

DATE : 12/09/2021



Test Booklet Code

**P3**

HAGAJA

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Time : 3 hrs.

# Answers & Solutions

Max. Marks : 720

*for*

## NEET (UG) - 2021

### Important Instructions :

1. The test is of **3 hours** duration and Test Booklet contains **200** multiple choice questions (Four options with a single correct answer). There are two sections in each subject, i.e. Section-A & Section-B. You have to attempt all 35 questions from Section-A & only 10 questions from Section-B out of 15. (**Candidates are advised to read all 15 questions in each subject of Section-B** before they start attempting the question paper. In the event of a candidate attempting more than ten questions, **the first ten questions answered by the candidate shall be evaluated.**)
2. Each question carries **4 marks**. For each correct response, the candidate will get **4 marks**. For every wrong response **1 mark** shall be deducted from the total score. Unanswered / unattempted questions will be given no marks. The maximum marks are **720**.
3. Use **Blue / Black Ball point Pen only** for writing particulars on this page/markings responses.
4. Rough work is to be done in the space provided for this purpose in the Test Booklet only.
5. On completion of the test, the candidate must handover the Answer Sheet to the Invigilator before leaving the Room / Hall. *The candidates are allowed to take away this Test Booklet with them.*
6. The CODE for this Booklet is **P3**.
7. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your Roll No. anywhere else except in the specified space in the Test Booklet/Answer Sheet. Use of white fluid for correction is **NOT** permissible on the Answer Sheet.
8. Each candidate must show on demand his/her Admission Card to the Invigilator.
9. No candidate, without special permission of the Superintendent or Invigilator, would leave his/her seat.
10. Use of Electronic/Manual Calculator is prohibited.
11. The candidates are governed by all Rules and Regulations of the examination with regard to their conduct in the Examination Hall. All cases of unfair means will be dealt with as per Rules and Regulations of this examination.
12. No part of the Test Booklet and Answer Sheet shall be detached under any circumstances.
13. The candidates will write the Correct Test Booklet Code as given in the Test Booklet / Answer Sheet in the Attendance Sheet.

















































168. For effective treatment of the disease, early diagnosis and understanding its pathophysiology is very important. Which of the following molecular diagnostic techniques is very useful for early detection?

- (1) Hybridization Technique
- (2) Western Blotting Technique
- (3) Southern Blotting Technique
- (4) ELISA Technique

**Answer (3/4\*)**

169. With regard to insulin choose **correct** options.

- (a) C-peptide is not present in mature insulin.
- (b) The insulin produced by rDNA technology has C-peptide.
- (c) The pro-insulin has C-peptide
- (d) A-peptide and B-peptide of insulin are interconnected by disulphide bridges.

Choose the **correct** answer from the option given below

- (1) (a) and (d) only
- (2) (b) and (d) only
- (3) (b) and (c) only
- (4) (a), (c) and (d) only

**Answer (4)**

170. A specific recognition sequence identified by endonucleases to make cuts at specific positions within the DNA is:

- (1) Poly(A) tail sequences
- (2) Degenerate primer sequence
- (3) Okazaki sequences
- (4) Palindromic Nucleotide sequences

**Answer (4)**

171. Which is the "Only enzyme" that has "Capability" to catalyse Initiation, Elongation and Termination in the process of transcription in prokaryotes?

- (1) DNase
- (2) DNA dependent DNA polymerase
- (3) DNA dependent RNA polymerase
- (4) DNA Ligase

**Answer (3)**

172. Which one of the following organisms bears hollow and pneumatic long bones?

- (1) *Ornithorhynchus*
- (2) *Neophron*
- (3) *Hemidactylus*
- (4) *Macropus*

**Answer (2)**

173. Read the following statements

- (a) Metagenesis is observed in Helminths.
- (b) Echinoderms are triploblastic and coelomate animals.
- (c) Round worms have organ-system level of body organization.
- (d) Comb plates present in ctenophores help in digestion.
- (e) Water vascular system is characteristic of Echinoderms.

Choose the **correct** answer from the options given below.

- (1) (b), (c) and (e) are correct
- (2) (c), (d) and (e) are correct
- (3) (a), (b) and (c) are correct
- (4) (a), (d) and (e) are correct

**Answer (1)**

174. Match List-I with List-II.

List-I		List-II	
(a)	Vaults	(i)	Entry of sperm through Cervix is blocked
(b)	IUDs	(ii)	Removal of Vas deferens
(c)	Vasectomy	(iii)	Phagocytosis of sperms within the Uterus
(d)	Tubectomy	(iv)	Removal of fallopian tube

Choose the correct answer from the option given below

- |     | (a)   | (b)   | (c)   | (d)   |
|-----|-------|-------|-------|-------|
| (1) | (iii) | (i)   | (iv)  | (ii)  |
| (2) | (iv)  | (ii)  | (i)   | (iii) |
| (3) | (i)   | (iii) | (ii)  | (iv)  |
| (4) | (ii)  | (iv)  | (iii) | (i)   |

**Answer (3)**



175. Sphincter of oddi is present at:

- (1) Junction of jejunum and duodenum
- (2) Ileo-caecal junction
- (3) Junction of hepato-pancreatic duct and duodenum
- (4) Gastro-oesophageal junction

**Answer (3)**

176. If Adenine makes 30% of the DNA molecule, what will be the percentage of Thymine, Guanine and Cytosine in it?

- (1) T : 20 ; G : 25 ; C : 25
- (2) T : 20 ; G : 30 ; C : 20
- (3) T : 20 ; G : 20 ; C : 30
- (4) T : 30 ; G : 20 ; C : 20

**Answer (4)**

177. Match List - I with List - II

List -I		List -II	
(a)	Metamerism	(i)	Coelenterata
(b)	Canal system	(ii)	Ctenophora
(c)	Comb plates	(iii)	Annelida
(d)	Cnidoblasts	(iv)	Porifera

Choose the correct answer from the options given below.

- |           |       |      |       |
|-----------|-------|------|-------|
| (a)       | (b)   | (c)  | (d)   |
| (1) (iv)  | (i)   | (ii) | (iii) |
| (2) (iv)  | (iii) | (i)  | (ii)  |
| (3) (iii) | (iv)  | (i)  | (ii)  |
| (4) (iii) | (iv)  | (ii) | (i)   |

**Answer (4)**

178. Which enzyme is responsible for the conversion of inactive fibrinogens to fibrinns?

- (1) Thrombokiase
- (2) Thrombin
- (3) Renin
- (4) Epinephrine

**Answer (2)**

179. Which of the following is not an objective of Biofortification in crops?

- (1) Improve micronutrient and mineral content
- (2) Improve protein content
- (3) Improve resistance to diseases
- (4) Improve vitamin content

**Answer (3)**

180. Dobson units are used to measure thickness of:

- (1) Troposphere
- (2) CFCs
- (3) Stratosphere
- (4) Ozone

**Answer (4)**

181. Which one of the following is an example of Hormone releasing IUD?

- (1) Multiload 375
- (2) CuT
- (3) LNG 20
- (4) Cu 7

**Answer (3)**

182. The centriole undergoes duplication during:

- (1) G<sub>2</sub> phase
- (2) S-phase
- (3) Prophase
- (4) Metaphase

**Answer (2)**

183. Which of the following RNAs is not required for the synthesis of protein?

- (1) siRNA
- (2) mRNA
- (3) tRNA
- (4) rRNA

**Answer (1)**

184. In a cross between a male and female, both heterozygous for sickle cell anaemia gene, what percentage of the progeny will be diseased?

- (1) 100%
- (2) 50%
- (3) 75%
- (4) 25%

**Answer (4)**

185. Select the favourable conditions required for the formation of oxyhaemoglobin at the alveoli.

- (1) Low pO<sub>2</sub>, low pCO<sub>2</sub>, more H<sup>+</sup>, higher temperature
- (2) High pO<sub>2</sub>, low pCO<sub>2</sub>, less H<sup>+</sup>, lower temperature
- (3) Low pO<sub>2</sub>, high pCO<sub>2</sub>, more H<sup>+</sup>, higher temperature
- (4) High pO<sub>2</sub>, high pCO<sub>2</sub>, less H<sup>+</sup>, higher temperature

**Answer (2)**

186. Match List-I with List - II

List - I		List - II	
(a)	Allen's Rule	(i)	Kangaroo rat
(b)	Physiological adaptation	(ii)	Desert lizard
(c)	Behavioural adaptation	(iii)	Marine fish at depth
(d)	Biochemical adaptation	(iv)	Polar seal

Choose the correct answer from the options given below.

- |     | (a)  | (b)   | (c)   | (d)   |
|-----|------|-------|-------|-------|
| (1) | (iv) | (iii) | (ii)  | (i)   |
| (2) | (iv) | (ii)  | (iii) | (i)   |
| (3) | (iv) | (i)   | (iii) | (ii)  |
| (4) | (iv) | (i)   | (ii)  | (iii) |

**Answer (4)**

187. Match List - I with List - II

List - I		List - II	
(a)	Adaptive radiation	(i)	Selection of resistant varieties due to excessive use of herbicides and pesticides
(b)	Convergent evolution	(ii)	Bones of forelimbs in Man and Whale
(c)	Divergent evolution	(iii)	Wings of Butterfly and Bird
(d)	Evolution by anthropogenic action	(iv)	Darwin Finches

Choose the correct answer from the options given below.

- |     | (a)   | (b)   | (c)   | (d)   |
|-----|-------|-------|-------|-------|
| (1) | (i)   | (iv)  | (iii) | (ii)  |
| (2) | (iv)  | (iii) | (ii)  | (i)   |
| (3) | (iii) | (ii)  | (i)   | (iv)  |
| (4) | (ii)  | (i)   | (iv)  | (iii) |

**Answer (2)**

188. Which of these is not an important component of initiation of parturition in humans ?

- (1) Release of Prolactin
- (2) Increase in estrogen and progesterone ratio
- (3) Synthesis of prostaglandins
- (4) Release of Oxytocin

**Answer (1)**

189. Which one of the following statements about Histones is wrong ?

- (1) Histones carry positive charge in the side chain
- (2) Histones are organized to form a unit of 8 molecules
- (3) The pH of histones is slightly acidic
- (4) Histones are rich in amino acids - Lysine and Arginine

**Answer (3)**

190. During muscular contraction which of the following events occur ?

- (a) 'H' zone disappears
- (b) 'A' band widens
- (c) 'I' band reduces in width
- (d) Myosine hydrolyzes ATP, releasing the ADP and Pi
- (e) Z-lines attached to actins are pulled inwards

Choose the correct answer from the options given below

- (1) (b), (d), (e), (a) only
- (2) (a), (c), (d), (e) only
- (3) (a), (b), (c), (d) only
- (4) (b), (c), (d), (e) only

**Answer (2)**

191. Match List-I with List-II

List - I		List - II	
(a)	Scapula	(i)	Cartilaginous joints
(b)	Cranium	(ii)	Flat bone
(c)	Sternum	(iii)	Fibrous joints
(d)	Vertebral column	(iv)	Triangular flat bone

Choose the correct answer from the options given below

- |     | (a)  | (b)   | (c)   | (d)  |
|-----|------|-------|-------|------|
| (1) | (iv) | (iii) | (ii)  | (i)  |
| (2) | (i)  | (iii) | (ii)  | (iv) |
| (3) | (ii) | (iii) | (iv)  | (i)  |
| (4) | (iv) | (ii)  | (iii) | (i)  |

**Answer (1)**

192. **Assertion (A):** A person goes to high altitude and experiences 'altitude sickness' with symptoms like breathing difficulty and heart palpitations.

**Reason (R):** Due to low atmospheric pressure at high altitude, the body does not get sufficient oxygen.

In the light of the above statements, choose the correct answer from the options given below

- (1) (A) is false but (R) is true
- (2) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (3) Both (A) and (R) are true but (R) is not the correct explanation of (A)
- (4) (A) is true but (R) is false

**Answer (2)**

193. The Adenosine deaminase deficiency results into

- (1) Addison's disease
- (2) Dysfunction of Immune system
- (3) Parkinson's disease
- (4) Digestive disorder

**Answer (2)**

194. Which of the following is **not** a step in Multiple Ovulation Embryo Transfer Technology (MOET)?

- (1) Fertilized eggs are transferred to surrogate mothers at 8-32 cell stage
- (2) Cow is administered hormone having LH like activity for super ovulation
- (3) Cow yields about 6-8 eggs at a time
- (4) Cow is fertilized by artificial insemination

**Answer (2)**

195. Match List-I with List-II

List -I		List -II	
(a)	Filariasis	(i)	<i>Haemophilus influenzae</i>
(b)	Amoebiasis	(ii)	<i>Trichophyton</i>
(c)	Pneumonia	(iii)	<i>Wuchereria bancrofti</i>
(d)	Ringworm	(iv)	<i>Entamoeba histolytica</i>

Choose the **correct** answer from the options given below

- |     | (a)   | (b)   | (c)   | (d)   |
|-----|-------|-------|-------|-------|
| (1) | (ii)  | (iii) | (i)   | (iv)  |
| (2) | (iv)  | (i)   | (iii) | (ii)  |
| (3) | (iii) | (iv)  | (i)   | (ii)  |
| (4) | (i)   | (ii)  | (iv)  | (iii) |

**Answer (3)**

196. Following are the statements with reference to 'lipids'.

- (a) Lipids having only single bonds are called unsaturated fatty acids
- (b) Lecithin is a phospholipid.
- (c) Trihydroxy propane is glycerol.
- (d) Palmitic acid has 20 carbon atoms including carboxyl carbon.

Choose the **correct** answer from the options given below.

- (1) (b) and (e) only
- (2) (a) and (b) only
- (3) (c) and (d) only
- (4) (b) and (c) only

**Answer (4)**

197. Following are the statements about prostomium of earthworm.

- (a) It serves as a covering for mouth.
- (b) It helps to open cracks in the soil into which it can crawl.
- (c) It is one of the sensory structures.
- (d) It is the first body segment.

Choose the **correct** answer from the options given below.

- (1) (b) and (c) are correct
- (2) (a), (b) and (c) are correct
- (3) (a), (b) and (d) are correct
- (4) (a), (b), (c) and (d) are correct

**Answer (2)**

198. Which of the following secretes the hormone, relaxin, during the later phase of pregnancy?

- (1) Uterus
- (2) Graafian follicle
- (3) Corpus luteum
- (4) Foetus

**Answer (3)**

199. **Statement I:** The codon 'AUG' codes for methionine and phenylalanine.

**Statement II:** 'AAA' and 'AAG' both codons code for the amino acid lysine.

In the light of the above statements, choose the **correct** answer from the options given below.

- (1) **Statement I** is incorrect but **Statement II** is true
- (2) Both **Statement I** and **Statement II** are true
- (3) Both **Statement I** and **Statement II** are false
- (4) **Statement I** is correct but **Statement II** is false

**Answer (1)**

200. Identify the types of cell junctions that help to stop the leakage of the substances across a tissue and facilitation of communication with neighbouring cells via rapid transfer of ions and molecules.

- (1) Adhering junctions and Gap junctions, respectively
- (2) Gap junctions and Adhering junctions, respectively
- (3) Tight junctions and Gap junctions, respectively
- (4) Adhering junctions and Tight junctions, respectively.

**Answer (3)**