithm

25. 17. Which of the following are commonly produced in animal cell cultures

Mark only one oval.

- Interferon
- mab
- vaccines
- all of these

26. 18. Recombinant proteins are

Mark only one oval.

- proteins synthesized in animals
- proteins synthesized by transgene in host cell by rDNA technology
- proteins synthesised in cells that are produced by protoplast fusion
- proteins synthesized in mutated cell lines

27. 19. The virus commonly used to infect cell cultures for the production of interferon is

Mark only one oval.

- Sendai virus
- Polio virus
- Corona virus
- Small pox virus

28. 20. The technique used in animal biotechnology for the rapid multiplication and production of animals with a desirable genotype is

Mark only one oval.

- protoplast fusion and embryo transfer
- hybrid selection and embryo transfer
- In vitro fertilization and embryo transfer
- all

29. 21. The first successfully cloned animal was

Mark only one oval.

- Monkey
- Gibbon
- Sheep
- Rabbit

30. 22. Which of the following is a 'defined media'?

Mark only one oval.

- Synthetic media
- Crude media
- Simple media
- Complex media

31. 23. Which of the following virus is considered as ‘natural genetic engineer’

Mark only one oval.

- Retrovirus
- Agrobacterium
- Baillus subtilis
- E.coli

32. 24. Introduction of DNA into cells by exposing to high voltage electric pulse is

Mark only one oval.

- lectrofusion
- Elctrofision
- Electroporation
- Electrolysis

33. 25. DNA solution injected directly into the cell using micromanipulators is called

Mark only one oval.

- macroinjection
- micromanipulator mediated DNA delivery
- microfection
- microinjection

34. 26. Which of these established cell lines originate from a mouse embryo?

Mark only one oval.

- 3T3
- BHK
- HeLa
- BTK

35. 27. The nucleous of mature unfertilized ovum may be removed by

Mark only one oval.

- irradiation
- surgery
- both irradiation and surgery
- neutralization and homogenization

36. 28. The technique, mainly used for the diagnosing birth defects in the fetus by means of needle, is called

Mark only one oval.

- amniocentesis
- ectogensis
- transplantation
- all of the above

37. 29. DNA is microinfected into the fertilized egg

Mark only one oval.

- after the fusion of male and female nuclei
- before the fusion of male and female nuclei
- at the time of fusion of male and female nuclei
- any time, it can be infected

38. 30. The number of follicles at any particular stage is governed by

Mark only one oval.

- the rate of entry of dormant follicles
- the rate of growth of follicles
- the rate of loss of follicles
- all of the above

39. 31. Enucleation of the cells can be achieved by treating the cells with

Mark only one oval.

- polyethylene glycol
- cytochalasin B
- both polyethylene glycol and cytochalasin B
- alcohol

40. 32. Which of the following is/are the method of transfection for making transgenic animals?

Mark only one oval.

- Transfer of whole nuclei
- Transfer of whole individual chromosomes or fragment
- Transfer of DNA
- All of the above

41. 33. DNA microinjection into the egg has been used to produce which of the following transgenic animals?

Mark only one oval.

- Mice
- Chicken
- Pigs
- All

42. 34. In transgenic fish, the genes are introduced by

Mark only one oval.

- microinjection in fish
- viruses
- transfer of whole nuclei
- all of these

43. 35. Production of transgenic animals require transfections of

Mark only one oval.

- eggs or embryos
- stem cells
- red blood cells
- all

44. 36. Which protein has been produced generating a transgenic sheep that is used for replacement therapy for individuals at risk from emphysema?

Mark only one oval.

- Plasminogen activator (tPA)
- α-anti trypsin (AAT)
- Casein
- Amyloid precursor proteins

45. 37. Transfection refers to which of the following?

Mark only one oval.

- Synthesis of mRNA from DNA template
- Introduction of foreign gene in to a cell
- Synthesis of protein based on mRNA sequence
- The process by which a cell become malignant

46. 38. Sickle cell anaemis is a type of disease linked with

Mark only one oval.

- autosomal
- Sex chrmosome recessive
- Sex linked dominant
- None

47. 39. Which process is used to insert normal genes into human cells to correct disorders?

Mark only one oval.

- Gene therapy
- Live vector vaccines
- Molecular cloning
- Stem cell therapy

48. 40. Gene therapy targeting the germ-line is..

Mark only one oval.

- Heritable
- Not heritable
- Not heritable
- Unrelated to heritability

49. 41. Which part of the human body are bone marrow cells removed from to perform ex vivo SCID gene therapy?

Mark only one oval.

- Lung
- Skull
- Hip bone
- Spinal cord

50. 42. When was the first gene therapy patient treated?

Mark only one oval.

- 1988
- 1990
- 1993
- 1999

51. 43. In which country was the first commercial gene therapy product, Gendicine, registered for the treatment of head and neck carcinoma?

Mark only one oval.

- China
- USA
- United Kingdom
- Germany

52. 44. Einstein's clone would have Einstein's genes but would not

Mark only one oval.

- Be alive
- Be as smart as Einstein
- Be Einstein
- Be a true clone

53. 45. Which of the following is correct related to transgene?

Mark only one oval.

- Phenotype remains unaltered
- Phenotype changes
- Produced within an organism
- Genotype changes

54. 46. Which of the following is true for heterologous proteins?

Mark only one oval.

- It occurs naturally in the cell
- It express the protein
- It does not express the protein
- It makes protein

55. 47. What is the purpose of gel electrophoresis?

Mark only one oval.

- helps cut DNA
- count the genes in DNA
- separates DNA based on size
- allows for an exact replicated organism

56. 48. During gel electrophoresis, DNA moves from the ___ end to the ___ end.

Mark only one oval.

- positive, negative
- negative, positive
- Does not Move
- None

57. 49. What charge is DNA?

Mark only one oval.

- positive
- negative
- neutral
- no charge

58. 50. How many cycles of PCR are normally used?

Mark only one oval.

- 20-35
- 6
- 45
- 100

59. 51. When performing a western blot, what is the purpose of adding a secondary antibody?

Mark only one oval.

- Separate the sample from other proteins
- Allow for detection of the protein sample
- Ensure that the primary antibody binds properly to the sample
- Block any interfering noise coming from the membrane

60. 52. A researcher is working with a protein that contains four subunits of differing molecular weights. If the researcher performs SDS-PAGE, how many distinct bands should he see on the gel?

Mark only one oval.

- 2
- 3
- 4
- 1

61. 53. Which of the following techniques would be most useful to study gene expression?

Mark only one oval.

- Northern blot
- Western blot
- Southern blot
- Eastern blot

62. 54. What is semen for use in artificial insemination put in?

Mark only one oval.

- syringes
- your hand
- cups
- straws

63. 55. What is in the semen tank to preserve the semen?

Mark only one oval.

- salt
- hydrogen
- xenon
- liquid nitrogen

64. 56. First mammal produced by IVF was

Mark only one oval.

- Calf
- Mouse
- Rabbit
- Monkey

65. 57. Most ideal method of oocyte collection from ovaries is

Mark only one oval.

- Slicing of ovaries
- Follicle aspiration
- Follicle puncturing
- None of these

66. 58. In cloning, donor somatic cells should be in which stage of cell cycle

Mark only one oval.

- G1
- G2
- M
- S

67. 59. Identify the kind of interactions that are typically involved in binding a drug to the binding site of a protein.

Mark only one oval.

- predominantly van der Waals interactions
- predominantly ionic bonds
- predominantly hydrogen bonds
- a combination of all of the above

68. 60. Different protein subunits in a multiprotein complex are...

Mark only one oval.

- tertiary structure
- primary structure
- secondary structure
- quaternary structure