



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University under section 3 of the UGC Act 1956)

Ph.D Entrance Test – November – 2025

Faculty of Medicine / Pathology

Instructions / Note:

1. Answer all the questions. Each question carries one mark.
2. No negative marks for wrong answers.
3. Read each question carefully and answer in the OMR sheet provided for each question with only blue/ black pen to fill the circles in the OMR Sheet.
4. Question number 1 - 35 questions belong to Research Methodology component and Question number 36-70 questions belong to the subject at PG level
5. Return the question paper along with the OMR sheet.

36. Select the disorder that is in an α - thalassemia _____
- A. HbH disease
 - B. Cooley's anemia
 - C. HPFH
 - D. HB Lepore
37. This group of neoplasms is characterized by a hypercellular bone marrow, effective proliferation of one or more myeloid lineages but morphologically and functionally dysplastic cells _____
- A. ALL
 - B. MPN
 - C. MDS/MPN
 - D. AML
38. Heberden's nodes and Bouchard nodes are found in which of the following bone disease?
- A. Rheumatoid arthritis
 - B. Osteoarthritis
 - C. Ankylosing spondylitis
 - D. Psoriatic arthritis



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University under section 3 of the UGC Act 1956)

39. A biopsy of myocardium shows endomyocardial fibrosis with dense eosinophilic infiltrate, with peripheral eosinophilia in blood. Which condition is most consistent?
- A. Loeffler endocarditis
 - B. Chagas disease
 - C. Sarcoidosis
 - D. Giant cell myocarditis
40. A testicular tumor with fibrous septae, prominent lymphocytic infiltrate, and uniform cells with clear cytoplasm is positive for OCT3/4 and PLAP. What is the most likely tumor?
- A. Embryonal carcinoma
 - B. Seminoma
 - C. Yolk sac tumor
 - D. Sertoli cell tumor
41. In ulcerative colitis, continuous mucosal inflammation typically begins in _____
- A. The terminal ileum
 - B. The rectum and extends proximally
 - C. The cecum with skip lesions
 - D. The ascending colon
42. A 45-year-old female presents with a firm, movable breast mass. Histology reveals ducts distended by atypical epithelial proliferation filling but not distorting the duct lumen. The diagnosis is _____
- A. Invasive ductal carcinoma
 - B. Atypical ductal hyperplasia
 - C. Duct ectasia
 - D. Sclerosing adenosis
43. Which of the following mutations is characteristic of Li-Fraumeni syndrome?
- A. BRCA1
 - B. TP53
 - C. RB1
 - D. APC
44. MHC class II molecules present antigen to _____
- A. CD8+ T cells
 - B. CD4+ T cells
 - C. NK cells
 - D. B cells



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University under section 3 of the UGC Act 1956)

45. Type II hypersensitivity reaction is primarily mediated by _____
- A. IgE
 - B. T lymphocytes
 - C. IgG and complement
 - D. Immune complexes
46. Oil Red O staining is mainly used for the demonstration of _____
- A. Glycogen
 - B. Neutral lipids
 - C. Acidic mucin
 - D. Amyloid
47. Most stable internal QC material _____
- A. Fresh serum
 - B. Plasma from donor
 - C. Whole blood
 - D. Lyophilized control
48. Which parameter requires the use of cyanide-free reagent in modern automated hematology analyzers?
- A. Platelet count
 - B. Red blood cell count
 - C. Hemoglobin concentration
 - D. Differential leukocyte count
49. Which stain is most commonly used to identify fungal organisms in cytologic specimens?
- A. Papanicolaou stain
 - B. Periodic acid Schiff (PAS)
 - C. Ziehl-Neelson stain
 - D. Sudan III Stain
50. The two-hit hypothesis applies most accurately to which of the following tumor suppressor genes?
- A. TP53
 - B. APC
 - C. RB1
 - D. PTEN



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University under section 3 of the UGC Act 1956)

51. In disseminated intravascular coagulation (DIC), which of the following findings is most characteristic?
- A. Localized platelet activation
 - B. Consumption coagulopathy with fibrin deposition in microvasculature
 - C. Elevated fibrinogen levels
 - D. Predominant activation of intrinsic pathway only
52. Principle of colorimetry is based on _____
- A. Beer-Lambert's law
 - B. Electromagnetic scattering
 - C. Osmotic pressure
 - D. Fluorescence
53. Hypoglycemia is a characteristic finding of _____
- A. Gastrinoma
 - B. Insulinoma
 - C. Glucagonoma
 - D. Vipoma
54. Linitis plastica is a form of _____
- A. Gastric carcinoma
 - B. Chronic atrophic gastritis
 - C. Peptic ulcer
 - D. Achlasia cardia
55. Renal pathology in SLE include all except _____
- A. Focal glomerulonephritis
 - B. Diffuse glomerulonephritis
 - C. Membranous glomerulonephritis
 - D. Minimal change disease
56. Hemophilia A has the following except _____
- A. Reduced factor VIII
 - B. Increased APTT
 - C. Increased PT
 - D. Normal BT



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University under section 3 of the UGC Act 1956)

57. ESR is markedly increased in _____
- A. Dengue
 - B. Malaria
 - C. Typhoid
 - D. Tuberculosis
58. Nutmeg liver is seen in _____
- A. Cirrhosis of liver
 - B. Hepatoma
 - C. Metastatic deposits in liver
 - D. Chronic venous congestion of liver
59. Starry sky appearance is seen in _____
- A. Large cell lymphoma
 - B. Hodgkin lymphoma
 - C. T cell lymphoma
 - D. Burkitt lymphoma
60. Caspases are involved in _____
- A. Acute inflammation
 - B. Chronic inflammation
 - C. Apoptosis
 - D. Regeneration
61. Cut off value of serum prostate specific antigen for advising prostate biopsy _____
- A. 3 ng/ml
 - B. 4 ng/ml
 - C. 5 ng/ml
 - D. 6ng/ml
62. Which molecular cytogenetic technique can analyze copy number variations across the entire genome?
- A. RT-PCR
 - B. Flow cytometry
 - C. Array-CGH (Comparative Genomic Hybridization)
 - D. IHC



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University under section 3 of the UGC Act 1956)

63. Tumor associated with exposure to asbestos is _____
- A. Mesothelioma
 - B. Hepatocellular carcinoma
 - C. Bladder carcinoma
 - D. Gallbladder carcinoma
64. What is a Levey-Jennings chart used for _____
- A. Calibrating laboratory equipment
 - B. Monitoring quality control data
 - C. Verifying patient reports
 - D. Managing laboratory inventory
65. Temporal arteritis (giant cell arteritis) primarily affects _____
- A. Small arterioles and capillaries
 - B. Medium arteries of viscera
 - C. Large arteries, especially branches of the carotid artery
 - D. Pulmonary arteries
66. The following pigment is not derived from hemoglobin?
- A. Hematin
 - B. Bilirubin
 - C. Lipofuscin
 - D. Hemosiderin
67. Sickle cell disease patient, has never had vaccination before, what is the most important vaccine to be given?
- A. Hepatitis vaccine
 - B. Tetanus vaccine
 - C. Pneumococcal + Meningococcal vaccine
 - D. Pneumococcal polysaccharide.
68. The diagnostic histologic findings in rabies is _____
- A. Neurotic plaque
 - B. Neurofibrillary tangle
 - C. Lewry body
 - D. Negri body



VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University under section 3 of the UGC Act 1956)

69. Prognostic markers of carcinoma breast include all except _____
- A. Histologic subtype
 - B. Distant metastases
 - C. Inflammatory carcinoma
 - D. S – 100 positivity
70. Tophus is seen in _____
- A. Rheumatoid arthritis
 - B. TB arthritis
 - C. Gout
 - D. Osteoarthritis

