

# National Board of Examinations

<b>Question Paper Name :</b>	DNB Physiology Paper2
<b>Subject Name :</b>	DNB Physiology Paper2
<b>Creation Date :</b>	2023-04-26 21:36:32
<b>Duration :</b>	180
<b>Share Answer Key With Delivery Engine :</b>	No
<b>Actual Answer Key :</b>	No

## DNB Physiology Paper2

<b>Group Number :</b>	1
<b>Group Id :</b>	327187677
<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

## DNB Physiology Paper2

<b>Section Id :</b>	327187680
<b>Section Number :</b>	1
<b>Section type :</b>	Offline

**Mandatory or Optional :** Mandatory

**Number of Questions to be attempted :** 10

**Section Marks :** 100

**Enable Mark as Answered Mark for Review and Clear Response :** Yes

**Maximum Instruction Time :** 0

**Sub-Section Number :** 1

**Sub-Section Id :** 327187684

**Question Shuffling Allowed :** No

**Is Section Default? :** null

**Question Number : 1 Question Id : 3271875852 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. Draw and describe a vascular function curve? Explain the effect of changes in total peripheral resistance, blood volume and venous tone on this curve. [4+6]

**Question Number : 2 Question Id : 3271875853 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) Define the components of work of breathing. [4]
- b) Explain how dynamic compliance is different from static compliance and its contribution to work of breathing. [6]

**Question Number : 3 Question Id : 3271875854 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) Discuss the application of concepts of preload and afterload to the contraction of heart. [5]
- b) Describe the role of calcium in excitation-contraction coupling in cardiac muscle. [5]

**Question Number : 4 Question Id : 3271875855 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) Describe and explain the ventilatory responses to increased CO<sub>2</sub> concentration in inspired air. [5]
- b) Describe and explain the ventilatory responses to decreased O<sub>2</sub> concentrations in inspired air. [5]

**Question Number : 5 Question Id : 3271875856 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) Describe the innervation of gastrointestinal tract in detail. Discuss the role of various gastrointestinal hormones on its motility. [4+3]
- b) Adynamic ileus. [3]

**Question Number : 6 Question Id : 3271875857 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Describe the mechanism of carbohydrate assimilation in humans. Add a note on lactose intolerance. [7+3]

**Question Number : 7 Question Id : 3271875858 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Describe the inflammatory response that occurs following invasion of the body by bacteria in blood through skin. [10]

**Question Number : 8 Question Id : 3271875859 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) Describe the genetic basis of ABO and Rh blood group systems present in humans. [5]
- b) Discuss the acute complications arising in matched and mismatched blood transfusions and how they can be avoided? [3+2]

**Question Number : 9 Question Id : 3271875860 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) Describe the structural and functional characteristics of glomerular filtration barrier. [5]
- b) Describe the structure & functions of Juxtaglomerular apparatus? [5]

**Question Number : 10 Question Id : 3271875861 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Describe the mechanisms involved in formation of edema. What role do kidneys play in this process? [7+3]