

National Board of Examinations

Question Paper Name :	DNB Physiology Paper1
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DNB Physiology Paper1

Group Number :	1
Group Id :	3271871165
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	100
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

DNB Physiology Paper1

Section Id :	3271871168
Section Number :	1

Section type : 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 : 3271871172
Question Shuffling Allowed : No

Question Number : 1 Question Id : 32718710702 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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. Write briefly on the contribution of the following scientists in physiology:

- a) Banting and Best. [5]
- b) William Harvey. [5]

Question Number : 2 Question Id : 32718710703 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) Enumerate various components of Cytoskeleton. Explain in brief the structure and function of each. [6]
- b) List the major molecular motors and their functions. [4]

Question Number : 3 Question Id : 32718710704 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) Describe the various body fluid compartments. [5]
- b) Explain the principle underlying measurement of body fluid compartments. Enumerate substances used for measuring the volume of various body fluid compartments. [2+3]

Question Number : 4 Question Id : 32718710705 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Describe the ionic basis of resting membrane & action potential of an excitable cell membrane. Add a note on Patch clamp technique. [6+4]

Question Number : 5 Question Id : 32718710706 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Discuss the following statement with examples – “The epithelia of absorptive organs are polarized.” Add a note on non-ionic diffusion. [8+2]

Question Number : 6 Question Id : 32718710707 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) Explain the terms transcription and translation in gene expression. [5]
- b) Give detailed account of transcription factors in terms of types, function and regulation. [5]

Question Number : 7 Question Id : 32718710708 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

- a) Enumerate and describe the various second messengers. [7]
- b) Describe JAK-STAT pathway. [3]

Question Number : 8 Question Id : 32718710709 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

a) ELISA (Enzyme-linked immunosorbent assay). [5]

b) Polymerase chain reaction (PCR) Vs Reverse Transcription PCR (RT-PCR). [5]

Question Number : 9 Question Id : 32718710710 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Describe the dystrophin–glycoprotein complex in skeletal muscle and the different type of muscle dystrophy in which it is affected. [5+5]

Question Number : 10 Question Id : 32718710711 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Discuss the physiology of growth with special reference to growth periods, hormonal effects and catch up growth. [4+4+2]