



All India Institute of Medical Sciences, Kalyani

B.Sc. (Hons) Nursing Second Year Examination, January 2024

Time: 3 Hrs.

PATHOLOGY & GENETICS

Marks: 75

INSTRUCTIONS:

- Answer Pathology & Genetics Section in separate answer booklets.
- Draw diagram wherever necessary

PATHOLOGY (45 MARKS)

SECTION-A

Answer any ONE of the following:

[1×10=10]

1. Define Necrosis. Mention the types of necrosis with examples. Describe the morphology for each kind of necrosis.

OR

2. Name the causative organism for tuberculosis. Discuss the various mode of transmission of tuberculosis. Discuss the pathogenesis of pulmonary tuberculosis (2+3+5)

SECTION-B

Write short notes on any FIVE:

[5×5=25]

3. Describe the blood groups in ABO grouping system and enumerate complications associated with blood transfusion.
4. Briefly discuss the risk factors and complications of atherosclerosis.
5. Tabulate the CSF findings in case of acute bacterial, tubercular and viral meningitis.
6. Define anemia and classify anemia based on its etiology.
7. Define Neoplasia. Tabulate the difference between benign and malignant tumors.
8. Enumerate various types of gall stones and discuss the risk factor associated with formation of gall stones



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GENETICS (30 MARKS)

SECTION-A

Answer any **ONE** of the following:

[1×7=7]

1. Describe in detail about the different Mendelian inheritance patterns with examples.

OR

2. Describe the different types of Genetic Testing methodologies with examples.

SECTION-B

Write short notes on any **THREE**:

[3×5=15]

3. Genetic counselling
4. Amniocentesis
5. Structure of Genes
6. Down syndrome



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Invigilator sign:

SECTION C (PATHOLOGY)

INSTRUCTIONS:

- Section C (Pathology & Genetics) should be answered in first 20 minutes of the Exam duration and handed over to the invigilators.
- Put one Tick (✓) mark to only one answer that you consider correct for each question.
- Mark your Tick (✓) in pen.

Please write the single most appropriate answer.

[5×1=5]

1. Nutmeg liver is a feature.....(edema/congestion)
2. The anticoagulant of choice for platelet count test is.....(Sodium Citrate/ EDTA)
3. The components of Virchow's triad include..... (hypercoagulability/ /laminar blood flow)
4. Haematuria is a feature of (Nephrotic syndrome/Nephritic syndrome)
5. Sterile vegetation's are seen in.....(Libman Sac endocarditis/ infective endocarditis)

Multiple Choice Questions (MCQs):

[5×1=5]

6. Aschoff bodies are seen in
 - a. Rheumatic arthritis
 - b. Infective endocarditis
 - c. Rheumatic fever
 - d. Myocardial infarction
 7. Increase in the number of RBC in urine is termed as
 - a. Pyuria
 - b. Hematuria
 - c. Hemoglobinuria
 - d. Ketonuria
 8. Auer rods are characteristic of
 - a. AML
 - b. CML
 - c. ALL
 - d. CLL
 9. Which of the following is a benign tumor?
 - a. Lipoma
 - b. Chondrosarcoma
 - c. Liposarcoma
 - d. Melanoma
 10. Which of the following is an example of cellular adaptation?
 - a. Endothelial injury
 - b. Necrosis
 - c. Barrett's esophagus
 - d. Lymphoma
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SECTION C (GENETICS)

INSTRUCTIONS:

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- Put one Tick (✓) mark to only one answer that you consider correct for each question.
- Mark your Tick (✓) in pen.

Multiple Choice Questions (MCQs):

[8×1=8]

1. Which of the following gene (s) is responsible for a familial cancer syndrome?
 - a. BRCA 1 & 2;
 - b. DMD;
 - c. CFTR;
 - d. MECP2
 2. What is the size of the Human Genome in Billion base pairs?
 - a. One
 - b. Two
 - c. Three
 - d. Four
 3. The racial discrimination of the Eugenics movement did **NOT** involve which of the following countries?
 - a. USA;
 - b. Germany;
 - c. UK;
 - d. India
 4. Which of the following is an inborn error of metabolism?
 - a. Phenylketonuria;
 - b. Huntington's disease;
 - c. Haemochromatosis;
 - d. Hemophilia A
 5. Which of the following disease can be detected by newborn metabolic screening?
 - a. G6PD deficiency;
 - b. Huntington's disease;
 - c. Down syndrome;
 - d. Turner syndrome
 6. Dysmorphism is a feature of:
 - a. Down syndrome;
 - b. Cystic Fibrosis;
 - c. G6PD deficiency;
 - d. Hemophilia A
 7. Fetal neural tube defect can be due to maternal deficiency of:
 - a. B₆;
 - b. Vitamin C;
 - c. Biotin;
 - d. Folic acid
 8. Which of the following is **NOT** a stage of mitosis?
 - a. Prophase;
 - b. Interphase;
 - c. Anaphase;
 - d. Telophase
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