Question Paper

Exam Date & Time: 23-May-2024 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. MLT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MLT3202 - MEDICAL MYCOLOGY AND VIROLOGY
(2020 SCHEME)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

Draw diagrams wherever necessary

1)	Define mycetoma. Explain the pathogenesis, clinical features, and Laboratory diagnosis of mycetoma. Add a note on treatment.	(20)
2)	List the types of influenza viruses. Explain the pathogenesis, clinical features, and laboratory diagnosis of influenza.	(20)
3)	Name the etiologic agent of rhinosporidiosis. Explain its life cycle, pathogenesis, and clinical features of Rhinosporidiosis.	(10)
4)	Define Mumps. Explain the pathogenesis and laboratory diagnosis of Mumps.	(10)
5A)	List the types of cell lines used for virus culture. Explain the detection viruses by cytopathic effect and staining methods.	(5)
5B)	Define AIDS. Explain the laboratory diagnosis of AIDS.	(5)
5C)	Classify Rabies. Name the stages of infection and explain the clinical features	(5)
5D)	List Hepatitis viruses transmitted through blood transfusion. Explain the pathogenesis and laboratory diagnosis of Hepatitis C infection.	(5)
5E)	Define and list the systemic fungal infections. Explain the general characteristics of systemic mycoses.	(5)
5F)	List the types of vaccines. Explain the killed and live attenuated vaccines for viral infections with example.	(5)
6A)	Explain the clinical manifestations of dengue hemorrhagic fever.	(2)
6B)	Explain the procedure of germ tube test. Name the fungi that produces germ tube.	(2)
6C)	Explain the laboratory diagnosis of candida infection.	(2)
6D)	Explain the procedure and interpretation of Hair perforation test.	(2)
6E)	Name any one virus having hemagglutinin. Explain the procedure of hemagglutination test.	(2)

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Question Paper

Exam Date & Time: 17-May-2024 (10:00 AM - 01:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. MLT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MLT3203 - CYTOLOGY AND DEVELOPMENTAL BIOLOGY
(2020 SCHEME)

Marks: 100 **Duration: 180 mins.**

Answer all the questions.

Draw diagrams wherever necessary.

1)	Define neoplasia. List classification and nomenclature of human tumors. Explain about grading and staging of tumors (2+3+5+10 = 20 marks)	(20)
2)	List different stages of cell cycle. Explain the stages of cycle and structure of human chromosome with a neat labelled diagram	(20)
3)	Explain in detail about Bethesda system for cervical cytology	(10)
4)	Explain the organization of cytology laboratory.	(10)
5A)	List and explain the banding techniques.	(5)
5B)	List and explain the morphology of epithelial cells	(5)
5C)	Explain the morphologic characteristics of cancer cells	(5)
5D)	Explain stains used for hormonal evaluation in females	(5)
5E)	Explain growth and differentiation of stem cells	(5)
5F)	List and explain the stages of mitosis	(5)
6A)	Define karyotyping	(2)
6B)	Explain the cellular components in urinary sediment	(2)
6C)	What is chromosomal disjunction?	(2)
6D)	Define fertilization	(2)
6E)	List any two clinical samples used for cytological examination	(2)

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Question Paper

Exam Date & Time: 28-May-2024 (10:00 AM - 12:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. MLT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MLT3241 - PROGRAM ELECTIVE - II : FOOD MICROBIOLOGY
(2020 SCHEME)

Marks: 50 **Duration: 120 mins.**

Answer all the questions.

Draw diagrams wherever neccessary.

1)	Define food spoilage. Explain the extrinsic factors of growth and survival of microorganism in food (2+8 = 10 marks)	(10)
2)	Define outbreak foodborne illness. Explain the process of investigation of food borne outbreak illness (2+8 = 10 marks)	(10)
3A)	List the application of vinegar in food preservation. Explain the principles of vinegar manufacturing. (2+3 = 5 marks)	(5)
3B)	Explain the food preservation by inhibiting microbial growth by modified atmosphere packing technology (MAP).	(5)
3C)	Explain the effect of antimicrobial barriers and antimicrobial contents in food spoilage (2+3 = 5 marks)	(5)
3D)	Explain the mechanism of pathogenesis of foodborne illness caused by *Campylobacter jejuni*	(5)
4A)	List the various foods preserved during ancient times.	(2)
4B)	List the fermented alcohol beverages.	(2)
4C)	Name two food safety regulatory bodies.	(2)
4D)	List the sources of microbial contamination of raw milk.	(2)
4E)	Explain the clinical features of foodborne illness.	(2)

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Question Paper

Exam Date & Time: 28-May-2024 (10:00 AM - 12:00 PM)

MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.Sc. MLT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: MLT3242 - PROGRAM ELECTIVE - II : ADVANCED DIAGNOSTIC TESTS IN PATHOLOGY
(2020 SCHEME)

Answer ALL questions.
Draw diagrams wherever necessary.

Marks: 50 **Duration: 120 mins.**

1)	Explain laboratory diagnosis of Hemophilia A including advanced techniques.	(10)
2)	Explain about direct and indirect Donath Landsteiner test and its interpretation.	(10)
3A)	Explain principle of DNA microarray.	(5)
3B)	Explain the procedure of thermal aptitude test.	(5)
3C)	Explain the tests to detect genotoxicity.	(5)
3D)	Explain the principle of CGH.	(5)
4A)	List laboratory findings in PCH.	(2)
4B)	Name any two advanced lab diagnosis of Thalassemia.	(2)
4C)	Define ABO sequencing.	(2)
4D)	Name molecular defect in sickle cell anemia.	(2)
4E)	Name the chemical and enzymes used in mitigating DARA interferences.	(2)

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