INSTRUCTIONS TO CANDIDATES

(Use only blue/black ball-point pen in the space above and on both sides of the Answer Sheet)

1. Within 10 minutes of the issue of the Question Booklet, Please ensure that you have got the correct booklet and it contains all the pages in correct sequence and no page/question is missing. In case of faulty Question Booklet, Bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.

2. Do not bring any loose paper, written or blank, inside the Examination Hall except the Admit Card without its envelope.

3. A separate Answer Sheet is given. It should not be folded or mutilated. A second Answer Sheet shall not be provided.

4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.

5. On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.

6. No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and Roll No. and OMR sheet no. on the Question Booklet.

7. Any change in the aforesaid entries is to be verified by the invigilator, otherwise it will be taken as unfair means.

8. This Booklet contains 40 multiple choice questions followed by 10 short answer questions. For each MCQ, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet. For answering any five short Answer Questions use five Blank pages attached at the end of this Question Booklet.

9. For each question, darken only one circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.

10. Note that the answer once filled in ink cannot be changed. If you do not wish to attempt a question, leave all the circles in the corresponding row blank (such question will be awarded zero marks).

11. For rough work, use the inner back pages of the title cover and the blank page at the end of this Booklet.

12. Deposit both OMR Answer Sheet and Question Booklet at the end of the Test.

13. You are not permitted to leave the Examination Hall until the end of the Test.

14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

Total No. of Printed Pages : 16
ROUGH WORK
No. of Questions : 50

Time : 2 Hours  Full Marks : 200

Note: (1) This Question Booklet contains 40 Multiple Choice Questions followed by 10 Short Answer Questions.

(2) Attempt as many MCQs as you can. Each MCQ carries 3 (Three) marks. 1 (One) mark will be deducted for each incorrect answer. Zero mark will be awarded for each unattempted question. If more than one alternative answers of MCQs seem to be approximate to the correct answer, choose the closest one.

(3) Answer only 5 Short Answer Questions. Each question carries 16 (Sixteen) marks and should be answered in 150-200 words. Blank 5 (Five) pages attached with this booklet shall only be used for the purpose. Answer each question on separate page, after writing Question No.

01. Which of the following is pluripotent cell
   (1) Stem cell               (2) Sertoli cells
   (3) Memory t cells          (4) Langerhans cells

02. Which of the following is NOT a lymphoid organ
   (1) Lymphnodes              (2) Tonsils
   (3) Thyroid                 (4) Spleen

03. Enzymes for kreb cycle are located in
   (1) Mitochondria           (2) Cytoplasm
   (3) Peroxisomes            (4) Nucleus

04. Which of the following is a non communicable disease
   (1) HIV                    (2) Tuberculosis
   (3) Measles                (4) Tetanus
05. Which of the following is NOT a part of immune system of the body?
   (1) Langerhans cells  (2) Helper T cells  
   (3) Histiocytes        (4) Reticulocytes 

06. Ovulation occurs at
   (1) 5th day of menstrual cycle  
   (2) 14th day of menstrual cycle  
   (3) 21st day of menstrual cycle  
   (4) 28th day of menstrual cycle

07. Amount of growth hormone secretion reach its peak by
   (1) 8 am   (2) 8 pm  
   (3) 12 am  (4) 12 pm

08. Which of the following is false?
   (1) Bones are attached to other bones by means of tendon  
   (2) Bones are attached to muscles by means ligaments
   (3) Bones are joined to other bones by mean of articular cartilage
   (4) Bones are joint to each other by mean of fibrous tissue

09. Regulators of thirst and hunger centre is present in
   (1) Medulla  (2) Midbrain  
   (3) Hypothalamus (4) Cortex

10. Which of the following is NOT included in the stages of embryological development?
   (1) Insemination  (2) Gastrulation  
   (3) Blastula formation (4) Morula formation
11. All of the following are the parts of Brainstem except
   (1) Mid Brain       (2) Cerebellum
   (3) Medulla         (4) Pons

12. Which of the following organelle is not found in neurons?
   (1) Mitochondria   (2) Lysosomes
   (3) Golgi Bodies   (4) Centromere

13. Which of the following is an excitatory neurotransmitter in brain?
   (1) Glutamate      (2) Ach.
   (3) Dopamine       (4) Glycine

14. Memory is related to which part of the brain?
   (1) Frontal lobe   (2) Parietal lobe
   (3) Temporal lobe  (4) Occipital lobe

15. Spinal cord is a part of -
   (1) Central nervous System (2) Peripheral nervous system
   (3) Both               (4) None

16. Which the following is not a neurodegenerative Disorder?
   (1) Alzheimer's disease   (2) Parkinson's disease
   (3) Motor Neuron disease  (4) CVA (Stroke)

17. Which of the following is an infectious disease of neurology?
   (1) Alzheimer's disease   (2) Parkinson's disease
   (3) Huntington's disease  (4) Leprosy

18. If both parents are carrier of an autonomic recessive disease then what is the percentage of affection of one offspring?
   (1) 50%              (2) 0%
   (3) 25%              (4) 100%
19. Maximum score in Glasgow Coma Scale (GCS) Score is -
   (1) 10  (2) 15
   (3) 20  (4) 5

20. What proportions of mitochondrial disorders caused by mutations in the mitochondrial DNA ?
   (1) 10-20%
   (2) 40-50%
   (3) 60-70%
   (4) 90-100%

21. The outermost meningeal covering of the brain is-
   (1) Duramatter
   (2) Piamatter
   (3) Arachnoid
   (4) None of the above

22. Technique of recording brain wave is called as -
   (1) Electroencephalography
   (2) Electrooculography
   (3) Electromyography
   (4) Nerve conduction Study

23. How many pairs of the cranial nerves are found in Human ?
   (1) 10
   (2) 11
   (3) 12
   (4) 13

24. Meningitis is -
   (1) Inflammation of brain covering
   (2) Inflammation of brain parenchyma
   (3) None of the above
   (4) Both

25. Which of the following artery does not supply blood to the brain ?
   (1) Internal Carotid Artery
   (2) External Carotid Artery
   (3) Vertebral Artery
   (4) Brachial Artery
26. Which of the following is not pain sensitive structure?
   (1) Meninges              (2) Dura covering Arteries
   (3) Brain Parenchyma      (4) Sensory nerves

27. Smallest skeletal muscle
   (1) Stepdias               (2) Anconeus
   (3) Piriformis             (4) Platysma

28. Which of the following is not a movement disorder?
   (1) Tremor                 (2) Parkinson’s Disease
   (3) Huntington’s Disease   (4) Epilepsy

29. Which of the following disease causing agent does not contain nucleic acid?
   (1) Bacteria               (2) Virus
   (3) Fungi                  (4) Prions

30. Most common neurological disorder
    (1) Stroke                (2) Epilepsy
    (3) Neuropathy            (4) Headache

31. Deficiency of which of the following vitamins does not cause any neurological disorder?
    (1) Vit. B1               (2) Vit. K
    (3) Vit. B12              (4) Vit. D

32. Myasthenia Gravis is a disorder of-
    (1) Peripheral Nerves     (2) Muscle
    (3) Neuromuscular Junction (4) None of the above
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33. Neurosyphilis is caused by-
   (1) T. pallidum  (2) Yaws
   (3) Pinta       (4) B. burgdorferi

34. Neurons primarily derived energy from-
   (1) Glucose      (2) Proteins
   (3) Fatty Acids (4) All of the above

35. All of the following are CAG trinucleotide repeat disorder except
   (1) Myotonic Dystrophy (2) Huntington's Disease
   (3) Friedreich Ataxia   (4) SCAs

36. Genes implicated in young onset AD
   (1) PS1           (2) PS2
   (3) APP           (4) All of the above

37. All of the following are cells of nervous system except-
   (1) Neurons       (2) Astrocyte
   (3) Microglia     (4) Histiocyte

38. Father of EEG is-
   (1) Hans Berger   (2) Babinski
   (3) Jenn Martin Charcot (4) Christopher Bernard
39. Which of the neurotransmitter act at skeletal neuromuscular junction

(1) DA                        (2) Ach
(3) Norepinephrine           (4) Glycine

40. Always fatal disease is-

(1) Rabies                    (2) TB
(3) Malaria                   (4) HIV
Short Answer Questions

Note: Attempt any five questions. Write answer in 150-200 words. Each question carries 16 marks. Answer each question on separate page after writing Question Number.

01. Differences between apoptosis and necrosis

02. Role of Glutamate in nervous system

03. Na-K ATPase

04. Superoxide dismutase

05. Stem cell transplantation

06. Pedigree Analysis

07. Karyotyping

08. Cell signaling

09. Protein Targetting

10. Post translational modification
अभ्यासियों के लिए निर्देश

(इस पुस्तिका के प्रथम आवरण पृष्ठ पर तथा उत्तर-पत्र के दोनों पृष्ठों पर केवल नीली-काली बाल-प्याइंट पेन से ही लिखिए)

1. प्रश्न पुस्तिका मिलने के 10 मिनट के अदर तक ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मोड़ूं तथा और कोई प्रश्न छुट्टा नहीं है। पुस्तिका मोड़ने पर जाने पर इसकी मूलना समन्वय कव्व-निर्देशक को देखकर सम्पूर्ण प्रश्नपत्र की दूसरी पुस्तिका प्राप्त कर लें।

2. परीक्षा भवन में लिफाफ के भीतर प्रश्न-पत्र के अंतिम रिक्ति, लिखा या सादा कोई भी खुला अभ्यास साध में न लाएं।

3. उत्तर-पत्र अलग से दिया गया है। इसे न तो जोड़ें और न ही विकृत करें। हूसरा उत्तर-पत्र नहीं दिया जायेगा। केवल उत्तर-पत्र का ही गूढ़नवनक प्राप्त करें।

4. अपना अनुमानिक मित्र उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पेन से निर्धारित स्थान पर लिखिए।

5. उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुमानिक निर्धारित स्थान पर लिखिए तथा खाद्य दिये गये कृतियों को गाढ़ा करें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखिए।

6. आंदोलन के पृष्ठ पर अनुमानिक संख्या प्रश्नपुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्नपुस्तिका पर अनुमानिक और आंदोलन के पत्र संख्या की प्रविष्टियों में वर्तित वर्ष की अनुमति नहीं है।

7. उपयुक्त प्रविष्टियों में कोई भी परीरस्तन कव्व निर्देशक द्वारा प्रमाणित होना चाहिए अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।

8. प्रश्न-पुस्तिका में प्रश्न-पत्र के चार वैकल्पिक उत्तर दिये गये हैं। प्रत्येक प्रश्न के वैकल्पिक उत्तर के लिए आपको उत्तर-पत्र को समावेशित पंक्ति के साथ दिये गये कृतियों को उत्तर-पत्र के प्रथम पृष्ठ पर दिये गये निर्देशों के अनुसार पेन से मार्क करें।

9. प्रत्येक प्रश्न के उत्तर के लिए केवल एक ही तृतीय कृतियों को गाढ़ा करें। एक से अधिक कृतियों को गाढ़ा करने पर अपवाद एक कृतियों को अतृप्त भावना पर वह उत्तर गलत माना जायेगा।

10. द्वस्त दें कि एक बार स्वाभाविक उत्तर बदलना नहीं जा सकता है। यदि आप किसी प्रश्न का उत्तर नहीं देने चाहते हैं, तो संबंधित पंक्ति के साथ दिये गये सभी कृतियों को खाली छोड़ दें। ऐसे प्रश्नों पर शौचा अंक दिये जायेंगे।

11. यदि कार्य के लिए प्रश्न-पुस्तिका के मुख्यपृष्ठ के अंदर चाला पृष्ठ तथा उत्तर-पुस्तिका के अंतिम पृष्ठ का प्रयोग करें।

12. परीक्षा के उपराक्रम अवसर आंदोलन के पत्र परीक्षा भवन में जमा कर दें।

13. परीक्षा मान्यता होने से पहले परीक्षा भवन से बाहर जाने की अनुमति नहीं होगी।

14. यदि कोई अभ्यासी विश्वास की अनुमति साधनों का प्रयोग करता है, तो वह विश्वसनीयता द्वारा निर्धारित देख का/की, भागी होगा/होगी।