

# National Board of Examinations

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| <b>Question Paper Name :</b>                   | DrNB CLINICAL HAEMATOLOGY Paper1 |
| <b>Subject Name :</b>                          | DrNB CLINICAL HAEMATOLOGY Paper1 |
| <b>Creation Date :</b>                         | 2024-05-15 21:33:45              |
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| <b>Share Answer Key With Delivery Engine :</b> | No                               |
| <b>Actual Answer Key :</b>                     | No                               |

## DrNB CLINICAL HAEMATOLOGY Paper1

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|--------------------------------------|------------|
| <b>Group Number :</b>                | 1          |
| <b>Group Id :</b>                    | 3271872621 |
| <b>Group Maximum Duration :</b>      | 0          |
| <b>Group Minimum Duration :</b>      | 180        |
| <b>Show Attended Group? :</b>        | No         |
| <b>Edit Attended Group? :</b>        | No         |
| <b>Group Marks :</b>                 | 100        |
| <b>Is this Group for Examiner? :</b> | No         |
| <b>Examiner permission :</b>         | Cant View  |
| <b>Show Progress Bar? :</b>          | No         |

## DrNB CLINICAL HAEMATOLOGY Paper1

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|-------------------------|------------|
| <b>Section Id :</b>     | 3271872624 |
| <b>Section Number :</b> | 1          |
| <b>Section type :</b>   | Offline    |

|   |            |
|---|------------|
| <b>Mandatory or Optional :</b>                                      | Mandatory  |
| <b>Number of Questions to be attempted :</b>                        | 10         |
| <b>Section Marks :</b>  | 100        |
| <b>Enable Mark as Answered Mark for Review and Clear Response :</b> | Yes        |
| <b>Maximum Instruction Time :</b>                                   | 0          |
| <b>Sub-Section Number :</b>   | 1          |
| <b>Sub-Section Id :</b>   | 3271872628 |
| <b>Question Shuffling Allowed :</b>                                 | No         |
| <b>Is Section Default? :</b>  | null       |

**Question Number : 1 Question Id : 32718730504 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

**Please write your answers in the answer booklet within the allotted pages as follows:-**

| Question Number | Answer to be attempted within | Question Number | Answer to be attempted within |
|-----------------|-------------------------------|-----------------|-------------------------------|
| Q. 1            | Page 1-5                      | Q. 6            | Page 26-30                    |
| Q. 2            | Page 6-10                     | Q. 7            | Page 31-35                    |
| Q. 3            | Page 11-15                    | Q. 8            | Page 36-40                    |
| Q. 4            | Page 16-20                    | Q. 9            | Page 41-45                    |
| Q. 5            | Page 21-25                    | Q. 10           | Page 46-50                    |

1. The Government of India has taken a great initiative for sickle cell anemia. India aims to eradicate sickle cell anemia by 2047 as announced by the Finance Minister during the Budget 2023 speech. Kindly comment on the following:

- The steps which can be taken by you as a hematologist to eliminate/ eradicate Sickle Cell Anemia from our country by 2047. [4]
- Various screening and testing methods for Sickle Cell Anemia. [3]
- Sickle cell interventions by Niti Aayog. [3]

**Question Number : 2 Question Id : 32718730505 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction**

**Time : 0**

**Correct Marks : 10**

A 54-year-old man with decompensated but stable alcoholic cirrhosis and a baseline platelet count of 25,000/ $\mu$ L requires endoscopy with possible variceal banding:

- a) Describe the multiple mechanisms that contribute to thrombocytopenia in patients with liver disease. [4]
- b) Stratify the periprocedural management of thrombocytopenia of liver disease based on the platelet count and bleeding risk of the procedure. [3]
- c) How should this patient be managed for the procedure? [3]

**Question Number : 3 Question Id : 32718730506 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Most of the studies leading to the prolific use of direct oral anticoagulants are noninferiority studies:

- a) Comment on the situations where the investigators are forced to resort to non-inferiority trials. [3]
- b) What are the limitations of a noninferiority study in comparison to a superiority studies. [3]
- c) Define non-inferiority margin and its crucial place in interpreting noninferiority studies. [4]

**Question Number : 4 Question Id : 32718730507 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

A previously healthy 43-year-old man was found to have moderate thrombocytopenia at a routine healthcare visit. It was presumed to be idiopathic thrombocytopenia, and his blood counts were followed, but no treatment was initiated. At 45 years of age, he saw a dermatologist for nail and skin pigmentation abnormalities and this physician suggested telomere biology disorders (TBD):

- a) Identify the spectrum of clinical manifestations in telomere biology disorders, including variable age at onset and disease progression. [5]
- b) Determine the appropriate diagnostic evaluation of patients with suspected telomere biology

disorders, including appropriate genetic testing. [5]

**Question Number : 5 Question Id : 32718730508 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

A 22-year-old female during her first trimester developed cerebral venous thrombosis. She was subjected to MTP and started on DOAC (Rivaroxaban). She developed easy bruising for which her DOACs were stopped abruptly and she was shifted to Vitamin K Antagonists (VKA) from the next day morning to titrate INR to 2-3:

- a) Comments on the decision of MTP in this case. [3]
- b) Comments on DOACs in this case and what would be your choice of anticoagulant in this patient. [3]
- c) In any given patient, if you had to shift Rivaroxaban to VKA, what would be your transition plan? [4]

**Question Number : 6 Question Id : 32718730509 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Principles in Allogeneic Transplant:

- a) Human Leukocyte Antigen. [2]
- b) Define matched related donor (MRD), matched unrelated donor (MUD), mismatched unrelated donor (MMUD) and Haploidentical donor. [2]
- c) What are the newer strategies for mismatched unrelated donor (MMUD) hematopoietic cell transplant (HCT). [3]
- d) In 2023, which is preferred in Indian Settings: haploidentical or MUD and why? [3]

**Question Number : 7 Question Id : 32718730510 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

A child from unrelated parents, with a clinical phenotype including anemia, failure to thrive, microcephaly, triangular visage, hypotelorism, microphthalmia, and right kidney ectopia.

Diepoxybutane analysis was positive, and a homozygous mutation c.1788T>A p:

- a) Describe the pathophysiology of this disease. [3]
- b) Enumerate the Potential clinical complications of the disease. [3]
- c) Tabulate the long-term monitoring time plan of such patients for malignancies. [4]

**Question Number : 8 Question Id : 32718730511 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Systematic reviews are an important component of scientific writing and deliver a meticulous summary of all the available primary research in response to the research question :

- a) What are the steps of a systematic review? [3]
- b) Comment on: Are systematic review and meta-analysis different? [3]
- c) Draw a Forest Plot, with a brief description of its components. [4]

**Question Number : 9 Question Id : 32718730512 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

A 32-year-old male presents with peripheral lymphadenopathy and was evaluated for the same to rule out the lymphoma:

- a) Describe the histological architecture of the lymph node in different types of lymphomatous disorders. [6]
- b) Differentiate the terms "generalized" and "significant" lymphadenopathy. [2]
- c) Describe the etiologies for lymphadenopathy, can the etiology be suggested based on their clinical location? [2]

**Question Number : 10 Question Id : 32718730513 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

An 18-year-old boy with sickle cell disease (SCD) presents with his parents to your clinic to discuss curative therapy for his SCD. Despite initiating treatment with hydroxyurea at a young age, he has experienced numerous disease-related complications. He requires chronic transfusions due to a history of cerebral infarctions and has had numerous admissions for acute chest syndrome, vaso-occlusive episodes requiring chronic opioids and several hospitalizations, moderate persistent asthma, and delayed puberty:

- a) Describe indications for allogeneic HSCT in this case of Sickle cell disease. [5]
- b) What are the late effects of an allogeneic HSCT for sickle cell disease, how will you help the family in their decision making about allogeneic transplant? [5]